Consumers Energy Company

Electric Rate Case No. U-21389

Index of Exhibits - A# Order

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207	A-136	-	Kelly, Michael P.	MPK-17	2021 Electric Distribution Infrastructure Investment Plan
208	A-137	-	Kelly, Michael P.	MPK-18	2021 Electric System Loss Study Report
209	A-138	-	Kelly, Michael P.	MPK-19	Electric System Reliability Maintenance Guidelines
210	A-139	-	Kelly, Michael P.	MPK-20	2018-2022 Distribution Unit Costs
211	A-140	-	Kelly, Michael P.	MPK-21	Environmental Justice Reliability and Hosting Capacity Maps
212	A-141	-	Lynd, Donald A.	DAL-1	2023-2024 Bridge Period LVD Project List
213	A-142	-	Lynd, Donald A.	DAL-2	2024-2025 Test Year LVD Project List
214	A-143	-	Lynd, Donald A.	DAL-3	Conservation Voltage Reduction Measurement and Verification Independent Assessment

215	A-144	-	McLean, Steven Q.	SQM-2	Summary of Actual & Projected O&M Expenses – Demand Response
216	A-145	-	McLean, Steven Q.	SQM-3	Electrification Pilot
217	A-146	-	Metz, Megan L.	MLM-1	Power Supply Cost Recovery Forecast for March 1, 2024 – February 28, 2025
218	A-147	-	Metz, Megan L.	MLM-2	Summary of PPA Changes from September 30, 2022 to February 1, 2023
219	A-148	-	Metz, Megan L.	MLM-3	Consumers Energy Forecast - Energy Market Sales Revenue and Total Variable Expense
220	A-149	-	Monroe, Adam J.	AJM-1	Overview of Consumers Energy River Hydro Facilities
221	A-150	-	Monroe, Adam J.	AJM-2	Consumers Energy River Hydro Brochure
222	A-151	-	Monroe, Adam J.	AJM-3	November 1, 2019 Letter from FERC to Consumers Energy Requiring Utilization of BOC
223	A-152	-	Monroe, Adam J.	AJM-4	April 28, 2017 Letter from FERC to Consumers Energy Requiring Spillway Assessment
224	A-153	-	Myers, Heidi J.	HJM-1	Distribution Investment Recovery Mechanism – Annual Revenue Requirement
225	A-154	-	Myrom, Jeffrey A.	JAM-2	Transportation Electrification Program Deferred Asset Costs
226	A-155	-	Slieff, James C.	JCS-1	Summary of Historical Year, Bridge Period, and Projected Test Year Operations Resources – Electric LVD Workplan; Summary of YE Actual and YE Projected Operations Resources – Electric LVD Workplan
227	A-156	-	Slieff, James C.	JCS-2	Summary of Historical Year, Bridge Period, and Projected Test Year Operations Resources – Electric HVD Workplan; Summary of YE Actual and YE Projected Operations Resources – Electric HVD Workplan
228	A-157	-	Stuart, R. Michael	RMS-1	2023 EICP Operational Goals
229	A-158	-	Stuart, R. Michael	RMS-2	2023 Customer Benefits: Employee Safety
230	A-159	-	Stuart, R. Michael	RMS-3	2023 Customer Benefits: Reliability
231	A-160	-	Stuart, R. Michael	RMS-4	2023 Customer Benefits: Culture Index
232	A-161	-	VanBlarcum, Brian J.	BJV-1	Development of the Property Tax Rate for the Test Year
233	A-162	-	VanBlarcum, Brian J.	BJV-2	Amortization of Excess Deferred Federal Income Taxes for the Test Year and Tax Reform Regulatory Liability & Amortization
234	A-163	-	VanBlarcum, Brian J.	BJV-3	Development of Production Tax Credits for the Test Year
235	A-164	-	Wehner, Todd A.	TAW-2	Wolfe Research: “The Fleishman Daily 11/21/22”
236	A-165	-	Wehner, Todd A.	TAW-3	Wells Fargo Equity Research: “DTE: Challenging Electric Rate Order – Bears Monitoring”
237	A-166	-	Wehner, Todd A.	TAW-4	UBS Equity Research: “DTE Energy Co: Electric Rate Case Revenue Light”
238	A-167	-	Wehner, Todd A.	TAW-5	Moody’s Investor Service November 10, 2022 Report
239	A-168	-	Wehner, Todd A.	TAW-6	Fama and French: “The CAPM is Wanted, Dead or Alive”
240	A-169	-	Wehner, Todd A.	TAW-7	Financial Times: “The time has come for the CAPM to RIP”
241	A-170	-	Wehner, Todd A.	TAW-8	Chartoff, Mayo, and Smith: “The Case Against the Use of the Capital Asset Pricing Model in Public Utility Ratemaking”
242	A-171	-	Wehner, Todd A.	TAW-9	Chretien and Coggins: “Cost of Equity for Energy Utilities: Beyond the CAPM”
243	A-172	-	Wehner, Todd A.	TAW-10	Federal Reserve Bank of New York Staff Reports: “The Equity Risk Premium: A Review of Models”
244	A-173	-	Wehner, Todd A.	TAW-11	Brattle Group: “Estimating the Cost of Equity for Regulated Companies”
245	A-174	-	Wehner, Todd A.	TAW-12	Value Line: “Using Beta”
246	A-175	-	Wehner, Todd A.	TAW-13	Gordon and Shapiro: “Capital Equipment Analysis”
247	A-176	-	Weller, Heather N.	HNW-1	Consumers Energy Digital Three-Year Plan for the Years 2023 – 2025 (Appendix B – Confidential)
248	A-177	-	Weller, Heather N.	HNW-2	Summary of Actual and Projected Information Technology Operations O&M Expense for the Years 2022, 2023, 2024, and Test Year 12 Months Ending February 28, 2025

249	A-178	-	Weller, Heather N.	HNW-3	Historical and Projected 13-Month Average of IT Cloud Computing Prepaid Balance for the historical years 2022 - 13-month balance ending December 31,2022, and for the projected years 2024 – 13-month balance ending February 28, 2025
250	A-179	-	Weller, Heather N.	HNW-4	Summary of Actual and Projected Information Technology Investments O&M Expense for the Years 2022, 2023, 2024 and Test Year 12 Months Ending February 28, 2025
251	A-180	-	Weller, Heather N.	HNW-6	Synopses Containing Descriptions, Scope, Benefits, Implementation Dates and Detailed Costs of Actual and Projected Electric & Common Capital Expenditures and O&M Expenses For the Years 2022, 2023, 2024 and 2025
252	A-181	-	Weller, Heather N.	HNW-7	Business Case Executive Summaries for Historical, Bridge Period, and Test Year Projects
253	A-182	-	Weller, Heather N.	HNW-8	Asset Refresh Programs Projected Electric and Common Capital Expenditures, For the Projected Year 2024 and Test Year Ending February 28, 2025, and For the Historical and Projected Years 2022 and 2023
254	A-183	-	Weller, Heather N.	HNW-9	Application Currency Programs Projected Electric and Common Capital and O&M Expenditures for the Years 2024, 2025, and Test Year 12 Months Ending February 28, 2025 (Confidential)
255	A-184	-	Weller, Heather N.	HNW-10	Projected Versus Actual Enhancement Capital Expenditures and O&M Expense Summary and Analysis
256	A-185	-	Weller, Heather N.	HNW-11	Enhancement Worklist Detail for Years 2016 through February 16, 2023

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	))))))	Case No. U-21389

EXHIBITS

OF

JOSNELLY C. APONTE

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

Schedule: A-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Revenue Deficiency (Sufficiency)
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-1 (JCA-1)
Schedule: A-1
Page: 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)
Line No	**Description**	**Source**	**Total ($000)**	**Jurisdictional ($000)**
1	Rate base	Exhibit No.: A-2 (JCA-3)	12,647,343	12,599,436
2	Adjusted net operating income	Exhibit No.: A-3 (JCA-9)	645,347	657,238
3	Overall rate of return	Line 2 / Line 1	5.10%	5.22%
4	Required rate of return	Exhibit No.: A-4 (JCA-22)	5.80%	5.80%
5	Income requirements	Line 1 * Line 4	734,073	731,292
6	Income deficiency (sufficiency)	Line 5 - Line 2	88,726	74,054
7	Revenue conversion factor	Exhibit No.: A-3 (JCA-10)	1.3391	1.3391
8	Revenue deficiency (sufficiency)	Line 6 * Line 7	118,810	99,164

Schedule: A-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Historical Financial Metrics - Financial Basis
ELECTRIC RESULTS ONLY
($000)

Case No.: U-21389
Exhibit No.: A-1 (JCA-2)
Schedule: A-2

Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
Line		Calendar Year				
No	**Description**	**2018**	**2019**	**2020**	**2021**	**2022**
1	Operating revenues	4,561,203	4,439,232	4,372,177	4,957,857	5,419,082
2	Operating expenses	3,745,412	3,632,901	3,531,392	4,156,834	4,630,615
3	Pre-tax operating income	815,791	806,331	840,785	801,024	788,467
4	Income taxes	108,918	134,677	115,416	117,193	108,800
5	Net operating income	706,874	671,655	725,370	683,831	679,667
6	Other income and deductions	35,098	47,194	41,819	83,027	102,863
7	AFUDC	5,095	5,918	7,211	8,207	5,520
8	Interest charges	(210,785)	(214,929)	(202,399)	(193,601)	(206,904)
9	Preferred stock dividends	(1,193)	(1,160)	(1,111)	(1,081)	(1,078)
10	Net income available to common stockholders	535,088	508,678	570,889	580,383	580,068
11	Average common equity	4,808,892	5,282,036	5,806,036	6,260,365	6,372,772
12	Earned rate of return on common equity	11.13%	9.63%	9.83%	9.27%	9.10%
13	Authorized rate of return on common equity	10.00% {1}	10.00% {2}	10.00% {3}	9.90% {3}	9.90% {4}

Schedule: A-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Historical Financial Metrics - Financial Basis
ELECTRIC RESULTS ONLY
($000)

Case No.: U-21389
Exhibit No.: A-1 (JCA-2)
Schedule: A-2
Page: 2 of 6
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
Line		Calendar Year				
No	**Description**	**2018**	**2019**	**2020**	**2021**	**2022**
	EBIT Interest Coverage Ratio					
14	Pre-tax operating income	815,791	806,331	840,785	801,024	788,467
15	Other income and deductions	35,098	47,194	41,819	83,027	102,863
16	AFUDC	5,095	5,918	7,211	8,207	5,520
17	Total EBIT	855,985	859,443	889,815	892,257	896,850
18	Interest charges	210,785	214,929	202,399	193,601	206,904
19	EBIT interest coverage ratio	4.06	4.00	4.40	4.61	4.33
	EBITDA Interest Coverage Ratio					
20	Total EBIT	855,985	859,443	889,815	892,257	896,850
21	Depreciation and amortization	682,307	713,007	739,148	771,634	757,258
22	Total EBITDA	1,538,292	1,572,450	1,628,963	1,663,891	1,654,108
23	Interest charges	210,785	214,929	202,399	193,601	206,904
24	EBITDA interest coverage ratio	7.30	7.32	8.05	8.59	7.99
	Funds Flow from Operations (FFO) Interest Coverage Ratio					
25	Net operating income	706,874	671,655	725,370	683,831	679,667
26	Depreciation and amortization	682,307	713,007	739,148	771,634	757,258
27	Deferred income taxes	124,791	38,192	321,515	(85,580)	166,168
28	AFUDC	5,095	5,918	7,211	8,207	5,520
29	Other major recurring non-cash items	-	-	-	-	-
30	Interest paid	196,495	200,213	207,328	198,499	202,104
	Less:					
31	Operating lease adjustment to depreciation	-	-	-	-	-
32	Subtotal	1,715,561	1,628,983	2,000,572	1,576,591	1,810,716
33	Interest charges	210,785	214,929	202,399	193,601	206,904
34	FFO interest coverage ratio	8.14	7.58	9.88	8.14	8.75

Schedule: A-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Historical Financial Metrics - Financial Basis
ELECTRIC RESULTS ONLY
($000)

Case No.: U-21389
Exhibit No.: A-1 (JCA-2)
Schedule: A-2
Page: 3 of 6
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
Line		Calendar Year				
No	**Description**	**2018**	**2019**	**2020**	**2021**	**2022**
	Overall Fixed Charge Coverage Ratio					
35	Net income available to common stockholders	535,088	508,678	570,889	580,383	580,068
36	Interest charges	210,785	214,929	202,399	193,601	206,904
37	Subtotal numerator	745,874	723,606	773,289	773,984	786,972
38	Interest charges	210,785	214,929	202,399	193,601	206,904
39	Preferred stock dividends	1,193	1,160	1,111	1,081	1,078
40	Subtotal denominator	211,978	216,089	203,510	194,682	207,982
41	Overall fixed charge coverage ratio	3.52	3.35	3.80	3.98	3.78
	Cash Flow Coverage of Dividends Ratio					
42	Net income available to common stockholders	535,088	508,678	570,889	580,383	580,068
43	Depreciation and amortization	682,307	713,007	739,148	771,634	757,258
44	Deferred income taxes	124,791	38,192	321,515	(85,580)	166,168
45	Subtotal	1,342,186	1,259,876	1,631,553	1,266,437	1,503,494
46	Common dividends {5}	428,071	406,942	456,712	464,306	464,055
47	Cash flow coverage of dividends ratio	3.14	3.10	3.57	2.73	3.24
	Common Dividend Payout Ratio					
48	Common dividends {5}	428,071	406,942	456,712	464,306	464,055
49	Net income available to common stockholders	535,088	508,678	570,889	580,383	580,068
50	Common dividend payout ratio	80%	80%	80%	80%	80%
	Permanent Capitalization					
51	Long term debt	6,809,306	7,263,181	8,131,338	8,437,664	10,208,351
52	Preferred stock	37,315	37,315	37,315	37,315	37,315
53	Common equity	6,884,117	7,700,854	8,519,584	9,242,745	10,118,365
54	Total permanent capita	13,730,738	15,001,350	16,688,236	17,717,724	20,364,031
55	Long term debt	49.59%	48.42%	48.72%	47.62%	50.13%
56	Preferred stock	0.27%	0.25%	0.22%	0.21%	0.18%
57	Common equity	50.14%	51.33%	51.05%	52.17%	49.69%
58	Total permanent capita	100.00%	100.00%	100.00%	100.00%	100.00%

Schedule: A-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Historical Financial Metrics - Ratemaking Basis
ELECTRIC RESULTS ONLY
($000)

Case No.: U-21389
Exhibit No.: A-1 (JCA-2)
Schedule: A-2
Page: 4 of 6
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
Line		Calendar Year				
No	**Description**	**2018**	**2019**	**2020**	**2021**	**2022**
59	Operating revenues	4,471,514	4,355,517	4,294,102	4,884,658	5,228,924
60	Operating expenses	3,792,887	3,625,943	3,482,006	4,219,304	4,515,341
61	Pre-tax operating income	678,627	729,574	812,096	665,354	713,583
62	Income taxes	58,632	82,880	166,654	34,134	57,803
63	Net operating income	619,995	646,693	645,441	631,220	655,781
64	Tax impact of pro forma interest on NOI	(12,859)	(13,290)	(5,605)	(4,444)	(4,034)
65	AFUDC	5,070	5,884	7,172	8,166	5,491
66	Interest charges	(159,794)	(161,635)	(171,758)	(166,478)	(184,127)
67	Preferred stock dividends	(1,070)	(1,026)	(1,010)	(973)	(931)
68	Net income available to common stockholders and JDITC	451,342	476,626	474,240	467,492	472,180
69	Return assignable to JDITC	(3,213)	(3,547)	(3,642)	(3,428)	(3,651)
70	Net income available to common stockholders	448,130	473,079	470,598	464,064	468,529
71	Average common equity	4,306,516	4,543,533	4,955,705	5,189,180	5,480,655
72	Earned rate of return on common equity	10.41%	10.41%	9.50%	8.94%	8.55%
73	Authorized return on equity	10.00% {1}	10.00% {2}	10.00% {3}	9.90% {3}	9.90% {4}

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Historical Financial Metrics - Ratemaking Basis
ELECTRIC RESULTS ONLY
($000)

Case No.: U-21389
Exhibit No.: A-1 (JCA-2)
Schedule: A-2
Page: 5 of 6
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
Line		Calendar Year				
No	**Description**	**2018**	**2019**	**2020**	**2021**	**2022**
	EBIT Interest Coverage Ratio					
74	Pre-tax operating income	678,627	729,574	812,096	665,354	713,583
75	AFUDC	5,070	5,884	7,172	8,166	5,491
76	Total EBIT	683,697	735,457	819,267	673,520	719,075
77	Interest charges, net of pro forma interest	146,935	148,345	166,153	162,034	180,093
78	EBIT interest coverage ratio	4.65	4.96	4.93	4.16	3.99
	EBITDA Interest Coverage Ratio					
79	Total EBIT	683,697	735,457	819,267	673,520	719,075
80	Depreciation and amortization	665,312	694,677	720,318	751,470	748,017
81	Total EBITDA	1,349,008	1,430,134	1,539,586	1,424,990	1,467,092
82	Interest charges, net of pro forma interest	146,935	148,345	166,153	162,034	180,093
83	EBITDA interest coverage ratio	9.18	9.64	9.27	8.79	8.15
	Funds Flow from Operations (FFO) Interest Coverage Ratio					
84	Net operating income	619,995	646,693	645,441	631,220	655,781
85	Depreciation and amortization	665,312	694,677	720,318	751,470	748,017
86	Deferred income tax	124,791	38,192	321,515	(85,580)	166,168
87	AFUDC	5,070	5,884	7,172	8,166	5,491
88	Other major recurring non-cash items	-	-	-	-	-
89	Interest paid	196,495	200,213	207,328	198,499	202,104
	Less:					
90	Operating lease adjustment to depreciation	-	-	-	-	-
91	Subtotal	1,611,662	1,585,658	1,901,774	1,503,775	1,777,561
92	Interest charges, net of pro forma interest	146,935	148,345	166,153	162,034	180,093
93	FFO interest coverage ratio	10.97	10.69	11.45	9.28	9.87
	Overall Fixed Charge Coverage Ratio					
94	Net income available to common stockholders	448,130	473,079	470,598	464,064	468,529
95	Interest charges, net of pro forma interest	146,935	148,345	166,153	162,034	180,093
96	Subtotal numerator	595,065	621,424	636,751	626,098	648,623
97	Interest charges, net of pro forma interest	146,935	148,345	166,153	162,034	180,093
98	Preferred stock dividends	1,070	1,026	1,010	973	931
99	Subtotal denominator	148,005	149,371	167,162	163,007	181,025
100	Overall fixed charge coverage ratio	4.02	4.16	3.81	3.84	3.58

Schedule: A-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Historical Financial Metrics - Ratemaking Basis
ELECTRIC RESULTS ONLY
($000)

Case No.: U-21389
Exhibit No.: A-1 (JCA-2)
Schedule: A-2
Page: 6 of 6
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
Line		Calendar Year				
No	**Description**	**2018**	**2019**	**2020**	**2021**	**2022**
	Cash Flow Coverage of Dividends Ratio					
101	Net income available to common stockholders	448,130	473,079	470,598	464,064	468,529
102	Depreciation and amortization	665,312	694,677	720,318	751,470	748,017
103	Deferred income tax	124,791	38,192	321,515	(85,580)	166,168
104	Subtotal	1,238,232	1,205,947	1,512,431	1,129,954	1,382,714
105	Common dividends {5}	358,504	378,463	376,478	371,251	374,824
106	Cash flow coverage of dividends ratio	3.45	3.19	4.02	3.04	3.69
	Common Dividend Payout Ratio					
107	Common dividends {5}	358,504	378,463	376,478	371,251	374,824
108	Net income available to common stockholders	448,130	473,079	470,598	464,064	468,529
109	Common Dividend Payout Ratio	80%	80%	80%	80%	80%
	Permanent Capitalization					
110	Long term debt, excluding securitization	6,311,870	6,997,291	7,880,109	8,214,999	9,009,833
111	Preferred stock	37,315	37,315	37,315	37,315	37,315
112	Common equity	6,904,894	7,728,910	8,555,596	9,274,520	10,133,854
113	Total permanent capital	13,254,079	14,763,516	16,473,020	17,526,834	19,181,001
114	Long term debt, excluding securitization	47.62%	47.40%	47.84%	46.87%	46.97%
115	Preferred stock	0.28%	0.25%	0.23%	0.21%	0.19%
116	Common equity	52.10%	52.35%	51.94%	52.92%	52.83%
117	Total permanent capital	100.00%	100.00%	100.00%	100.00%	100.00%

Notes

{1} Case No. U-18322 Final Order dated July 24, 2018
{2} Case No. U-20134 Settlement Agreement dated January 10, 2019
{3} Case No. U-20697 Final Order dated December 17, 2020
{4} Case No. U-20963 Final Order dated December 22, 2021
{5} CECo pays dividends to the parent as a total company. This number represents the company's 80% dividend policy applied to net income available to common stockholders

Schedule: B-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Rate Base
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-2 (JCA-3)
Schedule: B-1

Witness: JCAponte
Date: May 2023

Line No	(a) Description	(b) Source	(c) Total ($000)	(d) Jurisdictional ($000)
1	Total utility plant	Exhibit No.: A-2 (JCA-4)	18,230,527	18,158,506
2	Depreciation reserve	Exhibit No.: A-2 (JCA-5)	6,899,110	6,868,884
3	Net utility plant	Line 1 - Line 2	11,331,417	11,289,622
4	Customer advances for construction	Exhibit No.: A-2 (JCA-7), Column (d.1), Line 29	(57,395)	(57,361)
5	Utility plant rate base	Sum Lines 3 - 4	11,274,022	11,232,261
6	Working capital	Exhibit No.: A-2 (JCA-6)	1,373,322	1,367,175
7	Total rate base	Line 5 + Line 6	12,647,343	12,599,436

Schedule: B-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Total Utility Plant
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-2 (JCA-4)
Schedule: B-2

Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)
Line No	**Description**	**MPSC Account Number**	**Source**	**Total ($000)**	**Jurisdictional ($000)**
1	Gross Plant, incl. Plant Held For Future Use	101, 105	Exhibit No.: A-2 (JCA-7), Column (d.1), Line 3	19,046,599	18,971,938
2	Exclude: Renewables plant-in-service			(1,286,401)	(1,281,362)
3	Deferred debits	182		-	-
4	Construction work in progress	107	Exhibit No.: A-2 (JCA-7), Column (d.1), Line 7	534,865	532,136
5	Exclude: Renewables CWIP			(64,536)	(64,207)
6	Total utility plant		Sum Lines 1 - 5	18,230,527	18,158,506

Schedule: B-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Depreciation Reserve and Other Deductions
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-2 (JCA-5)
Schedule: B-3

Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)
Line No	**Description**	**Source**	**Total ($000)**	**Jurisdictional ($000)**
1	Accumulated depreciation, amortization and depletion of plant-in-service	Exhibit No.: A-2 (JCA-7), Column (d.1), Line 6	5,902,935	5,877,073
2	Add: Cost of removal regulatory liability		1,194,276	1,189,043
3	Exclude: Renewables depreciation reserve		(198,100)	(197,233)
4	Total depreciation reserve and other deduction	Sum Lines 1 - 3	6,899,110	6,868,884

Schedule: B-4

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Working Capital
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-2 (JCA-6)
Schedule: B-4

Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) ($000)
1	Cash, cash equivalents, and restricted cash	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 10	20,157
2	Accounts and notes receivable	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 11	284,586
3	Fuel stock	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 12	47,745
4	Materials and supplies	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 13	134,417
5	Allowances	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 14	14
6	Prepayments	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 16	769,539
7	Accrued revenue	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 17	302,353
8	Deferred taxes	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 18	228,375
9	Deferred debits	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 19	635,437
10	Total assets	Sum Lines 1 - 9	2,422,622
11	Accounts payable	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 23	558,140
12	Customer deposits	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 24	18,319
13	Accrued interest	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 25	49,157
14	Dividends payable	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 26	38,060
15	Accrued taxes	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 27	242,540
16	Other liabilities	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 28	65,860
17	Deferred credits	Exhibit No.: A-2 (JCA-7), Column (e.1), Line 31	77,226
18	Total liabilities	Sum Lines 11 - 17	1,049,301
19	Total working capital	Line 10 - Line 18	1,373,322
20	Jurisdictional factor		0.995524
21	Total working capital - jurisdictional	Line 19 * Line 20	1,367,175

Schedule: B-5

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
13-Month Average Balance Sheet Summary
For the Historical Year Ended December 31, 2022

Source: WP-JCA-7

Case No.: U-21389
Exhibit No.: A-2 (JCA-7)
Schedule: B-5
Page 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c.1)	(c.2)	(d.1)	(d.2)	(d.3)	(d.4)	(e.1)	(e.2)	(e.3)
			EXCLUDED		**PLANT**				**WORKING CAPITAL**		
Line No.	**Description**	**Total**	**Rate Base**	**Sub. Invest.**	**Electric**	**Gas**	**MGP**	**Non-Utility**	**Electric**	**Gas**	**Non-Utility**
1	Utility plant	$ 28,949,624,858	$ 596,106,072	$ -	$ 18,142,653,137	$ 10,210,865,649	$ -	$ -	$ -	$ -	$ -
2	Common plant	1,461,563,329	3,651,731	-	903,946,098	553,965,500	-	-	-	-	-
3	Gross plant	30,411,188,187	599,757,803	-	19,046,599,235	10,764,831,149	-	-			
4	Utility plant accumulated depreciatior	(7,747,215,458)	(135,537,031)	-	(5,317,044,124)	(2,294,634,303)	-	-	-	-	-
5	Common plant accumulated depreciatior	(932,998,950)	(5,734,881)	-	(585,890,504)	(341,373,565)	-	-	-	-	-
6	Total depreciation	(8,680,214,408)	(141,271,911)	-	(5,902,934,629)	(2,636,007,868)	-	-			
7	Construction work in progress	909,086,737	3,011,447	-	534,864,958	371,210,332	-	(0)	-	-	-
8	Net plant	22,640,060,516	461,497,338	-	13,678,529,564	8,500,033,613	-	(0)	-	-	-
9	Other property	155,473,230	120,218,263	(7,497,295)	-	-	-	22,589,514	-	-	20,162,748
10	Cash, cash equivalents, and restricted cash	36,022,773	4,476,043	-	-	-	-	-	20,157,171	11,389,560	-
11	Accounts and notes receivable	453,917,097	22,918,715	-	-	-	-	-	284,585,938	139,012,746	7,399,697
12	Fuel stock	47,744,753	-	-	-	-	-	-	47,744,753	-	-
13	Materials and supplies	180,076,313	21	-	-	-	-	-	134,416,728	45,659,564	-
14	Allowances	11,861,028	11,846,740	-	-	-	-	-	14,288	-	-
15	Gas stored underground	636,586,676	-	-	-	-	-	-	-	636,586,676	-
16	Prepayments	1,273,770,365	-	-	-	-	-	-	769,538,868	504,231,606	(109)
17	Accrued revenue	690,330,884	212,102,088	-	-	-	-	-	302,352,753	175,876,043	-
18	Deferred taxes	2,302,871,509	1,915,770,507	-	-	-	-	-	228,374,946	158,449,181	276,875
19	Deferred debits	1,613,578,867	600,815,150	-	219,064	-	108,743,662	-	635,436,762	268,157,179	207,049
20	Total assets	30,042,294,011	3,349,644,866	(7,497,295)	13,678,748,628	8,500,033,613	108,743,662	22,589,514	2,422,622,208	1,939,362,555	28,046,260
21	Debt, leases, and financial obligations	(8,904,831,647)	(8,904,831,647)	-	-	-	-	-	-	-	-
22	Notes payable	(290,428,624)	(290,428,624)	-	-	-	-	-	-	-	-
23	Accounts payable	(794,708,290)	(3,187,918)	-	-	-	-	-	(558,139,988)	(230,984,761)	(2,395,623)
24	Customer deposits	(29,537,390)	-	-	-	-	-	-	(18,318,532)	(11,218,859)	-
25	Accrued interest	(76,605,873)	(37,548)	-	-	-	-	-	(49,156,865)	(27,258,324)	(153,137)
26	Dividends payable	(59,283,013)	-	-	-	-	-	-	(38,059,694)	(21,104,753)	(118,566)
27	Accrued taxes	(449,094,286)	-	-	-	-	-	-	(242,540,013)	(233,723,641)	27,169,367
28	Other liabilities	(252,485,808)	(151,727,906)	-	-	-	(3,788,988)	-	(65,860,033)	(31,108,880)	-
29	Customer advances	(94,823,136)	-	-	(57,395,361)	(37,427,776)	-	-	-	-	-
30	Deferred income and investment taxes	(5,814,109,156)	(5,814,109,156)	-	-	-	-	-	-	-	-
31	Deferred credits	(3,388,236,281)	(823,275,792)	-	(1,201,063,398)	(1,213,585,747)	(55,331,305)	-	(77,225,582)	(15,890,824)	(1,863,634)
32	Total liabilities	(20,154,143,506)	(15,987,598,592)	-	(1,258,458,758)	(1,251,013,523)	(59,120,294)	-	(1,049,300,706)	(571,290,042)	22,638,408
33	Common equity	(9,850,835,704)	(9,850,835,704)	-	-	-	-	-	-	-	-
34	Preferred stock	(37,314,800)	(37,314,800)	-	-	-	-	-	-	-	-
35	Total equity	(9,888,150,504)	(9,888,150,504)	-	-	-	-	-	-	-	-
36	Net assets (liabilities)	$ -	$ (22,526,104,230)	$ (7,497,295)	$ 12,420,289,870	$ 7,249,020,090	$ 49,623,369	$ 22,589,514	$1,373,321,502	$ 1,368,072,514	$ 50,684,668

Schedule: B-6

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Point-In-Time Working Capital Balance Sheet Summary
For the Historical Year Ended December 31, 2022

Source: WP-JCA-6

Case No.: U-21389
Exhibit No.: A-2 (JCA-8)
Schedule: B-6
Page 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c.1)	(c.2)	(d.1)	(d.2)	(d.3)	(d.4)	(e.1)	(e.2)	(e.3)
			EXCLUDED		**PLANT**				**WORKING CAPITAL**		
Line No.	**Description**	**Total**	**Rate Base**	**Sub. Invest.**	**Electric**	**Gas**	**MGP**	**Non-Utility**	**Electric**	**Gas**	**Non-Utility**
1	Utility plant	$ 29,999,811,989	$ 686,839,993	$ -	$ 18,641,169,306	$ 10,671,802,691	$ -	$ -	$ -	$ -	$ -
2	Common plant	1,404,321,491	3,926,158	-	868,284,400	532,110,933	-	-	-	-	-
3	Gross plant	31,404,133,481	690,766,151	-	19,509,453,706	11,203,913,624	-	-			
4	Utility plant accumulated depreciatior	(8,036,587,692)	(157,944,290)	-	(5,547,576,293)	(2,331,067,110)	-	-	-	-	-
5	Common plant accumulated depreciatior	(881,485,490)	(5,836,586)	-	(553,273,718)	(322,375,186)	-	-	-	-	-
6	Total depreciation	(8,918,073,183)	(163,780,875)	-	(6,100,850,011)	(2,653,442,297)	-	-			
7	Construction work in progress	984,850,814	679,297	-	610,031,056	374,140,460	-	-	-	-	-
8	Net plant	23,470,911,112	527,664,573	-	14,018,634,751	8,924,611,788	-	-	-	-	-
9	Other property	160,378,431	118,900,551	(6,879,568)	-	-	-	27,117,777	-	-	21,239,671
10	Cash, cash equivalents, and restricted cash	40,928,508	2,319,973	-	-	-	-	-	24,669,397	13,939,137	-
11	Accounts and notes receivable	492,640,038	40,543,953	-	-	-	-	-	298,931,318	144,717,311	8,447,455
12	Fuel stock	59,159,159	-	-	-	-	-	-	59,159,159	-	-
13	Materials and supplies	206,028,524	21	-	-	-	-	-	155,227,413	50,801,090	-
14	Allowances	10,188,572	10,174,284	-	-	-	-	-	14,288	-	-
15	Gas stored underground	839,459,584	-	-	-	-	-	-	-	839,459,584	-
16	Prepayments	1,230,430,481	-	-	-	-	-	-	744,577,837	485,852,759	(115)
17	Accrued revenue	1,075,345,207	410,620,924	-	-	-	-	-	329,050,050	335,674,233	-
18	Deferred taxes	2,455,836,457	1,868,833,305	-	-	-	-	-	345,746,172	240,761,945	495,035
19	Deferred debits	1,800,871,873	654,486,926	-	1,522,508	-	108,282,211	-	724,697,210	311,679,467	203,551
20	Total assets	31,842,177,946	3,633,544,510	(6,879,568)	14,020,157,259	8,924,611,788	108,282,211	27,117,777	2,682,072,843	2,422,885,528	30,385,598
21	Debt, leases, and financial obligations	(10,160,744,281)	(10,160,744,281)	-	-	-	-	-	-	-	-
22	Notes payable	(253,080,460)	(253,080,460)	-	-	-	-	-	-	-	-
23	Accounts payable	(864,905,995)	-	-	-	-	-	-	(643,565,432)	(214,292,840)	(7,047,723)
24	Customer deposits	(33,226,380)	-	-	-	-	-	-	(20,781,559)	(12,444,821)	-
25	Accrued interest	(89,385,716)	(7,321)	-	-	-	-	-	(57,380,930)	(31,818,709)	(178,757)
26	Dividends payable	-	-	-	-	-	-	-	-	-	-
27	Accrued taxes	(573,638,149)	-	-	-	-	-	-	(342,072,132)	(231,246,686)	(319,332)
28	Other liabilities	(207,282,163)	(145,178,053)	-	-	-	(4,712,912)	-	(41,743,026)	(15,648,171)	-
29	Customer advances	(96,251,384)	-	-	(58,993,369)	(37,258,015)	-	-	-	-	-
30	Deferred income and investment taxes	(5,914,756,441)	(5,914,756,441)	-	-	-	-	-	-	-	-
31	Deferred credits	(3,493,226,917)	(922,578,338)	-	(1,190,155,456)	(1,242,520,674)	(58,174,149)	-	(70,184,879)	(6,962,285)	(2,651,135)
32	Total liabilities	(21,686,497,886)	(17,396,344,895)	-	(1,249,148,825)	(1,279,778,689)	(62,887,061)	-	(1,175,727,957)	(512,413,512)	(10,196,946)
33	Common equity	(10,118,365,260)	(10,118,365,260)	-	-	-	-	-	-	-	-
34	Preferred stock	(37,314,800)	(37,314,800)	-	-	-	-	-	-	-	-
35	Total equity	(10,155,680,060)	(10,155,680,060)	-	-	-	-	-	-	-	-
36	Net assets (liabilities)	$ -	$ (23,918,480,445)	$ (6,879,568)	$ 12,771,008,433	$ 7,644,833,099	$ 45,395,149	$ 27,117,777	$1,506,344,886	$ 1,910,472,015	$ 20,188,652

Schedule: C-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Adjusted Net Operating Income
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-3 (JCA-9)
Schedule: C-1

Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)
Line No.	**Description**	**Source**	**Total ($000)**	**Jurisdictional ($000)**
1	Sales revenues	Exhibit No.: A-3 (JCA-11)	4,963,156	4,961,988
2	Sales for resale	Exhibit No.: A-3 (JCA-11)	240,958	240,958
3	Other electric revenues	Exhibit No.: A-3 (JCA-11)	160,123	136,953
4	Total operating revenues	Sum Lines 1 - 3	5,364,237	5,339,899
5	Fuel expense	Exhibit No.: A-3 (JCA-12)	663,350	656,232
6	Purchased & interchange power	Exhibit No.: A-3 (JCA-12)	1,959,097	1,938,073
7	Operations and maintenance	Exhibit No.: A-3 (JCA-13)	893,311	889,864
8	Depreciation and amortization	Exhibit No.: A-3 (JCA-14)	751,446	748,017
9	Property taxes	Exhibit No.: A-3 (JCA-15)	203,698	202,818
10	General taxes	Exhibit No.: A-3 (JCA-15)	35,840	35,618
11	Other (local) taxes	Exhibit No.: A-3 (JCA-18)	1,323	1,328
12	State income taxes	Exhibit No.: A-3 (JCA-17)	44,456	44,628
13	Federal income taxes	Exhibit No.: A-3 (JCA-16)	57,580	57,803
14	Total operating expenses	Sum Lines 5 - 13	4,610,100	4,574,381
15	Net operating income	Line 4 - Line 14	754,137	765,518
16	AFUDC	Exhibit No.: A-3 (JCA-19)	5,520	5,491
17	Net operating income, including AFUDC	Line 15 + Line 16	759,656	771,009
	Adjustments to Net Operating Income			
18	Weather normalization	Exhibit No.: A-13 (JCA-51), Line 2	(41,107)	(40,897)
19	Purchased power administration fee revenue	Exhibit No.: A-13 (JCA-51), Line 3	(457)	(455)
20	Excess MDNR fees	Exhibit No.: A-13 (JCA-51), Line 4	334	332
21	MISO reliability schedule 10 charge	Exhibit No.: A-13 (JCA-51), Line 5	343	342
22	Surcharge revenues and expenses/amortization	Exhibit No.: A-13 (JCA-51), Line 6	(72,954)	(72,623)
23	Jobwork revenues	Exhibit No.: A-13 (JCA-51), Line 7	1,967	1,958
24	Interest income on cash operating accounts	Exhibit No.: A-13 (JCA-51), Line 8	371	370
25	Compensation expenses - Executive annual physicals	Exhibit No.: A-13 (JCA-51), Line 9	8	8
26	Compensation expenses - EICP	Exhibit No.: A-13 (JCA-51), Line 10	-	-
27	Compensation expenses - Corporate Giving - staff salarie	Exhibit No.: A-13 (JCA-51), Line 11	11	10
28	Compensation expenses - Corporate Communications - s	Exhibit No.: A-13 (JCA-51), Line 12	137	137
29	Advertising expenses	Exhibit No.: A-13 (JCA-51), Line 13	-	-
30	Dues & donations expenses	Exhibit No.: A-13 (JCA-51), Line 14	462	459
31	Jobwork expenses	Exhibit No.: A-13 (JCA-51), Line 15	(1,643)	(1,635)
32	Interest expense on security deposits	Exhibit No.: A-13 (JCA-51), Line 16	(193)	(192)
33	One-time Legal Consultant Expense	Exhibit No.: A-13 (JCA-51), Line 17	2,726	2,712
34	Voluntary Separation Plan expenses	Exhibit No.: A-13 (JCA-51), Line 18	4,045	4,024
35	Segregated Cell Insurance Expense	Exhibit No.: A-13 (JCA-51), Line 20	(4,309)	(4,287)
36	Pro Forma Interest Adjustment	Exhibit No.: A-13 (JCA-51), Line 21	(4,350)	(4,334)
37	Interest Synchronization Adjustment	Exhibit No.: A-13 (JCA-51), Line 22	301	300
38	Total net operating income adjustments	Sum Lines 18 - 37	(114,309)	(113,771)
39	Adjusted net operating income	Line 17 + Line 38	645,347	657,238

Schedule: C-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Calculation of the Revenue Conversion Factor
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-3 (JCA-10)
Schedule: C-2

Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) Amount
1	Income base - before taxes		100.0000
2	State income tax	Line 1 * 5.31% State Income Tax Rate	5.3100
3	Other (local) income tax	Line 1 * 0.16% Other (Local) Income Tax Rate	0.1600
4	Federal income tax base	Line 1 - Line 2 - Line 3	94.5300
5	Federal income tax	Line 4 * 21.00% Federal Income Tax Rate	19.8513
6	Income base - after taxes	Line 4 - Line 5	74.6787
7	Revenue conversion factor	Line 1 / Line 6	1.3391

Schedule: C-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Operating Revenues
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-3 (JCA-11)
Schedule: C-3
Page 1 of 1
Witness: JCAponte
Date: May 2023

Line No	(a) Description	(b) Source	(c) Total ($000)
1	Sales revenues	P-521 p. 300(M), Line 12 minus Line 17	4,963,156
2	Sales for resale	P-521 p. 300(M), Line 14	240,958
3	Other electric revenues	P-521 p. 300(M), Line 30	160,123
4	Total operating revenues	Sum Lines 1 - 3	5,364,237

Schedule: C-4

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Fuel and Purchased Power
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-3 (JCA-12)
Schedule: C-4
Page 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)
Line No.	**Description**	**Source**	**Total ($000)**
1	Fuel expense - Steam Power	P-521 p. 320, Line 5	336,055
2	Fuel expense - Other Power Generation	P-521 p. 321, Line 63	340,475
3	Fuel handling	WP-JCA-9	(13,180)
4	Total Fuel Expense	Sum Lines 1 - 3	663,350
5	Purchased power	P-521 p. 321, Line 76	1,484,172
6	Transmission expenses	P-521 p. 321, Line 112	468,500
7	Regional transmission and market operating expense	P-521 p. 322, Line 131	8,310
8	Load dispatch	WP-JCA-10	(1,885)
9	Total purchased and net interchange power	Sum Lines 5 - 8	1,959,097
10	Total cost of fuel and purchased power	Line 4 + Line 9	2,622,447

Schedule: C-5

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Operation and Maintenance Expenses
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-3 (JCA-13)
Schedule: C-5

Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) Total ($000)
1	Power production expenses	P-521 p. 321, Line 80 minus Exhibit No.: A-3 (JCA-12), Lines 4-5	183,601
2	Transmission expenses	(-) WP-JCA-10	1,885
3	Distribution expenses	P-521 p. 322, Line 156	327,465
4	Customer accounts expenses	P-521 p. 322, Line 164	75,665
5	Customer service & information expenses	P-521 p. 323, Line 171	251,843
6	Sales expenses	P-521 p. 323, Line 178	-
7	Administrative & general expenses	P-521 p. 323, Line 197	53,750
8	Subtotal	Sum Lines 1 - 7	894,208
9	Gains from disposition of allowances	P-521 p. 115, Line 22 (e)	(898)
10	Total other operation and maintenance expenses	Line 8 + Line 9	893,311

Schedule C-5a

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Historical Operation and Maintenance Expenses by Witnes
For the Historical Year Ended December 31, 202

Case No.: U-21389
Exhibit No.: A-3 (JCA-13)
Schedule: C-5
Page 2 of 3
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
Line No.	FERC Account	Description	Blumenstock	Bolden	Conrad	Cumberworth	Foster	Grob	Guinn	Hale	Kelly	McLean	Myrom	Weller	Total O&M	MPSC P-521 Pg 320-323	Variance
11	95000010	OP SUPV & ENGIN	$ 10,797,320	$ -	$ -	$ -	$ 166,256	$ -	$ -	$ -	$ 55,425	$ -	$ -	$ -	$ 11,019,000	$ 11,018,998	$ (2)
12	95011010	FUEL	-	-	-	-	-	-	-	-	-	-	-	-	-	336,055,164	336,055,164
13	95012010	FUEL - NONFUEL CLAUS	13,139,547	-	-	-	-	-	40,304	-	-	-	-	-	13,179,851	-	(13,179,851)
14	95020010	STEAM EXPENSES	16,196,757	-	-	-	-	-	-	-	-	-	-	-	16,196,757	16,564,896	368,139
15	95050010	ELECTRIC EXPENSES	10,297,527	-	-	-	-	-	-	-	-	-	-	-	10,297,527	10,297,527	(0)
16	95060010	MISCELL STEAM PWR	3,184,059	-	-	1,436,788	1,681,600	-	1,275,161	-	-	-	-	8,092,573	15,670,182	15,670,187	5
17	95100010	MTC SUPV & ENGIN	6,718,715	-	-	-	159,877	-	-	-	6	-	-	-	6,878,598	6,878,596	(2)
18	95110010	MTC OF STRUCTURES	5,086,561	-	-	-	-	-	-	-	-	-	-	-	5,086,561	5,074,894	(11,667)
19	95120010	MTC BOILER PLANT	21,973,994	-	-	-	-	-	-	-	-	-	-	-	21,973,994	21,803,113	(170,881)
20	95130010	MTCOF ELEC PLANT	3,835,701	-	-	-	-	-	-	-	-	-	-	-	3,835,701	3,835,701	0
21	95140010	MTC OF MISC STM PLT	1,154,938	-	-	-	-	-	-	-	-	-	-	-	1,154,938	1,154,818	(120)
22	95350010	OP SUPV & ENGIN- HY	1,191,870	-	-	97,525	41,585	-	12,040	-	4,601	-	-	1,107,101	2,454,721	2,454,715	(6)
23	95360010	WATER FOR PWR-HY	1,479,788	-	-	-	-	-	-	-	-	-	-	-	1,479,788	1,479,788	0
24	95370010	HYDRAULIC EXP-HY	3,498,259	-	-	-	-	-	-	-	-	-	-	-	3,498,259	3,498,259	(0)
25	95380010	ELECTRIC EXP-HY	1,369,839	-	-	-	-	-	-	-	-	-	-	-	1,369,839	1,369,839	(0)
26	95390010	MISCELL HY PWR GEN	532,930	-	-	286,112	544,622	-	32,377	-	-	-	-	-	1,396,042	1,396,042	0
27	95400010	RENTS-HYDRO PWR	(2,573)	-	-	-	-	-	-	-	-	-	-	-	(2,573)	(2,573)	(1)
28	95410010	MTC SUPV & ENGIN	1,502,214	-	-	-	38,395	-	3,629	-	-	-	-	-	1,544,239	1,563,932	19,693
29	95420010	MAINT OF STRUCT-HY	1,166,259	-	-	-	-	-	-	-	-	-	-	-	1,166,259	1,166,258	(1)
30	95430010	MAINT OF RESV DAM	3,067,766	-	-	-	-	-	-	-	-	-	-	-	3,067,766	3,067,768	2
31	95440010	MTC OF ELEC PLT-HY	1,851,466	-	-	-	-	-	-	-	-	-	-	-	1,851,466	1,851,465	(1)
32	95450010	MTC OF HYDRA PROD	5,302,392	-	-	-	-	-	-	-	-	-	-	-	5,302,392	5,302,391	(1)
33	95460010	SUPV & ENGG-OTH PWR	1,208,111	-	-	120,675	206,758	-	104,368	-	5,008	-	-	1,385,291	3,030,211	4,941,136	1,910,925
34	95470010	FUEL-OTHER PWR GEN	487,820	-	-	-	1,786	-	-	-	-	-	-	-	489,606	340,474,796	339,985,190
35	95480010	GEN EXPENSES	5,749,373	-	-	-	-	-	-	-	-	-	-	-	5,749,373	5,825,181	75,808
36	95490010	MISC OTHER PWR GEN	2,279,301	-	-	-	-	-	7,313	-	-	-	-	-	2,286,614	8,133,951	5,847,337
37	95500010	RENTS-OTHER PWR GEN	756	-	-	-	-	-	-	-	-	-	-	-	756	756	-
38	95510010	MTC SUPV & ENGIN	874,650	-	-	-	41,564	-	114,124	-	-	-	-	-	1,030,339	1,281,474	251,135
39	95520010	MAINT OF STRUCTURES	4,590	-	-	-	-	-	-	-	-	-	-	-	4,590	1,418,950	1,414,360
40	95530010	MAINT OF ELECT PLT	12,482,744	-	-	-	-	-	-	-	-	-	-	-	12,482,744	24,177,248	11,694,504
41	95540010	MTC OF MISC OTH GEN	1,971	-	-	-	-	-	-	-	-	-	-	-	1,971	1,971	0
42	95550010	PURCHASED POWER	-	-	-	-	-	-	-	-	-	-	-	-	-	1,484,172,064	1,484,172,064
43	95560010	SYS CONTROL AND DISP	6,990,986	-	-	95,231	-	-	-	-	972,820	-	-	1,248,185	9,307,222	9,193,515	(113,707)
44	95614010	SCHEDUL DISPATCH SVC	-	-	-	-	-	-	-	-	-	-	-	-	-	12,071,709	12,071,709
45	95618010	RELIAB PLAN STND SVC	-	-	-	-	-	-	-	-	1,424,875	-	-	-	1,424,875	1,884,724	459,849
46	95650010	TRANS OF ELEC OTHR	-	-	-	-	-	-	-	-	-	-	-	-	-	454,543,216	454,543,216
47	95757010	MKT ADMIN COMPL SVCS	-	-	-	-	-	-	-	-	-	-	-	-	-	8,309,570	8,309,570
48	95800010	OP SUPV & ENGG-DISTR	633,300	4,720,600	-	968,217	778,517	-	20,008	14,775	13,895,680	-	-	11,208,097	32,239,192	32,187,301	(51,891)
49	95820010	STATION EXP-DISTR	-	-	-	-	-	-	-	-	1,209,186	-	-	-	1,209,186	1,209,186	0
50	95830010	OVERHEAD LINE EXP	25,978	-	-	-	-	-	142	-	35,618,004	-	-	-	35,644,125	35,643,983	(142)
51	95840010	UNDERGRD LINE EXP	-	-	-	-	100,713	-	71	-	8,389,730	-	-	-	8,490,513	8,537,812	47,299
52	95841010	OPS ENERG STOR EQUIP	(0)	-	-	-	-	-	-	-	-	-	-	-	(0)	-	0
53	95850010	STREET LIGHT SIGNAL	-	-	-	-	-	-	-	-	1,718,539	-	-	-	1,718,539	1,718,538	(1)
54	95860010	METER EXP-DISTR	-	-	-	-	-	-	-	-	1,437,152	-	-	-	1,437,152	1,437,151	(1)
55	95870010	CUST INSTALL EXP	-	-	-	-	1,282	-	36	-	4,413,143	-	-	-	4,414,461	4,414,422	(39)
56	95880010	MISCELL DISTRI EXP	1,564,672	-	-	-	5,002,619	-	2,172,522	-	20,531,368	-	-	-	29,271,181	29,234,182	(36,999)
57	95890010	RENTS-DISTR	-	-	-	-	-	-	20,689	-	2,536,534	-	-	-	2,557,223	2,536,534	(20,689)
58	95900010	MTC SUPV AND ENGIN	25,978	1,530,137	-	-	1,282	-	-	-	3,196,101	-	-	-	4,753,498	4,753,497	(1)
59	95910010	MTC OF STRUCTURES	-	-	-	-	-	-	-	-	647,833	-	-	-	647,833	647,833	(0)
60	95920010	MTC OF STATION EQ	-	-	-	-	-	-	-	-	14,446,741	-	-	-	14,446,741	14,448,822	2,081
61	95922010	MTC ENERGY STOR EQUI	0	-	-	-	-	-	-	-	-	-	-	-	0	-	(0)
62	95930010	MTC OF OVH LINES	-	95,752,737	-	-	-	-	248	-	88,601,569	-	-	-	184,354,555	184,354,304	(251)
63	95940010	MTC OF LINES	-	-	-	-	-	-	-	-	2,002,292	-	-	-	2,002,292	2,002,292	0
64	95950010	MTC OF LINES TRANSF	-	-	-	-	-	-	-	-	230,107	-	-	-	230,107	230,107	0
65	95960010	MTC OF STREETLIGHT	-	-	-	-	-	-	-	-	179,033	-	-	-	179,033	179,033	(0)
66	95970010	MTC OF METERS	-	-	-	-	-	-	-	-	3,921,518	-	-	-	3,921,518	3,921,517	(1)
67	95980010	MTC MISC PLANT	-	-	-	-	-	-	-	-	8,100	-	-	-	8,100	8,100	(0)
68	99010010	SUPV CUST ACCT-E	-	-	-	-	621,859	-	379,953	8,154,734	915,805	-	-	-	10,072,351	10,026,909	(45,442)
69	99020010	MTR READING EXP-E	-	-	-	-	20,548	-	2,076	-	7,209,517	-	-	-	7,232,141	7,232,140	(1)
70	99030010	CUST REC COLL E	-	-	-	450,402	524,878	-	40,818	33,434,027	367,039	-	-	5,099,974	39,917,139	39,917,750	611
71	99041010	UNCOLL ACCTS-ELEC	-	-	-	-	18,816,745	-	-	-	-	-	-	-	18,816,745	18,482,855	(333,890)
72	99050010	MISC CUST ACCT E	-	-	-	-	-	-	-	5,694	-	-	-	-	5,694	5,694	(0)
73	99070010	SUPRV CUST SVC-ELEC	-	-	-	-	-	-	-	150,187	-	19,810,443	-	-	19,960,630	16,948,566	(3,012,064)
74	99080010	CUST ASSIST-ELEC	880,907	-	-	-	-	-	-	1,433,108	133,505	18,071,067	-	-	20,518,585	232,970,171	212,451,586
75	99090010	INFO AND INSTR-ELEC	1,923,803	-	-	-	14	-	-	-	-	-	-	-	1,923,817	1,923,817	(0)
76	99200010	A &G SAL-ELECT	1,112,220	-	3,426,806	1,710,164	33,661,113	1,205,914	3,002,252	538,782	-	-	-	5,471,340	50,128,592	50,141,524	12,932
77	99210010	OFFICE SUPP EXP-E	54,264	-	-	3,079,388	1,884,395	9,108	4,886,397	8,853	-	-	-	3,338,039	13,260,445	13,120,565	(139,880)
78	99220010	ADMIN TRANSF CR-E	-	-	(1,731,983)	-	(20,658,196)	-	-	-	-	-	-	-	(22,390,179)	(22,390,179)	0
79	99230010	OUTSIDE SVCS ELEC	64,948	-	-	1,633,779	10,102,578	1,057,650	779,354	234,089	320,281	-	-	16,254,287	30,446,966	34,101,339	3,654,373
80	99240010	PROP INSUR-ELEC	-	-	-	-	(8,795,123)	-	-	-	-	-	-	-	(8,795,123)	(8,795,123)	(0)
81	99250010	I&D ELECT	-	-	-	-	15,567,938	-	-	-	0	-	-	-	15,567,938	15,567,938	0
82	99260010	EMPL PEN & BENE-E	-	-	-	-	(784,404)	(44,472,283)	-	-	-	-	-	-	(45,256,688)	(45,256,688)	(0)
83	99280010	REGULATORY COM EXP-E	-	-	-	-	652,537	-	-	-	-	-	-	-	652,537	648,300	(4,237)
84	99302010	MISC GEN EXP-ELECT	318,977	-	-	-	3,603,390	-	-	7,492	-	-	-	-	3,929,859	11,789,548	7,859,689
85	99310010	RENTS-ELECTRIC	-	-	-	-	(46,821)	-	74,755	-	-	-	-	-	27,934	167,815	139,881
86	99350010	MTC OF GENL PLT-E	-	-	-	-	(222,294)	-	4,682,388	-	(68)	-	-	-	4,460,026	4,655,277	195,251
87		Sub-Total O&M by Witness	$ 150,030,678	$ 102,003,474	$ 1,694,823	$ 9,878,282	$ 63,716,010	$ (42,199,611)	$ 17,651,027	$ 43,981,740	$ 214,391,444	$ 37,881,510	$ -	$ 53,204,887	$ 652,234,264	$ 3,516,654,871	$ 2,864,420,607

Schedule C5

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Historical Operation and Maintenance Expenses by Witnes
For the Historical Year Ended December 31, 202

Case No.: U-21389
Exhibit No.: A-3 (JCA-13)
Schedule: C-5
Page: 3 of 3
Witness: JCAponte
Date: May 2023

Line No.	(a) FERC Account	(b) Description	(c) Blumenstock	(d) Bolden	(e) Conrad	(f) Cumberworth	(g) Foster	(h) Grob	(i) Guinn	(i) Hale	(i) Kelly	(i) McLean	(j) Myrom	(k) Weller	(l) Total O&M	(m) MPSC P-521 Pg 320-323	(n) Variance
		Items Included in CECo Other O&M Expense Not Included in the MPSC P-521															
88	94040010	Limited Term Utility -Electric	-	-	-	-	-	-	-	-	-	-	-	10,240	10,240	10,240	-
89	94160000	Expense Jobbing & CTR	-	-	-	12,402	-	-	-	-	-	-	-	175,356	187,758	187,758	-
90	94265010	Other Deductions	(0)	-	980,944	-	0	-	-	-	45,619	-	-	-	1,026,562	1,026,562	-
91		Allocation Difference	-	-	-	(185,707)	-	-	-	-	-	-	-	(319,303)	(505,010)	(505,010)	-
92		Total O&M by Witness (Sum Lines 87-91)	$ 150,030,678	$ 102,003,474	$ 2,675,767	$ 9,704,976	$ 63,716,010	$ (42,199,611)	$ 17,651,027	$ 43,981,740	$ 214,437,063	$ 37,881,510	$ -	$ 53,071,180	$ 652,953,814	$ 3,517,374,421	$ 2,864,420,607
		Reconciliation of MPSC P-521 to Witness Other O&M Expense															
93	95011010	FUEL														(336,055,164)	(336,055,164)
94	95012010	FUEL - NONFUEL CLAUS														13,179,851	13,179,851
95	95020010	STEAM EXPENSES														(368,139)	(368,139)
96	95460010	SUPV & ENGG-OTH PWR														(1,930,623)	(1,930,623)
97	95470010	FUEL-OTHER PWR GEN														(339,985,190)	(339,985,190)
98	95480010	GEN EXPENSES														(75,808)	(75,808)
99	95490010	MISC OTHER PWR GEN														(5,847,337)	(5,847,337)
100	95510010	MTC SUPV & ENGIN														(251,136)	(251,136)
101	95520010	MAINT OF STRUCTURES														(1,414,359)	(1,414,359)
102	95530010	MAINT OF ELECT PLT														(11,694,504)	(11,694,504)
103	95550010	PURCHASED POWER														(1,484,172,064)	(1,484,172,064)
104	95560010	SYS CONTROL AND DISP														113,707	113,707
105	95614010	SCHEDUL DISPATCH SVC														(12,071,709)	(12,071,709)
106	95618010	RELIAB PLAN STND SVC														(459,849)	(459,849)
107	95650010	TRANS OF ELEC OTHR														(454,543,216)	(454,543,216)
108	95757010	MKT ADMIN COMPL SVCS														(8,309,570)	(8,309,570)
109	95841010	OPS ENERG STOR EQUIP														(47,370)	(47,370)
110	95922010	MTC ENERGY STOR EQUI														(1,532)	(1,532)
111	99041010	UNCOLL ACCTS-ELEC														333,890	333,890
112	99070010	SUPRV CUST SVC-ELEC														3,012,064	3,012,064
113	99080010	CUST ASSIST-ELEC														(212,451,588)	(212,451,588)
114	99200010	A &G SAL-ELECT														(14,070)	(14,070)
115	99230010	OUTSIDE SVCS ELEC														(3,650,734)	(3,650,734)
116	99302010	MISC GEN EXP-ELECT														(7,859,689)	(7,859,689)
117		Rounding Adjustments														143,533	143,533
118		Total O&M by Witness (Sum Lines 92-117)														$ 652,953,814	$ 0
																-	

Schedule: C-6

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Depreciation and Amortization Expenses
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-3 (JCA-14)
Schedule: C-6

Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) ($000)
1	Steam production plant - depreciation expense	P-521 p. 321, Line 2(b) through 6(b)	314,817
2	Transmission plant - depreciation expense	P-521 p. 336M, Line 7(b)	-
3	Distribution plant - depreciation expense	P-521 p. 336M, Line 8(b)	298,444
4	General plant - depreciation expense	P-521 p. 336M, Line 9(b)	11,411
5	Common plant - electric - depreciation expense	P-521 p. 336M, Line 10(b)	20,523
6	Total amortization of limited-term electric plant (Acct 404)	P-521 p. 336M, Line 11(c)	871
7	Total amortization of other electric plant (Acct 405)	P-521 p. 336M, Line 11(d)	71,862
8	Amortization of utility plant acquisition adjustment	P-521 p. 115, Line 9 (e)	5,554
9	Regulatory debits	P-521 p. 115, Line 12 (e)	27,964
10	Subtotal	Sum Lines 1 - 9	751,446
11	Less: transmission expense	Line 2 *-1	-
12	Total depreciation and amortization expenses	Line 10 + Line 11	751,446

Schedule C-7

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
General Taxes
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-3 (JCA-15)
Schedule: C-7
Page 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)
Line No.	**Description**	**Source**	**Total ($000)**
1	Real and personal property taxes	P-521 p. 262.1 (i), Line 43	203,698
2	Federal unemployment tax	P-521 p. 262.1 (i), Line 4	125
3	Federal FICA tax	P-521 p. 262.1 (i), Line 6	25,257
4	State income tax	P-521 p. 262.1 (i), Line 17	735
5	Total payroll taxes	Sum Lines 2 - 4	26,117
6	State fuel tax	P-521 p. 262.1 (i), Line 19	-
7	State MPSC assessment	P-521 p. 262.1 (i), Line 35	9,723
8	State franchise tax	P-521 p. 262.1 (i), Line 22	-
9	State sales and use tax absorbed by company	P-521 p. 262.1 (i), Line 23-27	-
10	Other general taxes	Sum Lines 6 - 9	9,723
11	Total general taxes	Line 1 + Line 5 + Line 10	239,538

Schedule: C-8

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Federal Income Taxes
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-3 (JCA-16)
Schedule: C-8

Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) ($000)
1	Federal income taxes	P-521 p. 115, Line 15 (e)	(68,683)
2	Provision for deferred income taxes	P-521 p. 115, Line 17 (e)	463,047
3	Provision for deferred income taxes - credit	(-) P-521 p. 115, Line 18 (e)	(315,111)
4	Investment tax credit adjustment, net	P-521 p. 115, Line 19 (e)	18,232
4	Deferred state income tax	Tax Department	(38,551)
5	Deferred other (local) income tax	Tax Department	(1,354)
6	Total federal income taxes	Sum Lines 1 - 5	57,580

Schedule: C-9

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
State Income Taxes
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-3 (JCA-17)
Schedule: C-9

Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) ($000)
1	State income taxes	P-521 p. 262.1 (i), Line 13-15	5,905
2	Deferred state income taxes	Tax Department	38,551
3	Total state income taxes	Line 1 + Line 2	44,456

Schedule: C-10

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Other (or Local) Taxes
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-3 (JCA-18)
Schedule: C-10

Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) ($000)
1	Other (local) income taxes	P-521 p. 262.1 (i), Line 44	(31)
2	Deferred other (local) income taxes	Tax Department	1,354
3	Total other (local) income taxes	Line 1 + Line 2	1,323

Schedule: C-11

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Allowance for Funds Used During Construction
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-3 (JCA-19)
Schedule: C-11
Page 1 of 1
Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) ($000)
1	Total allowance for funds used during construction	WP-JCA-11	5,520

Schedule: C-12

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Pro Forma Interest Adjustment
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-3 (JCA-20)
Schedule: C-12
Page 1 of 1
Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) Total ($000)
1	Rate base	Exhibit No.: A-2 (JCA-3)	12,647,343
2	Weighted cost of debt {1}	Exhibit No.: A-4 (JCA-22)	0.0145
3	Allowable interest expense	Line 1 * Line 2	183,636
4	Actual interest expense {2}	WP-JCA-11, WP-JCA-15	200,816
5	Increase/ (decrease) in allowable interest deduction	Line 3 - Line 4	(17,181)
6	Impact on taxable income	Line 5 * -1	17,181
7	Impact on local income taxes	Line 6 * 0.16% Other (Local) Income Tax Rate	27
8	Impact on state income taxes	Line 6 * 5.31% State Income Tax Rate	912
9	Impact on federal taxable income	Line 6 - Line 7 - Line 8	16,241
10	Impact on federal income tax	Line 9 * 21.00% Federal Income Tax Rate	3,411
11	Total impact on net operating income	(Line 7 + Line 8 + Line 10) * -1	(4,350)

Notes

{1} Excludes JDITC
{2} Excludes PPA lease interest expense

Schedule: C-13

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Interest Synchronization Adjustment
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-3 (JCA-21)
Schedule: C-13

Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) Total ($000)
1	Rate base	Exhibit No.: A-2 (JCA-3)	12,647,343
2	JDITC debt-related portion of the capital structure	Exhibit No.: A-4 (JCA-22)	0.0026
3	Portion of rate base funded by JDITC	Line 1 * Line 2	32,351
4	Cost of JDITC - debt portion	Exhibit No.: A-4 (JCA-22)	0.0368
5	Allowable JDITC interest expense	Line 3 * Line 4	1,190
6	Impact on taxable income	Line 5 * -1	(1,190)
7	Impact on local income taxes	Line 6 * 0.16% Other (Local) Income Tax Rate	(2)
8	Impact on state income taxes	Line 6 * 5.31% State Income Tax Rate	(63)
9	Impact on federal taxable income	Line 6 - Line 7 - Line 8	(1,125)
10	Impact on federal income tax	Line 9 * 21.00% Federal Income Tax Rate	(236)
11	Total impact on net operating income	(Line 7 + Line 8 + Line 10) * -1	301

Schedule: D-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Overall Rate of Return Summary
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-4 (JCA-22)
Schedule: D-1

Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
		Capital Structure				**Weighted Cost**			
Line No	**Description**	**Amount ($000) {1}**	**Percent Permanent Capital**	**Percent of Total Capital**	**Cost Rate %**	**Permanent Capital**	**Total Cost %**	**Conversion Factor**	**Pre-Tax Return**
1	Long term debt	8,650,491	46.59%	38.08%	3.68% {2}	1.71%	1.40%		1.40%
2	Preferred stock	37,315	0.20%	0.16%	4.50% {3}	0.01%	0.01%	1.3391	0.01%
3	Common equity	9,880,631	53.21%	43.50%	9.90% {4}	5.27%	4.31%	1.3391	5.77%
4	Permanent capital	18,568,436							
5	Notes payable	118,110		0.52%	7.92% {5}		0.04%		0.04%
6	Advanced renewable reg liability	28,988		0.13%	7.92% {5}		0.01%		0.01%
7	Short term debt	147,098							
8	Deferred federal income tax	3,874,254		17.06%	0.00%		0.00%		0.00%
9	Deferred JDITC - long term debt	58,102		0.26%	3.68%		0.01%		0.01%
10	Deferred JDITC - preferred stock	251		0.00%	4.50%		0.00%	1.3391	0.00%
11	Deferred JDITC - common equity	66,364		0.29%	9.90%		0.03%	1.3391	0.04%
12	Total deferred JDITC {6}	124,716							
13	Total	22,714,505					5.80%		7.28%

Notes

{1} Amount reflects the 13-month average balance as of December 31, 2022
{2} Exhibit No.: A-4 (JCA-23)
{3} Exhibit No.: A-4 (JCA-25)
{4} Exhibit No.: A-4 (JCA-26)
{5} Exhibit No.: A-4 (JCA-24)
{6} The total deferred JDITC balance on line 12 is allocated to lines 9 through 11 based on the percent of permanent capital in column (c)

Schedule: D-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Long Term Debt (Excluding Securitization)
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-4 (JCA-23)
Schedule: D-2
Page 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Line No	Description	Original Issue Date	Stated Maturity Date	Interest Rate %	Amount of Offering ($000)	Price to Public %	Underwriting & Financing Expense %	Net Proceeds to the Company %	Cost Based on Net Proceeds %	Amount Outstanding ($000) {1}	Annual Cost ($000)
	First Mortgage Bonds										
1	FMB 5.80% - $175m - Due 09/15/2035	2005-08-11	2035-09-15	5.800%	175,000	99.81%	0.875%	98.76%	5.888%	175,000	10,304
2	FMB 6.17% - $50m - Due 09/01/2040	2010-09-01	2040-09-01	6.170%	50,000	100.00%	0.906%	99.02%	6.243%	50,000	3,121
3	FMB 4.97% - $50m - Due 10/15/2040	2010-10-15	2040-10-15	4.970%	50,000	100.00%	0.500%	99.46%	5.005%	50,000	2,502
4	FMB 3.19% - $52m - Due 12/15/2024	2012-12-17	2024-12-15	3.190%	51,500	100.00%	0.501%	99.46%	3.244%	51,500	1,671
5	FMB 3.39% - $36m - Due 12/15/2027	2012-12-17	2027-12-15	3.390%	35,500	100.00%	0.501%	99.46%	3.436%	35,500	1,220
6	FMB 4.31% - $263m - Due 12/15/2042	2012-12-17	2042-12-15	4.310%	263,000	100.00%	0.501%	99.47%	4.342%	263,000	11,418
7	FMB 3.95% - $425m - Due 05/15/2043	2013-05-17	2043-05-15	3.950%	425,000	99.84%	0.875%	98.81%	4.019%	425,000	17,079
8	FMB 3.375% - $325m - Due 08/15/2023	2013-08-09	2023-08-15	3.375%	325,000	99.95%	0.650%	99.18%	3.472%	325,000	11,284
9	FMB 3.125% - $250m - Due 08/31/2024	2014-08-18	2024-08-31	3.125%	250,000	99.90%	0.650%	99.11%	3.230%	250,000	8,074
10	FMB 4.35% - $250m - Due 08/31/2064	2014-08-18	2064-08-31	4.350%	250,000	99.14%	0.875%	98.14%	4.443%	250,000	11,107
11	FMB 4.10% - $250m - Due 11/15/2045	2015-11-02	2045-11-15	4.100%	250,000	99.91%	0.875%	98.86%	4.167%	250,000	10,417
12	FMB 3.25% - $450m - Due 08/15/2046	2016-08-10	2046-08-15	3.250%	450,000	99.22%	0.875%	98.16%	3.347%	450,000	15,063
13	FMB 3.95% - $350m - Due 07/15/2047	2017-02-15	2047-07-15	3.950%	350,000	99.58%	0.875%	98.52%	4.035%	350,000	14,122
14	FMB 3.18% - $40m - Due 09/28/2032 (Private Placement)	2017-09-28	2032-09-28	3.180%	40,000	100.00%	0.301%	99.67%	3.208%	40,000	1,283
15	FMB 3.52% - $125m - Due 09/28/2037 (Private Placement)	2017-09-28	2037-09-28	3.520%	125,000	100.00%	0.402%	99.56%	3.551%	125,000	4,439
16	FMB 3.86% - $20m - Due 09/28/2052 (Private Placement)	2017-09-28	2052-09-28	3.860%	20,000	100.00%	0.703%	99.22%	3.901%	20,000	780
17	FMB 3.18% - $60m - Due 11/15/2032 (Private Placement)	2017-11-15	2032-11-15	3.180%	60,000	100.00%	0.301%	99.67%	3.208%	60,000	1,925
18	FMB 3.6% - $350m - Due 8/15/2032	2022-08-11	2032-08-15	3.600%	350,000	99.93%	0.650%	99.14%	3.703%	350,000	12,961
19	FMB 3.52% - $210m - Due 11/15/2037 (Private Placement)	2017-11-15	2037-11-15	3.520%	210,000	100.00%	0.402%	99.56%	3.551%	210,000	7,457
20	FMB 3.86% - $30m - Due 11/15/2052 (Private Placement)	2017-11-15	2052-11-15	3.860%	30,000	100.00%	0.703%	99.22%	3.901%	30,000	1,170
21	FMB 4.05% - $550m - Due 05/15/2048	2018-05-14	2048-05-15	4.050%	550,000	98.97%	0.875%	97.89%	4.174%	550,000	22,955
22	FMB 3.68% - $100m - Due 10/01/2027 (Private Placement)	2018-10-01	2027-10-01	3.680%	100,000	100.00%	0.145%	99.84%	3.701%	100,000	3,701
23	FMB 4.01% - $215m - Due 10/01/2038 (Private Placement)	2018-10-01	2038-10-01	4.010%	215,000	100.00%	0.323%	99.65%	4.036%	215,000	8,677
24	FMB 4.28% - $185m - Due 10/01/2057 (Private Placement)	2018-10-01	2057-10-01	4.280%	185,000	100.00%	0.629%	99.32%	4.316%	185,000	7,985
25	FMB 3.80% - $300m - Due 11/15/2028	2018-11-13	2028-11-15	3.800%	300,000	99.75%	0.650%	99.00%	3.922%	300,000	11,765
26	FMB 4.35% - $550m - Due 04/15/2049	2018-11-13	2049-04-15	4.350%	550,000	99.62%	0.875%	98.56%	4.436%	550,000	24,400
27	FMB 3.75% - $300m - Due 02/15/2050	2019-05-28	2050-02-15	3.750%	300,000	98.83%	0.875%	97.75%	3.876%	300,000	11,627
28	FMB 3.10% - $550m - Due 08/15/2050	2019-09-03	2050-08-15	3.100%	550,000	99.29%	0.875%	98.32%	3.186%	550,000	17,521
29	FMB variable {a} - $76m - Due 09/15/2069	2019-09-19	2069-09-15	2.993%	75,649	100.00%	1.000%	98.01%	3.071%	75,649	2,323
30	FMB 3.50% - $575m - Due 08/01/2051	2020-03-17	2051-08-01	3.500%	575,000	99.61%	0.875%	98.51%	3.579%	575,000	20,580
31	FMB 2.50% - $525m - Due 05/01/2060	2020-05-13	2060-05-01	2.500%	525,000	99.15%	0.875%	98.10%	2.576%	525,000	13,526
32	FMB variable {b} - $134m - Due 05/20/2070	2020-05-20	2070-05-20	2.684%	134,349	100.00%	1.000%	98.71%	2.731%	134,349	3,670
33	FMB variable {c} - $126m - Due 10/07/2070	2020-10-07	2070-10-07	2.048%	126,497	100.00%	1.000%	98.71%	2.090%	126,497	2,644
34	FMB 0.35% - $300m - Due 06/01/2023	2020-12-14	2023-06-01	0.350%	300,000	99.97%	0.300%	99.49%	0.559%	300,000	1,678
35	FMB 2.65% - $300m - Due 8/15/2052	2021-08-12	2052-08-15	2.650%	300,000	99.92%	0.875%	98.85%	2.705%	300,000	8,116
36	FMB 4.2% - $450m - Due 9/1/2052	2022-08-11	2052-09-01	4.200%	450,000	99.93%	0.875%	98.79%	4.272%	450,000	19,222
37	Total First Mortgage Bonds				8,996,495					8,996,495	327,789
	Other Long-Term Debt										
38	MSF-VRBs	2021-10-07	2035-04-01	0.88%	35,000	100.00%	0.000%	98.62%	0.928%	35,000	325
39	2019 MSF VRBs	2019-10-01	2049-10-01	1.80%	75,000	100.00%	0.450%	98.45%	1.868%	75,000	1,401
40	Total other long term debt				110,000					110,000	1,726
41	Total long term debt, gross									9,106,495	329,515
42	Amortization of loss on reacquired debt										4,420
43	Total unamortized (premiums)/discounts									(27,194)	
44	Total long term debt before unamortized debt costs								3.68%	9,079,301	333,935
45	Unamortized debt costs									(69,468)	
46	Total long term debt									9,009,833	

Notes

{1} Amount reflects the outstanding balance for the 12-months ended December 31, 2022

Schedule: D-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Short Term Debt
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-4 (JCA-24)
Schedule: D-3

Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)
Line No	**Description**	**Amount ($000)**	**Percent Total Capital {1}**	**Cost Rate {2}**	**Weighted Average Cost of Short Term Debt ($000)**
1	Notes payable	118,110	0.52%		
2	Advanced renewable reg liability	28,988	0.13%		
3	Cost of short term debt	147,098		7.92%	11,645

Notes

{1} Exhibit No.: A-4 (JCA-22)
{2} Treasury Department

Schedule: D-4

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Preferred Stock
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-4 (JCA-25)
Schedule: D-4

Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No	**Description**	**Annual Dividend ($000)**	**Par Value ($000)**	**Discount or Premium ($000)**	**Finance Expense ($000)**	**Net Proceeds Received ($000)**	**Number of Shares Outstanding**	**Total Value of Outstanding Proceeds ($000)**	**Cost Rate %**	**Annual Dollar Amount ($000)**
1	Preferred stock	4.50	100	-	-	100	373,148	37,315	4.50%	1,679

Schedule: D-5

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Common Equity
For the Historical Year Ended December 31, 2022

Case No.: U-21389
Exhibit No.: A-4 (JCA-26)
Schedule: D-5

Witness: JCAponte
Date: May 2023

Line No	(a) Description
1	The Company's authorized cost of common equity is 9.90%. This rate was authorized by the Michigan Public Service Commission in Electric Rate Case U-20963 issued on 12/22/2021.

Schedule: A-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Revenue Deficiency (Sufficiency)
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-11 (JCA-27)
Schedule: A-1
Page 1 of 1
Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) Total ($000)	(d) Jurisdictional ($000)
1	Rate base	Exhibit No.: A-12 (JCA-30)	14,404,493	14,354,217
2	Adjusted net operating income	Exhibit No.: A-13 (JCA-37)	717,340	722,563
3	Overall rate of return	Line 2 / Line 1	4.98%	5.03%
4	Required rate of return	Exhibit No.: A-14 (MRB-1), Schedule D-1	6.11%	6.11%
5	Income requirement	Line 1 * Line 4	880,283	877,211
6	Income deficiency (sufficiency)	Line 5 - Line 2	162,943	154,648
7	Revenue conversion factor	Exhibit No.: A-13 (JCA-38)	1.3391	1.3391
8	Revenue deficiency (sufficiency)	Line 6 * Line 7	218,193	207,084

Schedule: A-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Financial Metrics - Ratemaking Basis
For the Projected 12-Month Period Ending February 28, 2025
ELECTRIC RESULTS ONLY
($000)

Case No.: U-21389
Exhibit No.: A-11 (JCA-28)
Schedule: A-2

Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) No Rate Relief	(c) Full Rate Relief
1	Operating revenues	5,076,926	5,284,010
2	Operating expenses	4,283,833	4,283,833
3	Pre-tax operating income	793,093	1,000,177
4	Income taxes	96,173	148,609
5	Net operating income	696,920	851,568
6	Tax effect of pro forma interest on NOI	Included in Line 4	Included in Line 4
7	AFUDC	25,643	25,643
8	Interest charges, net of tax benefit	(246,358)	(246,358)
9	Preferred stock dividends	(889)	(889)
10	Net income available to common stockholders and JDITC	475,316	629,964
11	Return assignable to JDITC	(3,447)	(3,447)
12	Net income available to common stockholders	471,869	626,517
13	Average common equity	6,112,363	6,112,363
14	Earned rate of return on common equity	7.72%	10.25%
15	Authorized rate of return on common equity {1}	10.25%	10.25%

Schedule: A-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Financial Metrics - Ratemaking Basis
For the Projected 12-Month Period Ending February 28, 2025
ELECTRIC RESULTS ONLY
($000)

Case No.: U-21389
Exhibit No.: A-11 (JCA-28)
Schedule: A-2
Page 2 of 3
Witness: JCAponte
Date: May 2023

Line No	(a) Description	(b) No Rate Relief	(c) Full Rate Relief
	EBIT Interest Coverage Ratio		
16	Pre-tax operating income	793,093	1,000,177
17	AFUDC	25,643	25,643
18	Total EBIT	818,736	1,025,820
19	Interest charges, net of tax benefit	246,358	246,358
20	EBIT interest coverage ratio	3.32	4.16
	EBITDA Interest Coverage Ratio		
21	Total EBIT	818,736	1,025,820
22	Depreciation and amortization	730,079	730,079
23	EBITDA	1,548,814	1,755,898
24	Interest charges, net of tax benefit	246,358	246,358
25	EBITDA interest coverage ratio	6.29	7.13
	FFO Interest Coverage Ratio {2}		
26	Net operating income	696,920	851,568
27	Depreciation and amortization	730,079	730,079
28	Deferred income taxes	166,168	166,168
29	AFUDC	25,643	25,643
30	Other major recurring non-cash items	-	-
31	Interest paid	202,104	202,104
	Less:		
32	Operating lease adjustment to depreciation	-	-
33	Subtotal	1,820,913	1,975,561
34	Interest charges, net of tax benefit	246,358	246,358
35	FFO interest coverage ratio	7.39	8.02
	Overall Fixed Charge Coverage Ratio		
36	Net income available to common stockholders	471,869	626,517
37	Interest charges, net of tax benefit	246,358	246,358
38	Subtotal numerator	718,227	872,875
39	Interest charges, net of tax benefit	246,358	246,358
40	Preferred stock dividends	889	889
41	Subtotal denominator	247,247	247,247
42	Overall fixed charge coverage ratio	2.90	3.53

Schedule: A-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Financial Metrics - Ratemaking Basis
For the Projected 12-Month Period Ending February 28, 2025
ELECTRIC RESULTS ONLY
($000)

Case No.: U-21389
Exhibit No.: A-11 (JCA-28)
Schedule: A-2
Page 3 of 3
Witness: JCAponte
Date: May 2023

Line No	(a) Description	(b) No Rate Relief	(c) Full Rate Relief
	Cash Flow Coverage of Dividend Ratio		
43	Net income available to common stockholders	471,869	626,517
44	Depreciation and amortization	730,079	730,079
45	Deferred taxes	166,168	166,168
46	Subtotal	1,368,116	1,522,763
47	Common dividends {3}	377,496	501,214
48	Cash flow coverage of dividends ratio	3.62	3.04
	Common Dividend Payout Ratio		
49	Common dividends {3}	377,496	501,214
50	Net income available to common stockholders	471,869	626,517
51	Common dividend payout ratio	80%	80%
	Permanent Capitalization		
52	Long term debt, excluding securitization	10,833	10,833
53	Preferred stock	37	37
54	Common equity	11,543	11,543
55	Permanent capitalization	22,413	22,413
56	Long term debt, excluding securitization	48.33%	48.33%
57	Preferred stock	0.17%	0.17%
58	Common equity	51.50%	51.50%
59	Permanent capitalization	100.00%	100.00%

Notes

{1} The company is requesting an ROE of 10.25% in this case
{2} FFO = Funds Flow from Operations
{3} Consumers Energy pays dividends to the parent as a total company. This number represents the company's 80% dividend policy applied to Net Income Available to Common Stockholders

Schedule: A-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of the Historical and Projected Revenue Requirement
For the Projected 12-Month Period Ending February 28, 2025
($000)

Case No.: U-21389
Exhibit No.: A-11 (JCA-29)
Schedule: A-3

Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
Line		Source		Jurisdictional		
No.	Description	Historical Year	Projected Test Year	Historical Year	Change	Test Year
1	Net utility plant	Exhibit No.: A-2 (JCA-3)	Exhibit No.: A-12 (JCA-30)	11,232,261	96,095	11,328,356
2	Working capital	Exhibit No.: A-2 (JCA-3)	Exhibit No.: A-12 (JCA-30)	1,367,175	1,658,686	3,025,861
3	Rate base	Line 1 + Line 2	Line 1 + Line 2	12,599,436	1,754,781	14,354,217
4	Rate of return	Exhibit No.: A-4 (JCA-22)	Exhibit No.: A-14 (MRB-1), Schedule D-	5.80%		6.11%
5	Income requirement	Line 3 * Line 4	Line 3 * Line 4	731,292	145,918	877,211
6	Adjusted net operating income	Exhibit No.: A-3 (JCA-9)	Exhibit No.: A-13 (JCA-37)	657,238	65,325	722,563
7	Income deficiency (sufficiency)	Line 5 - Line 6	Line 5 - Line 6	74,054	80,594	154,648
8	Revenue conversion factor	Exhibit No.: A-3 (JCA-10)	Exhibit No.: A-13 (JCA-38)	1.3391		1.3391
9	Revenue deficiency (sufficiency)	Line 7 * Line 8	Line 7 * Line 8	99,164	107,920	207,084

Schedule: B-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Rate Base
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-12 (JCA-30)
Schedule: B-1
Page 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)
Line No.	**Description**	**Source**	**Total ($000)**	**Jurisdictional ($000)**
1	Total utility plant	Exhibit No.: A-12 (JCA-32)	17,265,169	17,217,600
2	Depreciation reserve	Exhibit No.: A-12 (JCA-33)	5,848,183	5,831,886
3	Net utility plant	Line 1 - Line 2	11,416,986	11,385,714
4	Customer advances for construction	Exhibit No.: A-2 (JCA-7)	(57,395)	(57,358)
5	Utility plant rate base	Sum Lines 3 - 4	11,359,591	11,328,356
6	Working capital	Exhibit No.: A-12 (JCA-34)	3,044,903	3,025,861
7	Total rate base	Line 5 + Line 6	14,404,493	14,354,217

Schedule: B-1a

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Development of Rate Base
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-12 (JCA-31)
Schedule: B-1a

Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)
Line No.	**Description**	**Source**	**Total ($000)**	**Jurisdictional ($000)**
1	Net utility plant	Exhibit No.: A-2 (JCA-3)	11,274,022	11,232,261
2	Working capital	Exhibit No.: A-2 (JCA-3)	1,373,322	1,367,175
3	Total rate base - historical year	Line 1 + Line 2	12,647,343	12,599,436
	Change in Rate Base			
4	Change in net utility plant {1}	Line 10	85,569	96,095
5	Change in working capital	Line 13	1,671,581	1,658,686
6	Net change in rate base	Sum Lines 4 - 5	1,757,150	1,754,781
7	Total rate base - projected year	Line 3 + Line 6	14,404,493	14,354,217
	Change in Net Utility Plant			
8	Net utility plant - projected year	Exhibit No.: A-12 (JCA-30)	11,359,591	11,328,356
9	Net utility plant - historical year	Exhibit No.: A-2 (JCA-3)	11,274,022	11,232,261
10	Change in net utility plant	Line 8 - Line 9	85,569	96,095
	Change in Working Capital			
11	Working capital - projected year	Exhibit No.: A-12 (JCA-34)	3,044,903	3,025,861
12	Working capital - historical year	Exhibit No.: A-2 (JCA-6)	1,373,322	1,367,175
13	Change in working capital	Sum Lines 11 - 12	1,671,581	1,658,686
	Change in Jurisdictional Factors			
14	Net utility plant - projected year - jurisdictional	Exhibit No.: A-12 (JCA-30)	11,328,356	
15	Net utility plant - projected year - total electric	Exhibit No.: A-12 (JCA-30)	11,359,591	
16	Jurisdictional factor	Line 14 / Line 15	0.9973	
17	Net utility plant - historical year - jurisdictional	Exhibit No.: A-2 (JCA-3)	11,232,261	
18	Net utility plant - historical year - jurisdictional using new factor	Exhibit No.: A-2 (JCA-3), Line 5 * Line 16	11,243,022	
19	Change in net utility plant due to change in factor	Line 18 - Line 17	10,761	
20	Working capital - projected year - jurisdictional	Exhibit No.: A-12 (JCA-30)	3,025,861	
21	Working capital - projected year - total electric	Exhibit No.: A-12 (JCA-30)	3,044,903	
22	Jurisdictional factor	Line 20 / Line 21	0.9937	
23	Working capital - historical year - jurisdictional	Exhibit No.: A-2 (JCA-3)	1,367,175	
24	Working capital - historical year - jurisdictional using new factor	Exhibit No.: A-2 (JCA-3), Line 6 * Line 22	1,364,733	
25	Change in working capital due to change in factor	Line 24 - Line 23	(2,441)	

Notes

{1} Includes impact of change in utility plant jurisdictional factors calculated on line 19

Schedule: B-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Total Utility Plant
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-12 (JCA-32)
Schedule: B-2

Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)
Line No.	**Description**	**MPSC Account Number**	**Source**	**Total ($000)**	**Jurisdictional ($000)**
1	Plant-in-service	101	WP-JCA-23	16,521,245	16,478,839
2	Plant held of future use	105		11,234	11,190
3	Construction work in progress	107	WP-JCA-24	732,689	727,572
4	Total utility plant		Sum Lines 1 - 3	17,265,169	17,217,600

Schedule: B-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Depreciation Reserve
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-12 (JCA-33)
Schedule: B-3

Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) ($000)
1	Distribution	WP-JCA-25	3,625,214
2	Production (Hydro)	WP-JCA-25	311,322
3	Production (Hydro Ludington)	WP-JCA-25	237,449
4	Production (Steam)	WP-JCA-25	272,063
5	Production (Solar)	WP-JCA-25	3,672
6	Production (Other)	WP-JCA-25	428,501
7	Intangibles	WP-JCA-25	528,057
8	E-GP Structures	WP-JCA-25	43,665
9	E-GP Computers	WP-JCA-25	7,227
10	E-GP Transportation	WP-JCA-25	65,651
11	E-GP Other	WP-JCA-25	26,060
12	C-GP Structures	WP-JCA-25	81,422
13	C-GP Computers	WP-JCA-25	25,553
14	C-GP Transportation	WP-JCA-25	64,845
15	C-GP Other	WP-JCA-25	38,301
16	Zeeland Acq Adjustment	WP-JCA-25	89,181
17	Total depreciation reserve and other deductions	Sum Lines 1 - 16	5,848,183
18	Jurisdictional factor	Cost of Service Study	0.997213
19	Total depreciation reserve and other deductions - jurisdictional	Line 17 * Line 18	5,831,886

Schedule: B-4

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Working Capital
For the Projected 12-Month Period Ending February 28, 2025
($000)

Case No.: U-21389
Exhibit No.: A-12 (JCA-34)
Schedule: B-4
Page 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
Line No	**Description**	**Historical Year Working Capital**	**Change**	**December 2022 Working Capital**	**Test Year Adjustments**	**Test Year Working Capital**
1	Cash, cash equivalents, and restricted cash	20,157	-	20,157	33,522	53,679
2	Accounts and notes receivable	284,586	-	284,586	-	284,586
3	Fuel stock	47,745	-	47,745	-	47,745
4	Materials and supplies	134,417	-	134,417	-	134,417
5	Allowances	14	-	14	-	14
6	Prepayments	769,539	-	769,539	1,569	771,108
7	Accrued revenue	302,353	-	302,353	-	302,353
8	Deferred taxes	228,375	-	228,375	-	228,375
9	Deferred debits	635,437	-	635,437	1,659,650	2,295,087
10	Total assets	2,422,622	-	2,422,622	1,694,742	4,117,364
11	Accounts payable	558,140	-	558,140	-	558,140
12	Customer deposits	18,319	-	18,319	-	18,319
13	Accrued interest	49,157	-	49,157	-	49,157
14	Dividends payable	38,060	-	38,060	-	38,060
15	Accrued taxes	242,540	-	242,540	28,680	271,220
16	Other liabilities	65,860	-	65,860	-	65,860
17	Deferred credits	77,226	-	77,226	(5,519)	71,706
18	Total liabilities	1,049,301	-	1,049,301	23,161	1,072,461
19	Total working capital	1,373,322	-	1,373,322	1,671,581	3,044,903
20	Jurisdictional factor					0.993747
21	Total working capital - jurisdictional					3,025,861

Notes

Column (b): Exhibit No.: A-2 (JCA-6)
Column (c): Column (d) - Column (b)
Column (d): Exhibit No.: A-12 (JCA-35) Page 1 of 1, Column (b)
Column (e): Exhibit No.: A-12 (JCA-35) Page 1 of 1, Column (j)
Column (f): Column (d) + Column (e)

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Development of Working Capital
For the Projected 12-Month Period Ending February 28, 2025
($000)

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
Line No	**Description**	**December 2022 Working Capital**	**Pension Adjustment**	**OPEB Adjustment**	**Accrued Tax Adjustment**	**Prepaid Cloud Computing Adjustment**	**PowerMIDrive and PowerMIFleet Adjustment**	**Karn & Campbell Retention**	**Campbell NBV, Ash Disposal, Decommissioning**	**Year End Customer Reserve Adjustment**	**Cash Adjustment**	**Total Adjustments**	**Test Year Working Capital**
1	Cash, cash equivalents, and restricted cash	20,157	-	-	-	-	-	-	-	-	33,522	33,522	53,679
2	Accounts and notes receivable	284,586	-	-	-	-	-	-	-	-	-	-	284,586
3	Fuel stock	47,745	-	-	-	-	-	-	-	-	-	-	47,745
4	Materials and supplies	134,417	-	-	-	-	-	-	-	-	-	-	134,417
5	Allowances	14	-	-	-	-	-	-	-	-	-	-	14
6	Prepayments	769,539	-	-	-	1,569	-	-	-	-	-	1,569	771,108
7	Accrued revenue	302,353	-	-	-	-	-	-	-	-	-	-	302,353
8	Deferred taxes	228,375	-	-	-	-	-	-	-	-	-	-	228,375
9	Deferred debits	635,437	97,425	169,426	-	-	(2,430)	18,181	1,377,048	-	-	1,659,650	2,295,087
10	Total assets	2,422,622	97,425	169,426	-	1,569	(2,430)	18,181	1,377,048	-	33,522	1,694,742	4,117,364
11	Accounts payable	558,140	-	-	-	-	-	-	-	-	-	-	558,140
12	Customer deposits	18,319	-	-	-	-	-	-	-	-	-	-	18,319
13	Accrued interest	49,157	-	-	-	-	-	-	-	-	-	-	49,157
14	Dividends payable	38,060	-	-	-	-	-	-	-	-	-	-	38,060
15	Accrued taxes	242,540	-	-	28,680	-	-	-	-	-	-	28,680	271,220
16	Other liabilities	65,860	-	-	-	-	-	-	-	-	-	-	65,860
17	Deferred credits	77,226	-	-	-	-	-	-	-	(5,519)	-	(5,519)	71,706
18	Total liabilities	1,049,301	-	-	28,680	-	-	-	-	(5,519)	-	23,161	1,072,461
19	Total working capital	1,373,322	97,425	169,426	(28,680)	1,569	(2,430)	18,181	1,377,048	5,519	33,522	1,671,581	3,044,903

Notes

Column (c): WP-JCA-28
Column (d): WP-JCA-29
Column (e): WP-JCA-30
Column (f): WP-JCA-31
Column (g): WP-JCA-32
Column (h): WP-JCA-33
Column (i): WP-JCA-34
Column (j): SAP Account 2460600 average balance

Schedule: B-5

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Capital Spending
For the Projected 12-Month Period Ending February 28, 2025
($000)

Case No.: U-21389
Exhibit No.: A-12 (JCA-36)
Schedule: B-5
Page 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
			Historical	**Projected**				**Approved Capital Expenditures in U-21224 (1)**	**Projected Capital Expenditures in U-21224**
Line No.	**Description**	**Source**	**12 Months Ended 12/31/2022**	**12 Months Ended 12/31/2023**	**2 Months Ended 2/29/2024**	**14 Months Ended 2/29/2024**	**12 Months Ended 2/28/2025**	**12 Months Ended 12/31/2023**	**12 Months Ended 12/31/2023**
1	Electric Distribution	Exhibit No.: A-12 (MPK-1), Sch 5.7	801,543	690,614	123,715	814,329	770,680	-	746,451
2	Streetlighting	Exhibit No.: A-12 (DAS-1), Sch 5.10	14,901	16,335	2,782	19,117	16,705	-	19,882
3	Generation	Exhibit No.: A-12 (RTB-3), Sch 5.1	141,372	1,293,935	78,679	1,372,614	375,970	-	1,258,404
4	Information Technology	Exhibit No.: A-12 (HNW-5), Sch 5.11	36,804	34,967	6,384	41,351	38,495	-	42,924
5	Security	Exhibit No.: A-12 (ALC-1), Sch 5.3	5,656	1,664	1,031	2,695	7,038	-	4,361
6	Electric Vehicles	Exhibit No.: A-12 (JAM-1), Sch 5.9	111	4,899	613	5,511	3,064	-	4,370
7	Operations Support	Exhibit No.: A-12 (QAG-1), Sch 5.5	28,181	25,349	3,734	29,082	39,798	-	25,178
8	Fleet Services	Exhibit No.: A-12 (ASC-1), Sch 5.3	20,079	19,633	2,209	21,842	20,863	-	19,545
9	Corporate	Exhibit No.: A-12 (MJF-6), Sch 5.4	537	558	95	653	572	-	614
10	Customer Experience & Operations	Exhibit No.: A-12 (CMH-1), Sch 5.6	52	310	-	310	-	-	350
11	Demand Response	Exhibit No.: A-12 (SQM-1), Sch 5.8	10,678	10,920	1,152	12,072	7,185	-	8,771
12	Total capital expenditures		1,059,913	2,099,183	220,394	2,319,577	1,280,369	-	2,130,850

Notes

(1) Case No. U-21224 resulted in a settlement agreement that did not state the approved capital spending for all spending categorie

Schedule: C-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Adjusted Net Operating Income
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-13 (JCA-37)
Schedule: C-1

Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)
Line No.	**Description**	**Source**	**Total ($000)**	**Jurisdictional ($000)**
1	Sales revenues	Exhibit No.: A-13 (JCA-39)	4,943,202	4,943,202
2	Wholesale revenues	Exhibit No.: A-13 (JCA-39)	24,339	-
3	Other electric revenues	Exhibit No.: A-13 (JCA-39)	134,737	133,724
4	Total operating revenues	Sum Lines 1 - 3	5,102,278	5,076,926
5	Power supply costs	Exhibit No.: A-13 (JCA-40)	2,589,397	2,564,230
6	Operations and maintenance	Exhibit No.: A-13 (JCA-41)	705,078	702,708
7	Depreciation and amortization	Exhibit No.: A-13 (JCA-43)	733,075	730,079
8	Property taxes	Exhibit No.: A-13 (JCA-44)	250,200	249,436
9	General taxes	Exhibit No.: A-13 (JCA-44)	37,563	37,381
10	Other (local) taxes	Exhibit No.: A-13 (JCA-47)	1,244	1,232
11	State income taxes	Exhibit No.: A-13 (JCA-46)	36,604	36,890
12	Federal income taxes	Exhibit No.: A-13 (JCA-45)	57,601	58,051
13	Total operating expenses	Sum Lines 5 - 12	4,410,761	4,380,006
14	Net operating income	Line 4 - Line 13	691,517	696,920
15	AFUDC	Exhibit No.: A-13 (JCA-48)	25,823	25,643
16	Net operating income, including AFUDC	Line 14 + Line 15	717,340	722,563
	Net Operating Income Adjustments			
17	Income tax effect of interest {a}		Included in Lines 10, 11, and 12	
18	Interest synchronization adjustment {a}		Included in Lines 10, 11, and 12	
19	Total adjusted net operating income	Line 16	717,340	722,563

Notes

{a} Income tax effect of interest and the interest synchronization adjustment are included in the calculation of local, state, and federal income tax. The separate calculations can be found on Exhibit No.: A-13 (JCA-49) and Exhibit No.: A-13 (JCA-50)

Schedule: C-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Calculation of the Revenue Conversion Factor
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-13 (JCA-38)
Schedule: C-2

Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) Amount
1	Income base - before taxes		100.0000
2	State income tax	Line 1 * 5.31% State Income Tax Rate	5.3100
3	Other (local) income tax	Line 1 * 0.16% Other {Local) Income Tax Rate	0.1600
4	Federal income tax base	Line 1 - Line 2 - Line 3	94.5300
5	Federal income tax	Line 4 * 21.00% Federal Income Tax Rate	19.8513
6	Income base - after taxes	Line 4 - Line 5	74.6787
7	Revenue conversion factor	Line 1 / Line 6	1.3391

Schedule: C-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Operating Revenues
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-13 (JCA-39)
Schedule: C-3
Page 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)
Line No.	**Description**	**Source**	**Total ($000)**
1	Sales revenues	Exhibit No.: A-15 (EMB-3), Schedule E-2	4,943,202
2	Wholesale revenues	Exhibit No.: A-15 (EMB-3), Schedule E-2	24,339
3	Other electric revenue	Exhibit No.: A-15 (EMB-3), Schedule E-2	134,737
4	Total operating revenues	Sum Lines 1 - 3	5,102,278

Schedule: C-4

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Fuel and Purchased Power
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-13 (JCA-40)
Schedule: C-4
Page 1 of 1
Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) ($000)
1	Total fuel and purchased power	Exhibit No.: A-51 (EMB-6)	2,589,397
2	Jurisdictional factor	Cost of Service Study	0.9903
3	Total fuel and purchased power - jurisdictional	Line 1 * Line 2	2,564,230

Schedule: C-5

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Other Operation and Maintenance Expenses
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-13 (JCA-41)
Schedule: C-5

Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)
Line No	**Description**	**Source**	**Historical Year ($000)**	**Change ($000)**	**Projected Year ($000)**
1	Electric Division - Electric & Common	Exhibit No.: A-129 (MPK-10)	214,437	(6,890)	207,547
2	Forestry	Exhibit No.: A-47 (PLB-6)	102,003	16,853	118,856
3	Generation	Exhibit No.: A-41 (RTB-4)	150,031	14,221	164,252
4	Operations Support	Exhibit No.: A-95 (QAG-2)	17,651	(1,465)	16,186
5	Information Technology Operations	Exhibit No.: A-177 (HNW-2)	42,043	2,112	44,155
6	Information Technology Investments	Exhibit No.: A-179 (HNW-4)	11,028	636	11,664
7	Information Technology - Security Operations	Exhibit No.: A-77 (ALC-3)	8,784	221	9,006
8	Information Technology - Security Investments	Exhibit No.: A-78 (ALC-4)	921	(185)	735
9	Customer Interactions	Exhibit No.: A-109 (CMH-2)	18,212	88	18,301
10	Billing & Payment	Exhibit No.: A-109 (CMH-2)	25,769	775	26,544
11	Demand Response	Exhibit No.: A-144 (SQM-2)	37,882	3,368	41,250
12	Pension Plans A/B	Exhibit No.: A-91 (KKG-1)	(29,860)	(13,467)	(43,327)
13	Defined Company Contribution Plan	Exhibit No.: A-91 (KKG-1)	14,105	778	14,883
14	401(k) Employees' Savings Plan	Exhibit No.: A-91 (KKG-1)	12,974	710	13,684
15	Active Health Care/Life Insurance/LTD	Exhibit No.: A-91 (KKG-1)	26,332	1,549	27,881
16	Retiree Health Care and Life Insurance	Exhibit No.: A-91 (KKG-1)	(69,030)	29,422	(39,608)
17	Other Benefits	Exhibit No.: A-91 (KKG-1)	3,279	215	3,494
18	Corporate Services	Exhibit No.: A-82 (MJF-1)	38,247	10,370	48,617
19	Uncollectible Expense	Exhibit No.: A-82 (MJF-1)	18,817	(1,298)	17,519
20	Injuries & Damages	Exhibit No.: A-82 (MJF-1)	6,652	(2,669)	3,983
21	Incentive Compensation	Exhibit No.: A-75 (AMC-3)	2,218	185	2,403
22	Job Work Expense	Exhibit No.: A-15 (EMB-3), Schedule E-2	2,200	-	2,200
23	Interest expense on security deposits	WP-JCA-22	258	-	258
24	DR Reconciliation	S.McLean Testimony	-	(5,406)	(5,406)
25	Total operation and maintenance expenses	Sum Lines 1 - 23	654,954	50,124	705,078
26	Jurisdictional factor	Cost of Service Study			0.9966
27	Total operation and maintenance expenses - jurisdictiona	Line 25 * Line 26			702,708

Schedule: C-5a

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Inflation and Merit Increases Included in Other Operation and Maintenance Expenses
For the Projected 12-Month Period Ending February 28, 2025
($000)

Case No.: U-21389
Exhibit No.: A-13 (JCA-42)
Schedule: C-5a

Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
				Projected Adjustments					
Line No.	Description	Source	Historical 12 Months Ended 12/31/2022	Inflation for the 12 Months Ended 12/31/2023	Inflation for the 12 Months Ended 12/31/2024	2 Months Ended 2/28/2025	Other Adjustments	Total Projected Adjustments	Projected 12 Months Ended 2/28/2025
								∑ (d) thru (g)	(c) + (h)
1	Electric Division - Electric & Common	Exhibit No.: A-50 (MPK-15)	214,437	6,753	3,958	644	(18,244)	(6,890)	207,547
2	Forestry	Exhibit No.: A-47 (PLB-6)	102,003	3,978	2,201	412	10,262	16,853	118,856
3	Generation	Exhibit No.: A-41 (RTB-4)	150,031	5,851	3,429	558	4,383	14,221	164,252
4	Operations Support	Exhibit No.: A-95 (QAG-2)	17,651	159	97	15	(1,736)	(1,465)	16,186
5	Information Technology Operations	Exhibit No.: A-177 (HNW-2)	42,043	399	234	38	1,441	2,112	44,155
6	Information Technology Investments	Exhibit No.: A-179 (HNW-4)	11,028	-	-	-	636	636	11,664
7	Information Technology - Security Operation	Exhibit No.: A-77 (ALC-3)	8,784	105	61	10	46	221	9,006
8	Information Technology - Security Investmer	Exhibit No.: A-78 (ALC-4)	921	-	-	-	(185)	(185)	735
9	Customer Interactions	Exhibit No.: A-109 (CMH-2)	18,212	710	416	68	(1,106)	88	18,301
10	Billing & Payment	Exhibit No.: A-109 (CMH-2)	25,769	1,005	589	96	(915)	775	26,544
11	Demand Response	Exhibit No.: A-144 (SQM-2)	37,882	1,477	866	141	884	3,368	41,250
12	Pension Plans A/B	Exhibit No.: A-91 (KKG-1)	(29,860)	(1,165)	(683)	(111)	(11,509)	(13,467)	(43,327)
13	Defined Company Contribution Plan	Exhibit No.: A-91 (KKG-1)	14,105	550	322	52	(147)	778	14,883
14	401(k) Employees' Savings Plan	Exhibit No.: A-91 (KKG-1)	12,974	506	297	48	(141)	710	13,684
15	Active Health Care/Life Insurance/LTD	Exhibit No.: A-91 (KKG-1)	26,332	1,027	602	98	(178)	1,549	27,881
16	Retiree Health Care and Life Insurance	Exhibit No.: A-91 (KKG-1)	(69,030)	(2,692)	(1,578)	(257)	33,949	29,422	(39,608)
17	Other Benefits	Exhibit No.: A-91 (KKG-1)	3,279	128	75	12	-	215	3,494
18	Corporate Services	Exhibit No.: A-83 (MJF-2)	38,247	1,954	1,145	186	7,085	10,370	48,617
19	Uncollectible Expense	Exhibit No.: A-85 (MJF-4)	18,817	-	-	-	(1,298)	(1,298)	17,519
20	Injuries & Damages	Exhibit No.: A-86 (MJF-5)	6,652	-	-	-	(2,669)	(2,669)	3,983
21	Incentive Compensation	Exhibit No.: A-75 (AMC-3)	2,218	87	52	8	39	185	2,403
22	Job Work Expense	Exhibit No.: A-15 (EMB-3), Schedule E-2	2,200	-	-	-	-	-	2,200
23	Interest expense on security deposits	WP-JCA-22	258	-	-	-	-	-	258
24	DR Reconciliation	S.McLean Testimony	-	-	-	-	(5,406)	(5,406)	(5,406)
25	Projected inflation of other O&M expenses	Sum Lines 1 - 24	654,954	20,832	12,084	2,018	15,190	50,124	705,078

Schedule: C-6

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Depreciation and Amortization Expenses
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-13 (JCA-43)
Schedule: C-6
Page 1 of 1
Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) ($000)
1	Distribution	WP-JCA-26	353,060
2	Production (Hydro)	WP-JCA-26	47,273
3	Production (Hydro Ludington)	WP-JCA-26	17,604
4	Production (Steam)	WP-JCA-26	16,835
5	Production (Solar)	WP-JCA-26	5,767
6	Production (Other)	WP-JCA-26	48,631
7	Intangibles	WP-JCA-26	59,918
8	E-GP Structures	WP-JCA-26	4,433
9	E-GP Computers	WP-JCA-26	3,048
10	E-GP Transportation	WP-JCA-26	-
11	E-GP Other	WP-JCA-26	4,147
12	C-GP Structures	WP-JCA-26	2,824
13	C-GP Computers	WP-JCA-26	9,273
14	C-GP Transportation	WP-JCA-26	-
15	C-GP Other	WP-JCA-26	5,772
16	Zeeland Acq Adjustment	WP-JCA-26	5,455
17	PowerMiDrive	Exhibit No.: A-17 (JCA-52)	2,097
18	PowerMiFleet	Exhibit No.: A-18 (JCA-53)	559
19	Karn Plant Retention and Separation Costs	Exhibit No.: A-19 (JCA-54)	4,146
20	Campbell Plant Retention and Separation Costs	Exhibit No.: A-20 (JCA-55)	14,074
21	Campbell Net Book Value Amortization	Exhibits No.: A-21 (JCA-56) & A-22 (JCA-57	125,469
22	Karn 1-2 Decommissioning Costs Amortization	Exhibit No.: A-23 (JCA-58)	1,344
23	Karn 1-2 and Classic 7 Ash Disposal Amortization	Exhibit No.: A-24 (JCA-59)	1,182
24	Campbell Decommissioning Costs Amortization	Exhibit No.: A-25 (JCA-60)	166
25	Total depreciation and amortization expenses	Sum Lines 1 - 24	733,075
26	Jurisdictional factor	Cost of Service Study	0.9959
27	Total depreciation and amortization expenses - jurisdictional	Line 25 * Line 26	730,079

Schedule: C-7

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
General Taxes
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-13 (JCA-44)
Schedule: C-7
Page 1 of 1
Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) Total ($000)	(d) Jurisdictional ($000)
1	Real and personal property taxes	Exhibit No.: A-161 (BJV-1)	250,200	249,436
	Projected payroll taxes			
2	Total payroll taxes - historical year	Exhibit No.: A-3 (JCA-15)	26,117	
3	Inflation factor 2023	WP-JCA-50	103.9%	
4	Inflation factor 2024	WP-JCA-50	102.2%	
5	Inflation factor 2025	WP-JCA-50	102.1%	
6	Total payroll taxes - projected year	Line 2 * Line 3 * Line 4 * Line 5	28,315	28,221
	Projected other general taxes			
7	State MPSC assessment - historical year	Exhibit No.: A-3 (JCA-15)	9,723	
8	Total operating revenues - historical year	Exhibit No.: A-3 (JCA-11)	5,364,237	
9	Average State MPSC assessment rate	Line 7 / Line 8	0.18%	
10	Total operating revenues - projected year	Exhibit No.: A-13 (JCA-39)	5,102,278	
11	Average State MPSC assessment rate	Line 9	0.18%	
12	Projected State MPSC assessment	Line 10 * Line 11	9,249	
13	Incremental change in State MPSC assessment	Line 12 - Line 7	(475)	
14	Other general taxes - historical year	Exhibit No.: A-3 (JCA-15)	9,723	
15	Total other general taxes - projected year	Line 13 + Line 14	9,249	9,160
16	Total general taxes	Line 1 + Line 6 + Line 15	287,763	286,817

Schedule: C-8

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Federal Income Taxes
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-13 (JCA-45)
Schedule: C-8
Page 1 of 1
Witness: JCAponte
Date: May 2023

Line No	(a) Description	(b) Source	(c) ($000)
1	Operating revenues	Exhibit No.: A-13 (JCA-39)	5,102,278
2	Power supply costs	Exhibit No.: A-13 (JCA-40)	(2,589,397)
3	Other O&M expenses	Exhibit No.: A-13 (JCA-41)	(705,078)
4	Depreciation and amortization expenses	Exhibit No.: A-13 (JCA-43)	(733,075)
5	General taxes	Exhibit No.: A-13 (JCA-44)	(287,763)
6	State income taxes	Exhibit No.: A-13 (JCA-46), Line 22 * -1	(36,604)
7	Other (local) income taxes	Exhibit No.: A-13 (JCA-47), Line 20 * -1	(1,244)
8	Net operating income	Sum Lines 1 - 7	749,118
9	Allowable interest expense	Exhibit: Exhibit No.: A-13 (JCA-49)	(245,986)
10	Allowable JDITC interest expense	Exhibit: Exhibit No.: A-13 (JCA-50)	(1,235)
11	Pre-tax operating income	Sum Lines 8 - 10	501,897
	Permanent Differences		
12	Meals and entertainment	Tax Department	448
13	Non-deductible parking	Tax Department	102
14	Total permanent differences	Sum Lines 12 - 13	550
	Temporary Differences		
15	Book depreciation	Exhibit No.: A-13 (JCA-43)	733,075
16	Tax depreciation	Tax Department	(770,630)
17	263A - mixed service costs deduction	Tax Department	(25,213)
18	Tax repairs	Tax Department	(217,000)
19	Contributions in aid of construction	Tax Department	15,376
20	Cost of removal	Tax Department	(186,343)
21	Gain/loss on ACRS/MACRS dispositions	Tax Department	(68,129)
22	Software expense	Tax Department	(15,380)
23	Tax interest during construction	Tax Department	30,372
24	Bad debt allowance	Tax Department	-
25	OPEB - book expense	Exhibit No.: A-13 (JCA-41), Line 16	(39,608)
26	OPEB - payments	Tax Department	-
27	Other revenue reserves	Tax Department	1,990
28	Pension book expense	Exhibit No.: A-13 (JCA-41), Line 12	(43,327)
29	Pension - payments	Tax Department	-
30	Securitization Amortization	Tax Department	99,318
31	Premium, discount & debt expense amortization	Tax Department	2,554
32	Real and personal property taxes	Tax Department	(34,838)
33	Renewable energy reserve	Tax Department	36,888
34	Deferred state income taxes	Tax Department	37,907
35	Deferred city income taxes	Tax Department	1,147
36	Total temporary differences	Sum Lines 15 - 33	(441,842)
37	Federal taxable income	Line 11 + Line 14 + Line 36	60,605
	Calculation of Current Federal Income Tax Expenses		
38	Current federal income taxes	Line 37 * 21.00% Federal Income Tax Rate	12,727
39	Production tax credits	Tax Department	(6,548)
40	Research & development credit	Tax Department	(2,018)
41	Total current federal income tax exenses	Line 38 + Line 40	4,161
	Calculation of Deferred Federal Income Tax Expenses		
42	Deferred federal income taxes	(Line 36 * 21.00% Federal Income Tax Rate) * -1	92,787
43	FAS 109	Tax Department	(119)
44	Investment tax credit amortization	Tax Department	(3,699)
45	TCJA amortization - ARAM	Tax Department	(27,538)
46	TCJA amortization - non-ARAM	Tax Department	(4,148)
47	TCJA Tracker	Tax Department	(6,492)
48	Repealed Medicare subsidy benefil	Tax Department	2,649
49	Total deferred federal income tax expenses	Sum Lines 42 - 48	53,440
50	Total federal income taxes	Line 41 + Line 49	57,601
51	Jurisdictional factor	Cost of Service Study	1.0078
52	Total federal income taxes - jurisdictional	Line 50 * Line 51	58,051

Schedule: C-9

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
State Income Taxes
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-13 (JCA-46)
Schedule: C-9

Witness: JCAponte
Date: May 2023

Line No	(a) Description	(b) Source	(c) ($000)
1	Operating revenues	Exhibit No.: A-13 (JCA-39)	5,102,278
2	Power supply costs	Exhibit No.: A-13 (JCA-40)	(2,589,397)
3	Other O&M expenses	Exhibit No.: A-13 (JCA-41)	(705,078)
4	Depreciation and amortization expenses	Exhibit No.: A-13 (JCA-43)	(733,075)
5	General taxes	Exhibit No.: A-13 (JCA-44)	(287,763)
6	Net operating income	Sum Lines 1 - 5	786,965
7	Interest expense	Exhibit No.: A-13 (JCA-49)	(245,986)
8	Interest synchronization	Exhibit No.: A-13 (JCA-50)	(1,235)
9	Pre-tax operating income	Sum Lines 6 - 8	539,744
10	Total permanent differences	Exhibit No.: A-13 (JCA-45)	550
11	Schedule M temp diff, excluding DSIT and DCIT	Exhibit No.: A-13 (JCA-45)	(480,895)
12	Depreciation/gain-loss adjustment	Tax Department	(83,945)
13	State taxable income	Sum Lines 9 - 12	(24,546)
14	Current state income taxes	Line 13 * 5.31% State Income Tax Rate	(1,303)
	Calculation of Deferred State Income Tax Expense		
15	Deferred state income tax expenses, tax effected	((Lines 11 + 12) * 5.31% State Income Tax Rate) * -1	29,993
16	FAS 109 - AFUDC-equity flow-through reversal	Tax Department	205
17	Deferred - amortization of Medicare Subsidy benefit - state	Tax Department	454
18	Deferred - amortization of state income tax transition reg asset	Tax Department	7,255
19	Deferred state income taxes	Sum Lines 15 - 18	37,907
20	Total state income taxes	Line 14 + Line 19	36,604
21	Jurisdictional factor	Cost of Service Study	1.0078
22	Total state income taxes - jurisdictional	Line 20 * Line 21	36,890

Schedule: C-10

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Other (or Local) Taxes
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-13 (JCA-47)
Schedule: C-10

Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) ($000)
1	Operating revenues	Exhibit No.: A-13 (JCA-39)	5,102,278
2	Power supply costs	Exhibit No.: A-13 (JCA-40)	(2,589,397)
3	Other O&M expenses	Exhibit No.: A-13 (JCA-41)	(705,078)
4	Depreciation and amortization expenses	Exhibit No.: A-13 (JCA-43)	(733,075)
5	General taxes	Exhibit No.: A-13 (JCA-44)	(287,763)
6	State income taxes	Exhibit No.: A-13 (JCA-46)	(36,604)
7	Net operating income	Sum Lines 1 - 6	750,362
8	Interest expense	Exhibit: Exhibit No.: A-13 (JCA-49)	(245,986)
9	Interest synchronization	Exhibit: Exhibit No.: A-13 (JCA-50)	(1,235)
10	Pre-tax operating income	Sum Lines 7 - 9	503,141
11	Total permanent differences	Exhibit No.: A-13 (JCA-45)	550
12	Schedule M temp diff, excluding DCIT	Exhibit No.: A-13 (JCA-45)	(442,988)
13	Other (local) taxable income	Sum Lines 10 - 12	60,702
14	Current other (local) income taxes	Line 13 * 0.16% Other (Local) Income Tax Rate	97
	Calculation of Deferred Other (Local) Income Tax Expenses		
15	Deferred other (local) income tax expenses, tax effected	(Line 12 * 0.16% Other (Local) Income Tax Rate) * -1	709
16	Deferred - amortization of reg asset	Exhibit No.: A-13 (JCA-45)	438
17	Total deferred other (local) income taxes	Line 15 + Line 16	1,147
18	Total other (local) income taxes	Line 14 + Line 17	1,244
19	Jurisdictional factor	Cost of Service Study	0.9905
20	Total other (local) income taxes - jurisdictional	Line 18 * Line 19	1,232

Schedule: C-11

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Allowance for Funds Used During Construction
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-13 (JCA-48)
Schedule: C-11
Page 1 of 1
Witness: JCAponte
Date: May 2023

Line No	(a) Description	(b) Source	(c) ($000)
1	Total allowance for funds used during construction	WP-JCA-28	25,823
2	Jurisdictional factor	Cost of Service Study	0.9930
3	Total allowance for funds used during construction - jurisdictional	Line 1 * Line 2	25,643

Schedule: C-12

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Pro Forma Interest Adjustment
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-13 (JCA-49)
Schedule: C-12
Page 1 of 1
Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) ($000)
1	Rate base	Exhibit No.: A-12 (JCA-31)	14,404,493
2	Weighted cost of debt {1}	Exhibit No.: A-14 (MRB-1), Schedule D-1	0.0171
3	Allowable interest expense	Line 1 * Line 2	245,986
4	Pro forma interest expense - historical year	Exhibit No.: A-3 (JCA-20)	183,636
5	Increase/ (decrease) in allowable interest deduction	Line 3 - Line 4	62,350
6	Impact on taxable income	Line 5 * -1	(62,350)
7	Impact on state and local income taxes	Line 6 * 5.47% State and Local Income Tax Rate	(3,411)
8	Impact on federal taxable income	Line 6 - Line 7	(58,939)
9	Impact on federal income taxes	Line 8 * 21.00% Federal Income Tax Rate	(12,377)
10	Total impact on net operating income	(Line 7 + Line 9) * -1	15,788

Notes

{1} Excludes JDITC

Schedule C-13

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Interest Synchronization Adjustment
For the Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-13 (JCA-50)
Schedule: C-13

Witness: JCAponte
Date: May 2023

Line No.	(a) Description	(b) Source	(c) ($000)
1	Rate base	Exhibit No.: A-12 (JCA-31)	14,404,493
2	JDITC debt-related portion of the capital structure	Exhibit No.: A-14 (MRB-1), Schedule D-1	0.0021
3	Portion of rate base funded by JDITC	Line 1 * Line 2	29,812
4	Cost of JDITC - debt portion	Exhibit No.: A-14 (MRB-1), Schedule D-1	0.0414
5	Allowable JDITC interest expense	Line 3 * Line 4	1,235
6	Allowable JDITC interest expense - historical year	Exhibit No.: A-3 (JCA-21)	1,190
7	Increase/ (decrease) in allowable JDITC interest expense	Line 5 - Line 6	45
8	Impact on taxable income	Line 7 * -1	(45)
9	Impact on state and local income taxes	Line 8 * 5.47% State and Local Income Tax Rate	(2)
10	Impact on federal taxable income	Line 8 - Line 9	(43)
11	Impact on federal income taxes	Line 10 * 21.00% Federal Income Tax Rate	(9)
12	Total impact on net operating income	(Line 9 + Line 11) * -1	11

Schedule: C-14

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Development of Adjusted Net Operating Income
For the Projected 12-Month Period Ending February 28, 2025
($000)

Case No.: U-21389
Exhibit No.: A-13 (JCA-51)
Schedule: C-14
Page 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
Line No	Description	Source	Sales	Whlsale	Other Revenue	Fuel P&I	Other O&M	Deprec.	Property Tax	Other Taxes	CIT	MCIT	FIT	NOI	AFUDC	Adjusted NOI
1	Net operating income - historical year		4,963,156	240,958	160,123	2,622,447	893,311	751,446	203,698	35,840	1,323	44,456	57,580	754,137	5,520	759,656
	Historical Year Adjustments															
2	Weather normalization	Exhibit No.: A-15 (EMB-3), Schedule E-2	(55,044)	-	-	-	-	-	-	-	(88)	(2,923)	(10,927)	(41,107)	-	(41,107)
3	Purchased power administration fee revenue	WP-JCA-12	(612)	-	-	-	-	-	-	-	(1)	(33)	(122)	(457)	-	(457)
4	Excess MDNR fees	WP-JCA-13	447	-	-	-	-	-	-	-	1	24	89	334	-	334
5	MISO reliability schedule 10 charge	WP-JCA-14	460	-	-	-	-	-	-	-	1	24	91	343	-	343
6	Surcharge revenues and expenses/amortization	WP-JCA-15	(361,034)	-	-	-	(237,073)	(70,541)	(9,733)	54,004	(156)	(5,187)	(19,393)	(72,954)	-	(72,954)
7	Jobwork revenues	Exhibit No.: A-15 (EMB-3), Schedule E-2	-	-	2,633	-	-	-	-	-	4	140	523	1,967	-	1,967
8	Interest income on cash operating accounts	WP-JCA-16	-	-	497	-	-	-	-	-	1	26	99	371	-	371
9	Compensation expenses - Executive annual physicals	WP-JCA-17	-	-	-	-	(10)	-	-	-	0	1	2	8	-	8
10	Compensation expenses - EICP	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Compensation expenses - Corporate Giving - staff salaries	WP-JCA-19	-	-	-	-	(14)	-	-	-	0	1	3	11	-	11
12	Compensation expenses - Corporate Communications - staff salaries	WP-JCA-19	-	-	-	-	(184)	-	-	-	0	10	36	137	-	137
13	Advertising expenses	WP-JCA-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Dues & donations expenses	WP-JCA-21	-	-	-	-	(618)	-	-	-	1	33	123	462	-	462
15	Jobwork expenses	Exhibit No.: A-15 (EMB-3), Schedule E-2	-	-	-	-	2,200	-	-	-	(4)	(117)	(437)	(1,643)	-	(1,643)
16	Interest expense on security deposits	WP-JCA-22	-	-	-	-	258	-	-	-	(0)	(14)	(51)	(193)	-	(193)
17	One-time Legal Consultant Expense	Exhibit No.: A-83 (MJF-2)	-	-	-	-	(3,651)	-	-	-	6	194	725	2,726	-	2,726
18	Voluntary Separation Plan expenses	WP-JCA-18	-	-	-	-	(5,417)	-	-	-	9	288	1,075	4,045	-	4,045
19	Segregated Cell Insurance Expense	WP-JCA-52	-	-	-	-	5,771	-	-	-	(9)	(306)	(1,146)	(4,309)	-	(4,309)
20	Pro Forma Interest Adjustment	Exhibit No.: A-3 (JCA-20)	-	-	-	-	-	-	-	-	27	912	3,411	(4,350)	-	(4,350)
21	Interest Synchronization Adjustment	Exhibit No.: A-3 (JCA-21)	-	-	-	-	-	-	-	-	(2)	(63)	(236)	301	-	301
22	Adjusted net operating income - historical year		4,547,372	240,958	163,254	2,622,447	654,573	680,905	193,965	89,844	1,112	37,465	31,445	639,828	5,520	645,347
	Test Year Adjustments															
23	Sales revenues		395,830	-	-	-	-	-	-	-	633	21,019	78,577	295,601	-	295,601
24	Wholesale revenues		-	(216,619)	-	-	-	-	-	-	(347)	(11,502)	(43,002)	(161,768)	-	(161,768)
25	Other electric revenues		-	-	(28,517)	-	-	-	-	-	(46)	(1,514)	(5,661)	(21,296)	-	(21,296)
26	Fuel and P&I expenses		-	-	-	(33,050)	-	-	-	-	53	1,755	6,561	24,681	-	24,681
27	Other operation and maintenance		-	-	-	-	50,505	-	-	-	(81)	(2,682)	(10,026)	(37,716)	-	(37,716)
28	Depreciation and amortization		-	-	-	-	-	52,169	-	-	(83)	(2,770)	(10,356)	(38,959)	-	(38,959)
29	Property taxes		-	-	-	-	-	-	56,235	-	(90)	(2,986)	(11,163)	(41,996)	-	(41,996)
30	Other general taxes		-	-	-	-	-	-	-	(52,281)	84	2,776	10,378	39,043	-	39,043
31	Other (local) income taxes		-	-	-	-	-	-	-	-	8	-	(2)	(6)	-	(6)
32	State income taxes		-	-	-	-	-	-	-	-	-	(4,956)	1,041	3,915	-	3,915
33	Federal income taxes		-	-	-	-	-	-	-	-	-	-	9,809	(9,809)	-	(9,809)
34	AFUDC		-	-	-	-	-	-	-	-	-	-	-	-	20,304	20,304
35	Adjusted net operating income - projected test year		4,943,202	24,339	134,737	2,589,397	705,078	733,075	250,200	37,563	1,244	36,604	57,601	691,517	25,823	717,340
36	Jurisdictional factor		1.0000	-	0.9925	0.9903	0.9966	0.9959	0.9969	0.9952	0.9905	1.0078	1.0078	1.0078	0.9930	
37	Adjusted net operating income - projected test year - jurisdictional		4,943,202	-	133,724	2,564,230	702,708	730,079	249,436	37,381	1,232	36,890	58,051	696,920	25,643	722,563

Notes

Line 1, Col. (c) - Col. (p) Source: Exhibit No.: A-3 (JCA-9)
Line 37, Col. (c) - Col. (p) Source: Exhibit No.: A-13 (JCA-37)

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Regulatory Asset and Amotization
PowerMiDrive Costs
($000)

Case No.: U-21389
Exhibit No.: A-17 (JCA-52)
Page: 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No.	**Item Description**	**Actual 2019**	**Actual 2020**	**Actual 2021**	**Actual 2022**	**Forecast 2023**	**Forecast 2024**	**Forecast 2025**	**Forecast 2026**	**Forecast 2027**
1	Electric Vehicle Expenditures [4]	$ 917	$ 2,896	$ 2,947	$ 3,876					
	Amortization Expense									
2	2019	-	183	183	183	183	183			
3	2020	-	-	579	579	579	579	579		
4	2021	-	-	-	589	589	589	589	589	
5	2022	-	-	-	-	775	775	775	775	775
6	Total amortization expense	$ -	$ 183	$ 763	$ 1,352	$ 2,127	$ 2,127	$ 1,944	$ 1,365	$ 775

	Item Description	**Avg Balance Feb 28, 2025 (3)**	**12 Mos Ending Feb 29, 2024 (1)**	**12 Mos Ending Feb 28, 2025 (2)**
7	Test Year Amortization Expense			$ 2,097
8	Electric Vehicle Deferred Balance	$ 4,808	$ 5,857	$ 3,760

(1) Sum of Line 1 columns (b) through (e) Less (sum of Line 6 columns (b) through (f) + Line 6 colum (g) ÷ 12 * 2)
(2) Amortization Expense = [(Line 6 column (g)) ÷ 12 * 10 (Line 6 column (h)) ÷ 12 * 2)
Deferred Balance = Sum of Line 1 columns (b) through (e) Less (sum of Line 6 columns (b) through (g) + Line 6 colum (h) ÷ 12 * 2)
(3) (Line 8 column (b) Plus Line 6 column (c)) ÷ 2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Regulatory Asset and Amotization
PowerMiFleet Costs
($000)

Case No.: U-21389
Exhibit No.: A-18 (JCA-53)
Page: 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No.	**Item Description**	**Actual 2019**	**Actual 2020**	**Actual 2021**	**Actual 2022**	**Forecast 2023**	**Forecast 2024**	**Forecast 2025**	**Forecast 2026**	**Forecast 2026**
1	Electric Vehicle Expenditures [4]	$ -	$ -	$ 1,009	$ 1,785					
	Amortization Expense									
2	2019	-	-	-	-	-	-	-	-	-
3	2020	-	-	-	-	-	-	-	-	-
4	2021	-	-	-	202	202	202	202	202	-
5	2022	-	-	-	-	357	357	357	357	357
6	Total amortization expense	$ -	$ -	$ -	$ 202	$ 559	$ 559	$ 559	$ 559	$ 357

	Item Description	**Avg Balance Feb 28, 2025 (3)**	**12 Mos Ending Feb 29, 2024 (1)**	**12 Mos Ending Feb 28, 2025 (2)**
7	Test Year Amortization Expense			$ 559
8	Electric Vehicle Deferred Balance	$ 1,660	$ 1,940	$ 1,381

(1) Sum of Line 1 columns (b) through (e) Less (sum of Line 6 columns (b) through (f) + Line 6 colum (g) ÷ 12 * 2)
(2) Amortization Expense = [(Line 6 column (g)) ÷ 12 * 10 (Line 6 column (h)) ÷ 12 * 2)
Deferred Balance = Sum of Line 1 columns (b) through (e) Less (sum of Line 6 columns (b) through (g) + Line 6 colum (h) ÷ 12 * 2)
(3) (Line 8 column (b) Plus Line 6 column (c)) ÷ 2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Regulatory Asset and Amotization
Karn Plant Retention and Separation Costs
($000)

Case No.: U-21389
Exhibit No.: A-19 (JCA-54)
Page: 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)
Line No.	**Item Description**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
1	Karn Expenditures Deferred	$ 7,016	$ 4,828	$ 1,762																
	Amortization Expense																			
2	2021		2,339	2,339	2,339	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	2022			1,609	1,609	1,609	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	2023				587	587	587	-	-	-	-	-	-	-	-	-	-	-	-	-
5	2024					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Total amortization expense	$ -	$ 2,339	$ 3,948	$ 4,535	$ 2,197	$ 587	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

	Item Description	**Avg Balance Feb 28, 2025 (3)**	**12 Mos Ending Feb 29, 2024 (1)**	**12 Mos Ending Feb 28, 2025 (2)**
7	Test Year Amortization Expense			$ 4,146
8	Karn Expenditures Deferred Balance	$ 4,491	$ 6,563	$ 2,418

(1) Sum of Line 1 columns (b) through (d) Less (sum of Line 6 columns (b) through (d) + Line 6 colum (e) ÷ 12 * 2)
(2) Amortization Expense = [(Line 6 column (e)) ÷ 12 * 10 (Line 6 column (f)) ÷ 12 * 2)
Deferred Balance = Sum of Line 1 columns (b) through (d) Less (sum of Line 6 columns (b) through (e) + Line 6 colum (f) ÷ 12 * 2)
(3) (Line 8 column (b) Plus Line 6 column (c)) ÷ 2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Regulatory Asset and Amotization
Campbell Plant Retention and Separation Costs
($000)

Case No.: U-21389
Exhibit No.: A-20 (JCA-55)
Page: 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)
Line No.	**Item Description**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
1	Campbell Expenditures Deferred	$ -	$ 23,904	$ 16,516	$ 10,814	$ 3,044														
	Amortization Expense																			
2	2023			7,968	7,968	7,968	-	-	-	-	-	-	-	-	-	-	-	-	-	(23,904)
3	2024				5,505	5,505	5,505	-	-	-	-	-	-	-	-	-	-	-	-	7,387
4	2025					3,605	3,605	3,605	-	-	-	-	-	-	-	-	-	-	-	5,703
5	2026						1,015	1,015	1,015	-	-	-	-	-	-	-	-	-	-	(3,044)
6	Total amortization expense	$ -	$ -	$ 7,968	$ 13,473	$ 17,078	$ 10,125	$ 4,619	$ 1,015	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (13,858)

	Item Description	**Avg Balance Feb 28, 2025 (3)**	**12 Mos Ending Feb 29, 2024 (1)**	**12 Mos Ending Feb 28, 2025 (2)**
7	Test Year Amortization Expense			$ 14,074
8	Campbell Expenditures Deferred Balance	$ 29,731	$ 32,009	$ 27,454

(1) Sum of Line 1 columns (b) through (d) + Line 1 column (e) ÷ 12 * 2 Less (sum of Line 6 columns (b) through (d) + Line 6 colum (e) ÷ 12 * 2)
(2) Amortization Expense = [(Line 6 column (e)) ÷ 12 * 10 (Line 6 column (f)) ÷ 12 * 2)
Deferred Balance = Sum of Line 1 columns (b) through (e) + Line 1 column (f) ÷ 12 * 2 Less (sum of Line 6 columns (b) through (e) + Line 6 colum (f) ÷ 12 * 2)
(3) (Line 8 column (b) Plus Line 6 column (c)) ÷ 2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Regulatory Asset and Amotization
Campbell 1-2 Plants Net Book Value
($000)

Case No.: U-21389
Exhibit No.: A-21 (JCA-56)
Page: 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
Line No.	**Item Description**	**2022**	2 **Months Ending 02/28/23**	12 **Months Ending 02/29/24**	12 **Months Ending 02/28/25**	12 **Months Ending 02/28/26**	12 **Months Ending 02/28/27**	12 **Months Ending 02/29/28**	12 **Months Ending 02/28/29**	12 **Months Ending 02/28/30**	12 **Months Ending 02/28/31**	3 **Months Ending 5/31/2031**
1	Beginning Plant in Service		$ 1,119,994	$ 1,120,350								
2	Additions [1]		356	7,215								
3	Ending Plant in Service	$ 1,119,994	$ 1,120,350	$ 1,127,565								
4	Beginning Accumulated Depreciation		$ 560,612	$ 570,643								
5	Depreciation Expense [2]		10,031	62,730								
6	Ending Accumulated Depreciation	$ 560,612	$ 570,643	$ 633,373								
7	Unrecovered Net Book Value [3]	$ 559,382	$ 549,707	$ 494,192	$ 494,192	$ 426,028	$ 357,863	$ 289,699	$ 221,534	$ 153,370	$ 85,206	$ 17,041
8	Amortization Expense [4]				$ 68,164	$ 68,164	$ 68,164	$ 68,164	$ 68,164	$ 68,164	$ 68,164	$ 17,041
9	Campbell 1&2 NBV Regulatory Asset Balance [5]				426,028	357,863	289,699	221,534	153,370	85,206	17,041	(0)
10	Campbell 1&2 NBV Regulatory Asset Balance Test Year [6]				$ 460,110							

Notes:
(1) Additions as of 02/29/2024 include CWIP Balance as of 12/31/2022
(2) Source: WP-JCA-55
(3) Ending Plant in Service Less Ending Accumulated Depreciation
(4) Unrecovered Net Book Value ÷ 87 months x months in the period
(5) Unrecovered Net Book Value Less Amortization Expense
(6) (Line 9 column (f) Plus Line 11 column (f)) ÷ 2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Regulatory Asset and Amotization
Campbell 3 Plant Net Book Value
($000)

Case No.: U-21389
Exhibit No.: A-22 (JCA-57)
Page: 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)
Line No.	**Item Description**	**2022**	2 **Months Ending 02/28/23**	12 **Months Ending 02/29/24**	12 **Months Ending 02/28/25**	12 **Months Ending 02/28/26**	12 **Months Ending 02/28/27**	12 **Months Ending 02/29/28**	12 **Months Ending 02/28/29**	12 **Months Ending 02/28/30**	12 **Months Ending 02/28/31**	12 **Months Ending 2/29/2032**	12 **Months Ending 2/28/2033**	12 **Months Ending 2/28/2034**	12 **Months Ending 2/28/2035**	12 **Months Ending 2/29/2036**	12 **Months Ending 2/28/2037**	12 **Months Ending 2/28/2038**	12 **Months Ending 2/28/2039**	12 **Months Ending 2/29/2040**	3 **Months Ending 5/31/2040**
1	Beginning Plant in Service		$ 1,764,862	$ 1,766,031																	
2	Additions [1]		1,169	14,231																	
3	Ending Plant in Service	$ 1,764,862	$ 1,766,031	$ 1,780,262																	
4	Beginning Accumulated Depreciation		$ 774,552	$ 784,822																	
5	Depreciation Expense [2]		10,270	64,234																	
6	Ending Accumulated Depreciation	$ 774,552	$ 784,822	$ 849,056																	
7	Unrecovered Net Book Value [3]	$ 990,310	$ 981,209	$ 931,206	$ 931,206	$ 873,901	$ 816,596	$ 759,291	$ 701,986	$ 644,681	$ 587,376	$ 530,071	$ 472,766	$ 415,461	$ 358,156	$ 300,851	$ 243,546	$ 186,241	$ 128,936	$ 71,631	$ 14,326
8	Amortization Expense [4]				$ 57,305	$ 57,305	$ 57,305	$ 57,305	$ 57,305	$ 57,305	$ 57,305	$ 57,305	$ 57,305	$ 57,305	$ 57,305	$ 57,305	$ 57,305	$ 57,305	$ 57,305	$ 57,305	$ 14,326
9	Campbell 3 NBV Regulatory Asset Balance [5]				873,901	816,596	759,291	701,986	644,681	587,376	530,071	472,766	415,461	358,156	300,851	243,546	186,241	128,936	71,631	14,326	(0)
10	Campbell 3 NBV Regulatory Asset Balance Test Year [6]				$ 902,553																

Notes:
(1) Additions as of 02/29/2024 include CWIP Balance as of 12/31/2022
(2) Source: WP-JCA-56
(3) Ending Plant in Service Less Ending Accumulated Depreciation
(4) Unrecovered Net Book Value ÷ 195 months x months in the period
(5) Unrecovered Net Book Value Less Amortization Expense
(6) (Line 9 column (f) Plus Line 11 column (f)) ÷ 2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Regulatory Asset and Amortization
Karn 1-2 Decommissioning Costs
($000)

Case No.: U-21389
Exhibit No.: A-23 (JCA-58)
Page: 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Line No.	**Item Description**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
1	Karn 1-2 Decommissioning Costs Deferred (JEB-1)	$ 10,755									
2	Amortization Expense 2022			1,344	1,344	1,344	1,344	1,344	1,344	1,344	1,344
3	Total amortization expense	$ -	$ -	$ 1,344	$ 1,344	$ 1,344	$ 1,344	$ 1,344	$ 1,344	$ 1,344	$ 1,344

	Item Description	**Avg Balance Feb 28, 2025 (3)**	**12 Mos Ending Feb 29, 2024 (1)**	**12 Mos Ending Feb 28, 2025 (2)**
4	Test Year Amortization Expense			$ 1,344
5	Karn 1-2 Decommissioning Costs Deferred Balance	$ 9,859	$ 10,531	$ 9,187

(1) Line 1 column (b) Less Line 6 column (d) ÷ 12 * 2
(2) Amortization Expense = [(Line 6 column (d)) ÷ 12 * 10 (Line 6 column (e)) ÷ 12 * 2)
Deferred Balance = Line 1 column (b) Less (sum of Line 6 column (d) + Line 6 column (e) ÷ 12 * 2)
(3) (Line 8 column (b) Plus Line 6 column (c)) ÷ 2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Regulatory Asset and Amortization
Karn 1-2, Classic 7, and Campbell Ash Disposal
($000)

Case No.: U-21389
Exhibit No.: A-24 (JCA-59)
Page: 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
Line No.	**Item Description**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**
1	Karn 1-2, Classic 7, and Campbell Ash Disposal Costs Deferred (JEB-2)	$ 11,816											
2	Amortization Expense 2022			1,182	1,182	1,182	1,182	1,182	1,182	1,182	1,182	1,182	1,182
3	Total amortization expense	$ -	$ -	$ 1,182	$ 1,182	$ 1,182	$ 1,182	$ 1,182	$ 1,182	$ 1,182	$ 1,182	$ 1,182	$ 1,182

	Item Description	**Avg Balance Feb 28, 2025 (3)**	**12 Mos Ending Feb 29, 2024 (1)**	**12 Mos Ending Feb 28, 2025 (2)**
4	Test Year Amortization Expense			$ 1,182
5	Karn 1-2, Classic 7, and Campbell Ash Disposal Costs Deferred Balance	$ 11,028	$ 11,619	$ 10,437

(1) Line 1 column (b) Less Line 6 column (d) ÷ 12 * 2
(2) Amortization Expense = [(Line 6 column (d)) ÷ 12 * 10 (Line 6 column (e)) ÷ 12 * 2)
Deferred Balance = Line 1 column (b) Less (sum of Line 6 column (d) + Line 6 column (e) ÷ 12 * 2)
(3) (Line 8 column (b) Plus Line 6 column (c)) ÷ 2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Regulatory Asset and Amortization
Campbell Decommissioning Costs
($000)

Case No.: U-21389
Exhibit No.: A-25 (JCA-60)
Page: 1 of 1
Witness: JCAponte
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
Line No.	**Item Description**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**
1	Campbell Decommissioning Costs Deferred (JEB-3)	$ 1,659											
2	Amortization Expense 2022			166	166	166	166	166	166	166	166	166	166
3	Total amortization expense	$ -	$ -	$ 166	$ 166	$ 166	$ 166	$ 166	$ 166	$ 166	$ 166	$ 166	$ 166

	Item Description	**Avg Balance Feb 28, 2025 (3)**	**12 Mos Ending Feb 29, 2024 (1)**	**12 Mos Ending Feb 28, 2025 (2)**
4	Test Year Amortization Expense			$ 166
5	Campbell Decommissioning Costs Deferred Balance	$ 1,549	$ 1,632	$ 1,466

(1) Line 1 column (b) Less Line 6 column (d) ÷ 12 * 2
(2) Amortization Expense = [(Line 6 column (d)) ÷ 12 * 10 (Line 6 column (e)) ÷ 12 * 2)
Deferred Balance = Line 1 column (b) Less (sum of Line 6 column (d) + Line 6 column (e) ÷ 12 * 2)
(3) (Line 8 column (b) Plus Line 6 column (c)) ÷ 2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Demand Response Revenue Requirement
(000)

Case No.: U-21389
Exhibit No.: A-26 (JCA-61)
Page: 1 of 3
Witness: JCAponte
Date: May 2023

Total Demand Response

Line	Description	Total	Source
(a)	(b)	(c)	(d)
1	**Residential Revenue Requirement**	**$28,687**	Exhibit A-26 (JCA-61), p 2
2	**C&I Revenue Requirement**	**23,507**	Exhibit A-26 (JCA-61), p 3
3	**Case No. U-21233 Reconciliation - Incentive**	**4,640**	Company Witness McLean
4	**Case No. U-21233 Reconciliation - Reg Liability**	**(10,046)**	Company Witness McLean
5	**Total Demand Response Revenue Requirement**	**$46,789**	

(1)

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Demand Response Revenue Requirement
(000)

Case No.: U-21389
Exhibit No.: A-26 (JCA-61)
Page: 2 of 3
Witness: JCAponte
Date: May 2023

Residential Demand Response

Line	Description	2 Mos Ending 2/28/2023	12 Mos Ending 2/29/2024	12 Mos Ending 2/28/2025	Total	
(a)	(b)	(c)	(d)	(e)	(f)	
1	**Total Capital Spending**	$ 1,848	$ 9,852	$ 6,838	$ 18,538	Exhibit A-12 (SQM-1)
	Revenue Requirement Calculation:					
					2/28/2025 Average	
2	Beginning Plant	$ 46,602	$ 48,450	$ 58,302		
3	Closings	1,848	9,852	6,838		
4	Ending Plant	$ 48,450	$ 58,302	$ 65,140	$ 61,721	
5	Beginning CWIP	$ 119	$ 119	$ 119		
6	Capital Spending	1,848	9,852	6,838		
7	Closings	1,848	9,852	6,838		
8	Ending CWIP	$ 119	$ 119	$ 119	$ 119	
9	Beginning Depreciation Reserve	$ 8,604	$ 9,277	$ 13,982		
10	Depreciation Expense [1]	673	4,704	5,440		
11	End Depreciation Reserve	$ 9,277	$ 13,982	$ 19,422	$ 16,702	
12	Total Rate Base				$ 45,138	Line 4 + Line 8 - Line11
13	Pre-Tax Rate of Return				7.60%	Exhibit A-14 (MRB-1)
14	Return on Investment				$ 3,431	Line 12 * Line 13
15	Depreciation Expense				5,440	Line 10
16	O&M				19,050	Exhibit A-144 (SQM-2)
17	R&PP Tax				767	Footnote [2]
18	**Total Residential Revenue Requirement**				**$28,687**	

Footnotes

(1)	2022 Composite Depreciation Rate	8.81%	
	Jan-Feb 2023 Depreciation portion	16.07%	
(2)	Average Plant Balance Test Year	$ 61,840	
	Property Tax Rate	0.012396326	Source: Exh A-161 (BJV-1)

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Demand Response Revenue Requirement
(000)

Case No.: U-21389
Exhibit No.: A-26 (JCA-61)
Page: 3 of 3
Witness: JCAponte
Date: May 2023

Commercial and Industrial Demand Response

Line	Description	2 Mos Ending 2/28/2023	12 Mos Ending 2/29/2024	12 Mos Ending 2/28/2025	Total	
(a)	(b)	(c)	(d)	(e)	(f)	
1	**Total Capital Spending**	$ 42	$ 330	$ 347	$ 718	Exhibit A-12 (SQM-1)
	Revenue Requirement Calculation:					
					2/28/2025 Average	
2	Beginning Plant	$ 6,664	$ 6,705	$ 7,035		
3	Closings	42	330	347		
4	Ending Plant	$ 6,705	$ 7,035	$ 7,382	$ 7,209	
5	Beginning CWIP	$ 17	$ 17	$ 17		
6	Capital Spending	42	330	347		
7	Closings	42	330	347		
8	Ending CWIP	$ 17	$ 17	$ 17	$ 17	
9	Beginning Depreciation Reserve	$ 1,851	$ 1,989	$ 2,867		
10	Depreciation Expense [1]	137	878	922		
11	End Depreciation Reserve	$ 1,989	$ 2,867	$ 3,789	$ 3,328	
12	Total Rate Base				$ 3,898	Line 4 + Line 8 - Line11
13	Pre-Tax Rate of Return				7.60%	Exhibit A-14 (MRB-1)
14	Return on Investment				$ 296	Line 12 * Line 13
15	Depreciation Expense				922	Line 10
16	O&M				22,200	Exhibit A-144 (SQM-2)
17	R&PP Tax				90	Footnote [2]
18	**Total C&I Revenue Requirement**				**$23,507**	

Footnotes

(1)	2022 Composite Depreciation Rate		12.79%
	Jan-Feb 2023 Depreciation portion		16.07%
(2)	Average Plant Balance Test Year	$	7,226

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
2022 Distribution Deferral
(000)

Case No.: U-21389
Exhibit No.: A-27 (JCA-62)
Page: 1 of 2
Witness: JCAponte
Date: May 2023

Line	Description	Actual 2022	U-20963 Approved 2022	Difference 2022
(a)	(b)	(c)	(d)	(e)
	Capital Spending			
1	New Business	174,753	123,172	51,581
2	Demand Failures	214,758	121,365	93,393
3	Asset Relocations	62,267	53,078	9,189
4	**Total Capital Spending**	$ 451,777	$ 297,615	$ 154,162

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
2022 Distribution Deferral
(000)

Case No.: U-21389
Exhibit No.: A-27 (JCA-62)
Page: 2 of 2
Witness: JCAponte
Date: May 2023

Line	Description	Amount	Source
(a)	(b)	(c)	(e)
	Revenue Requirement Calculation:		
1	Beginning Plant in Service	$ -	
2	Additional Capital Spending	154,162	Page 1, Line 4
3	Ending Plant	$ 154,162	Line 1 + Line 2
4	Average Plant in Service	$ 77,081	Average (Line 1 & Line 3)
5	Beginning Depreciation Reserve	$ -	
6	Depreciation Expense [1]	2,305	Line 4 x 2.99%
7	End Depreciation Reserve	$ 2,305	Line 5 + Line 6
8	Average Depreciation Reserve	$ 1,152	Average (Line 5 & Line 7)
9	Total Average Rate Base	$ 75,929	Line 3 Less Line 8
10	Return on Investment [1][2]	$5,341	Line 9 x 7.03%
11	R&PP Tax [1]	910	Line 4 x 1.181%
12	**Total 2021 Deferred Revenue Requirement**	**$ 8,556**	**Line 6 + Line 10 + Line 11**

[1] Depreciation rate of 2.99%, pretax cost of capital of 7.03%, and the property tax rate of 1.181% are from case No. U-20963.

[2] For accounting purposes there is a contra regulatory asset account that includes the return on equity portion of the return on investment. The return on equity authorized for deferral cannot be recorded until collected.

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company	Case No.:	U-21389
2023 Distribution Deferral	Exhibit No.:	A-28 (JCA-63)
(000)	Page:	1 of 1
	Witness:	JCAponte
	Date:	May 2023

Line	Description	U-21224 Approved 2023
(a)	(b)	(c)
	Capital Spending	
1	New Business	167,217
2	Demand Failures	148,356
3	Asset Relocations	55,122
4	**Total Capital Spending**	$ 370,695

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	))))))	Case No. U-21389

EXHIBITS

OF

JEFFREY E. BATTAGLIA

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Karn Units 1 & 2 Decommissioning Plan Expenditures

Case No.: U-21389
Exhibit No.: A-29 (JEB-1)
Page: 1 of 1
Witness: JEBattaglia
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
	Period	**2022-2026**		**2022**		**2023**	**2024**	**2025**	**2026**
Line No.	**Activity**	**Projected (2022)**	**Actual and Projected (2023)**	**Forecast**	**Actual**	**Updated Projected**	**Updated Projected**	**Updated Projected**	**Updated Projected**
1	Utility Separation	-	2,453,260	-	1,905,828	547,432	-	-	-
2	Decommissioning	5,935,991	7,628,332	234,995	299,590	7,328,743	-	-	-
3	Abatement	14,508,377	14,750,163	-	-	-	14,750,163	-	-
4	Demolition	28,373,080	26,826,467	-	-	-	11,447,658	15,378,809	-
5	Asset Recovery	(16,745,760)	(17,895,829)	-	-	-	(7,200,000)	(10,695,829)	-
6	Environmental	8,165,981	9,645,887	-	-	340,000	7,119,982	2,185,905	-
7	Restoration	3,306,472	4,502,339	-	-	-	-	4,502,339	-
8	Inventory Write Off	6,235,589	6,971,387	1,235,589	2,721,387	4,250,000	-	-	-
9	Contingency	13,661,085	17,042,850	300,000	-	1,300,000	10,000,000	5,742,850	-
10	Project Indirects	20,057,335	25,129,349	2,926,722	5,828,423	4,175,419	9,197,650	5,148,956	778,900
11	**Total**	83,498,149	97,054,205	4,697,306	10,755,228	17,941,594	45,315,453	22,263,030	778,900

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Actual Coal Ash Disposal Plan Expenditures

($000's)

Case No.: U-21389
Exhibit No.: A-30 (JEB-2)
Page: 1 of 1
Witness: JEBattaglia
Date: May 2023

	Site	Projected 2022	Actuals 2022	
(a)	**DE Karn**	$ 549	$ 121	$ 428
(b)	**JC Weadock**	$ 9,491	$ 5,166	$ 4,325
(c)	**BC Cobb**	$ 4,158	$ 6,102	$ (1,944)
(d)	**JR Whiting**	$ -	$ -	$ -
(e)	**JH Campbell**	$ -	$ 427	$ (427)
(f)	**Total**	$ 14,198	$ 11,816	

Footnote:

1 All expenses from 2022-2029 will recorded as regulatory asset

2 All expenses in the regulatory asset will be amortized for 10 years (beginning in 2029) so that all amoritzation will be complete by 2039

3 Ground monitor costs beginning in 2030 will be expensed in same year incurred

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Projected JHC Decommissioning Plan Expenditures

Case No.: U-21389
Exhibit No.: A-31 (JEB-3)
Page: 1 of 1
Witness: JEBattaglia
Date: May 2023

Projected JH Campbell Units 1, 2 & 3 Decommissioning Expense-March 2023

	(a)	(b)	(c)	(d)	(e)
			Actual Jan-June	**Actual July- Dec**	**Total Actual**
Line No.	**Activity**	**Forecasted**	**2022**	**2022**	**2022**
1	Utility Separation	19,596,869			
2	Decommissioning	11,542,385			
3	Abatement	14,652,459			
4	Demolition	77,493,000			
5	Asset Recovery	(27,736,946)			
6	Environmental	31,632,778			
7	Restoration	7,363,983			
8	Inventory Write Off	10,400,000			
9	Contingency	31,185,000			
10	Project Indirects	45,539,383	497,314	1,191,923	1,659,205
11	**Total**	221,668,911	497,314	1,191,923	1,659,205

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	))))))	Case No. U-21389

EXHIBITS

OF

MARC R. BLECKMAN

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

Schedule D-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Overall Rate of Return Summary
for the Projected Year Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-14 (MRB-1)
Schedule: D-1
Page: 1 of 2
Witness: MRBleckman
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
		Capital Structure				Weighted Cost			
Line No.	Description	Amount ($000,000) (1)	Percent Permanent Capital (2)	Percent of Total Capital	Cost Rate %	Permanent Capital (7)	Total Cost % (8)	Conversion Factor	Pre-Tax Return (9)
1									
2	Long-Term Debt	$ 10,833	48.33%	39.96%	4.14% (3)	2.00%	1.66%	1.0000	1.66%
3									
4	Preferred Stock	37	0.17%	0.14%	4.50% (4)	0.01%	0.01%	1.3391	0.01%
5									
6	Common Shareholder's Equity	11,543	51.50%	42.58%	10.25% (5)	5.28%	4.36%	1.3391	5.84%
7									
8	Total Permanent Capital	$ 22,413	100.00%						
9									
10	Short-Term Debt	294		1.08%	4.79% (6)		0.05%	1.0000	0.05%
11									
12	Deferred Income Taxes	4,280		15.79%	0.00%		0.00%	1.0000	0.00%
13									
14	Investment Tax Credit								
15	Long-Term Debt	56		0.21%	4.14%		0.01%	1.0000	0.01%
16	Preferred Stock	0		0.00%	4.50%		0.00%	1.3391	0.00%
17	Common Equity	63		0.23%	10.25%		0.02%	1.3391	0.03%
18									
19	Total	$ 27,106		100.00%			6.11%		7.60%

(1) See Exhibit A-14 (MRB-2), Schedule D-1a, Page 1.
(2) Excludes Short-term Debt, Deferred Income Taxes, and Investment Tax Credit to calculate the rate of return for Investment Tax Credit purposes in accordance with Internal Revenue Service Income Tax Regulation Section 1.46-6.
(3) See Exhibit A-14 (MRB-4), Schedule D-2.
(4) See Exhibit A-14 (MRB-6), Schedule D-4.
(5) See Exhibit A-14 (TAW-1), Schedule D-5.
(6) See Exhibit A-14 (MRB-5), Schedule D-3, Page 1.
(7) Column (c) x column (e).
(8) Column (d) x column (e).
(9) Column (g) x column (h).

Schedule D-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Overall Rate of Return Summary - Adjusted
for the Projected Year Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-14 (MRB-1)
Schedule: D-1
Page: 2 of 2
Witness: MRBleckman
Date: May 2023

Line No.	(a) Description	(b) Unadjusted 13-Month Avg. For Yr. Ended Feb. 2025 Amount ($000,000)	(c) Unadjusted 13-Month Avg. For Yr. Ended Feb. 2025 Percent Permanent Capital	(d) Adjusted 13-Month Avg. For Yr. Ended Feb. 2025 Amount ($000,000)	(e) Adjusted 13-Month Avg. For Yr. Ended Feb. 2025 Percent Permanent Capital
1					
2	Long-Term Debt	$ 10,833 (1)	48.33%	$ 11,939	50.76%
3					
4	Preferred Stock	37 (1)	0.17%	37 (1)	0.16%
5					
6	Common Shareholder's Equity	11,543 (1)	51.50%	11,543 (1)	49.08%
7					
8	Total Permanent Capital	$ 22,413	100.00%	$ 23,519	100.00%
9					
10					
11					
12	Long-Term Debt			$ 10,833 (1)	
13					
14	Add: Securitization Debt			731 (2)	
15	Add: Short-Term Debt			294 (1)	
16	Add: Leases			81 (3)	
17				$ 1,106	
18					
19	Long-Term Debt - Adjusted			$ 11,939	
20					

(1) See Exhibit A-14 (MRB-1), Schedule D-1, Page 1.
(2) Projected Securitization debt balance for the 13-months ending February 2025.
(3) Projected using the Lease balance at December 31, 2022.

Schedule D-1a

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Capital Structure Development
for the Projected Year Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-14 (MRB-2)
Schedule: D-1a
Page: 1 of 4
Witness: MRBleckman
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
		Historical Capital Structure 13-Month Avg. For Yr. Ended December 31, 2022					**Recommended Capital Structure**		
Line No.	**Description**	**Amount Outstanding (000,000)**	**% of Permanent Capital**	**% of Total Capital**	**Balances as of Dec. 31, 2022 (000,000)**	**Test Year Adjustments (000,000)**	**Amount Outstanding (000,000)**	**% of Permanent Capital**	**% of Total Capital**
1									
2	Long-Term Debt	$ 8,650	46.59%	38.08%	$ 9,010	$ 1,823	$ 10,833	48.33%	39.96%
3									
4	Preferred Stock	37	0.20%	0.16%	37	-	37	0.17%	0.14%
5									
6	Common Equity	9,881	53.21%	43.50%	10,134	1,409	11,543	51.50%	42.58%
7									
8	Total Permanent Capital	$ 18,568	100.00%		$ 19,181	$ 3,232	$ 22,413	100.00%	
9									
10	Short-Term Debt, Incl Renewable Liability	147		0.65%	1,095	(801)	294		1.08%
11									
12	Deferred Income Taxes	3,874		17.06%	3,772	508	4,280		15.79%
13									
14	Investment Tax Credit								
15	Long-Term Debt	58		0.26%	52	4	56		0.21%
16	Preferred Stock	0		0.00%	0	0	0		0.00%
17	Common Equity	66		0.29%	59	4	63		0.23%
18									
19	Total Investment Tax Credit	125		0.55%	112	8	120		0.44%
20									
21	Total Capitalization	$ 22,715		100.00%	$ 24,159		$ 27,106		100.00%

Sources and Support, by Column:

(b) Consumers Energy General Ledger 13-month average balances as of December 31, 2022.
(c) Each line 2, 4, and 6 in column (b) is divided by line 8, column (b).
(d) Each line 2, 4, 6, 10, 12, 15, 16, 17, and 19 in column (b) is divided by line 21, column (b).
(e) Consumers Energy General Ledger balances as of December 31, 2022.
(f) Line 2 Debt maturities and debt issues, line 6 Adjustment for retained earnings and equity contributions, line 10 Adjustment to project short-term debt and renewable liability balance, line 12 Adjustment to project Deferred Income Taxes balance, lines 15-17 Adjustment to project Investment Tax Credit balance.
(g) Column (e) + column (f). Represents 13-month averages.
(h) Each line 2, 4, and 6 in column (g) is divided by line 8, column (g).
(i) Each line 2, 4, 6, 10, 12, 15, 16, 17, and 19 in column (g) is divided by line 21, column (g).

Schedule D-1a

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Capital Structure Development - Projected Long-Term Debt Balance
for the Projected Year Ending February 28, 2025
(in millions)

Case No.: U-21389
Exhibit No.: A-14 (MRB-2)
Schedule: D-1a
Page: 2 of 4
Witness: MRBleckman
Date: May 2023

Line No.	(a) Long-Term Debt	(b) Actual Jan-22	(c) Actual Feb-22	(d) Actual Mar-22	(e) Actual Apr-22	(f) Actual May-22	(g) Actual Jun-22	(h) Actual Jul-22	(i) Actual Aug-22	(j) Actual Sep-22	(k) Actual Oct-22	(l) Actual Nov-22	(m) Actual Dec-22
1													
2	Beginning Balance	$ 8,306	$ 8,306	$ 8,306	$ 8,306	$ 8,306	$ 8,306	$ 8,306	$ 8,306	$ 9,106	$ 9,106	$ 9,106	$ 9,106
3	Add: Issuances	-	-	-	-	-	-	-	800	-	-	-	-
4	Less: Retirements	-	-	-	-	-	-	-	-	-	-	-	-
5	Subtotal	$ 8,306	$ 8,306	$ 8,306	$ 8,306	$ 8,306	$ 8,306	$ 8,306	$ 9,106	$ 9,106	$ 9,106	$ 9,106	$ 9,106
6													
7	Less: Unamortized Fees	(91)	(90)	(90)	(89)	(89)	(88)	(88)	(95)	(95)	(95)	(94)	(96)
8													
9	Ending Balance	$ 8,215	$ 8,216	$ 8,216	$ 8,217	$ 8,217	$ 8,218	$ 8,218	$ 9,011	$ 9,011	$ 9,011	$ 9,012	$ 9,010
10													
11													
12													
13	Long-Term Debt	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
14													
15	Beginning Balance	$ 9,106	$ 9,531	$ 10,231	$ 10,231	$ 10,231	$ 10,631	$ 10,331	$ 10,331	$ 10,406	$ 10,406	$ 10,406	$ 10,406
16	Add: Issuances	425	700	-	-	400	-	-	400	-	-	-	-
17	Less: Retirements	-	-	-	-	-	(300)	-	(325)	-	-	-	-
18	Subtotal	$ 9,531	$ 10,231	$ 10,231	$ 10,231	$ 10,631	$ 10,331	$ 10,331	$ 10,406	$ 10,406	$ 10,406	$ 10,406	$ 10,406
19													
20	Less: Unamortized Fees	(99)	(107)	(107)	(106)	(111)	(111)	(111)	(115)	(115)	(115)	(114)	(114)
21													
22	Ending Balance	$ 9,432	$ 10,124	$ 10,124	$ 10,125	$ 10,520	$ 10,220	$ 10,220	$ 10,291	$ 10,291	$ 10,291	$ 10,292	$ 10,292
23													
24													
25													
26	Long-Term Debt	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
27													
28	Beginning Balance	$ 10,406	$ 10,406	$ 10,406	$ 10,406	$ 10,406	$ 10,906	$ 10,906	$ 10,906	$ 11,226	$ 11,226	$ 11,226	$ 11,226
29	Add: Issuances	-	-	-	-	500	-	-	570	-	-	-	-
30	Less: Retirements	-	-	-	-	-	-	-	(250)	-	-	-	(52)
31	Subtotal	$ 10,406	$ 10,406	$ 10,406	$ 10,406	$ 10,906	$ 10,906	$ 10,906	$ 11,226	$ 11,226	$ 11,226	$ 11,226	$ 11,174
32													
33	Less: Unamortized Fees	(114)	(113)	(113)	(113)	(117)	(117)	(117)	(122)	(122)	(122)	(121)	(121)
34													
35	Ending Balance	$ 10,292	$ 10,293	$ 10,293	$ 10,293	$ 10,789	$ 10,789	$ 10,789	$ 11,104	$ 11,104	$ 11,104	$ 11,105	$ 11,053
36													
37													
38													
39	Long-Term Debt	Jan-25	Feb-25										
40													
41	Beginning Balance	$ 11,174	$ 11,174										
42	Add: Issuances	-	-										
43	Less: Retirements	-	-										
44	Subtotal	$ 11,174	$ 11,174										
45													
46	Less: Unamortized Fees	(121)	(120)										
47													
48	Ending Balance	$ 11,053	$ 11,054										
49													
50	**Test Year 13-Month Average:**												
51	Subtotal		$ 10,951										
52	Less: Unamortized Fees		(118)										
53	Ending Balance		**$ 10,833**										

Schedule D-1a

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Capital Structure Development - Projected Common Equity Balance
for the Projected Year Ending February 28, 2025
(in millions)

Case No.: U-21389
Exhibit No.: A-14 (MRB-2)
Schedule: D-1a
Page: 3 of 4
Witness: MRBleckman
Date: May 2023

Line No.	(a) Common Equity	(b) Actual Jan-22	(c) Actual Feb-22	(d) Actual Mar-22	(e) Actual Apr-22	(f) Actual May-22	(g) Actual Jun-22	(h) Actual Jul-22	(i) Actual Aug-22	(j) Actual Sep-22	(k) Actual Oct-22	(l) Actual Nov-22	(m) Actual Dec-22
1													
2	Beginning Balance	$ 9,275	$ 9,614	$ 9,732	$ 9,832	$ 9,739	$ 9,798	$ 10,082	$ 10,017	$ 10,088	$ 10,111	$ 9,983	$ 10,045
3	Ret. Earnings	(111)	118	100	(93)	59	49	(65)	71	23	(128)	62	89
4	Equity Infusion	450	-	-	-	-	235	-	-	-	-	-	-
5	Ending Balance	$ 9,614	$ 9,732	$ 9,832	$ 9,739	$ 9,798	$ 10,082	$ 10,017	$ 10,088	$ 10,111	$ 9,983	$ 10,045	$ 10,134
6													
7													
8													
9	Common Equity	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
10													
11	Beginning Balance	$ 10,134	$ 10,150	$ 10,240	$ 10,256	$ 10,272	$ 10,688	$ 10,703	$ 10,719	$ 10,735	$ 10,750	$ 10,766	$ 10,782
12	Ret. Earnings	16	16	16	16	16	16	16	16	16	16	16	16
13	Equity Infusion	-	75	-	-	400	-	-	-	-	-	-	-
14	Ending Balance	$ 10,150	$ 10,240	$ 10,256	$ 10,272	$ 10,688	$ 10,703	$ 10,719	$ 10,735	$ 10,750	$ 10,766	$ 10,782	$ 10,798
15													
16													
17													
18	Common Equity	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
19													
20	Beginning Balance	$ 10,798	$ 10,813	$ 11,179	$ 11,195	$ 11,210	$ 11,226	$ 11,592	$ 11,608	$ 11,623	$ 11,639	$ 11,655	$ 11,670
21	Ret. Earnings	16	16	16	16	16	16	16	16	16	16	16	16
22	Equity Infusion	-	350	-	-	-	350	-	-	-	-	-	-
23	Ending Balance	$ 10,813	$ 11,179	$ 11,195	$ 11,210	$ 11,226	$ 11,592	$ 11,608	$ 11,623	$ 11,639	$ 11,655	$ 11,670	$ 11,686
24													
25													
26													
27	Common Equity	Jan-25	Feb-25										
28													
29	Beginning Balance	$ 11,686	$ 11,702										
30	Ret. Earnings	16	16										
31	Equity Infusion	-	350										
32	Ending Balance	$ 11,702	$ 12,068										
33													
34													
35	**Test Year 13-Month Average**		**$ 11,543**										

(n)	(o) Test Year Impact of Retained Earnings 2023	(p) 2024	(q) 2025	(r) Test Year Impact of Equity Infusions 2023	(s) 2024	(t) 2025
Jan	$ 16	$ 204	$ 393	$ -	$ 475	$ 1,175
Feb	$ 31	$ 220	$ 409	$ 75	$ 825	$ 1,525
Mar	$ 47	$ 236		$ 75	$ 825	
Apr	$ 63	$ 251		$ 75	$ 825	
May	$ 79	$ 267		$ 475	$ 825	
Jun	$ 94	$ 283		$ 475	$ 1,175	
Jul	$ 110	$ 299		$ 475	$ 1,175	
Aug	$ 126	$ 314		$ 475	$ 1,175	
Sep	$ 141	$ 330		$ 475	$ 1,175	
Oct	$ 157	$ 346		$ 475	$ 1,175	
Nov	$ 173	$ 361		$ 475	$ 1,175	
Dec	$ 189	$ 377		$ 475	$ 1,175	
13-Month Avg.			$ 315			$ 1,094

Schedule D-1a

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Capital Structure Development - Projected Deferred Income Tax Balance
for the Projected Year Ending February 28, 2025
(in millions)

Case No.: U-21389
Exhibit No.: A-14 (MRB-2)
Schedule: D-1a
Page: 4 of 4
Witness: MRBleckman
Date: May 2023

Deferred Income Tax Ending Balance

Line No.	(a) Actual Jan-22	(b) Actual Feb-22	(c) Actual Mar-22	(d) Actual Apr-22	(e) Actual May-22	(f) Actual Jun-22	(g) Actual Jul-22	(h) Actual Aug-22	(i) Actual Sep-22	(j) Actual Oct-22	(k) Actual Nov-22	(l) Actual Dec-22
1	$ 3,774	$ 3,777	$ 3,824	$ 3,830	$ 3,835	$ 3,817	$ 3,519	$ 3,836	$ 3,848	$ 3,917	$ 3,396	$ 3,772
2												
3												
4												
5	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
6	$ 3,957	$ 3,976	$ 3,994	$ 4,013	$ 4,032	$ 4,050	$ 4,069	$ 4,087	$ 4,106	$ 4,125	$ 4,143	$ 4,162
7												
8												
9												
10	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
11	$ 4,177	$ 4,191	$ 4,206	$ 4,221	$ 4,236	$ 4,251	$ 4,265	$ 4,280	$ 4,295	$ 4,310	$ 4,325	$ 4,339
12												
13												
14												
15	Jan-25	Feb-25										
16	$ 4,353	$ 4,366										
17												
18												
19	**Test Year 13-Month Avg**		**$ 4,280**									

Schedule D-1b

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Development of Capital Structure
for the Projected Year Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-14 (MRB-3)
Schedule: D-1b
Page: 1 of 1
Witness: MRBleckman
Date: May 2023

Line No.	(a) Description	(b) Financial Basis	(c) MPSC Ratemaking Basis
I.	LONG-TERM DEBT:		
a.	First Mortgage Bonds	Include	Include
b.	Trust Preferred Securities	Include	Include
c.	Other Subordinated LTD	Include	Include
d.	Unamortized Debt Premium	Include	Include
e.	Unamortized Debt Discount	Include	Include
f.	Unamortized Debt Expense	Include	Include
g.	Current Maturities	**Exclude**	**Include**
h.	Capitalized Leases	**Include**	**Exclude**
II.	SHORT-TERM DEBT	Include	Include
III.	PREFERRED STOCK EXPENSE		
a.	Preferred Stock	Include	Include
b.	Trust Preferred Securities	Exclude	Exclude
c.	Preferred Stock Expense	Include	Include
IV.	COMMON EQUITY		
a.	Common Stock Issued	Include	Include
b.	Premium on Common Stock	Include	Include
c.	Donations Received From Stockholders	Include	Include
d.	Common Stock Expense	Include	Include
e.	Gain on Reacquired Stock	Include	Include
f.	Miscellaneous Paid In Capital	Include	Include
g.	Mark-to-Market Accounting	**Include**	**Exclude**
h.	Appropriated Retained Earnings	Include	Include
I.	Unappropriated Retained Earnings	Include	Include
j.	FAS 90 (Abandoned Plant)	Include	Include
V.	DEFERRED ITC	**Exclude**	**Include**
VI.	DEFERRED TAXES	**Exclude**	**Include**
VII.	DEFERRED JDITC	**Exclude**	**Include**

Schedule D-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Long-Term Debt
for the Projected Year Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-14 (MRB-4)
Schedule: D-2
Page: 1 of 1
Witness: MRBleckman
Date: May 2023

Line No.	(a) Description	(b) Original Issue Date	(c) Stated Maturity Date	(d) Interest Rate (%)	(d1) Interest Payments Per Year	(e) Amount of Offering ($000)	(f) Price to Public (%)	(g) Underwriting Expenses (%)	(g1) Underwriting Expenses ($000)	(g2) Financing Expenses (%)	(g3) Financing Expenses ($000)	(g4) (Premium) Discount ($000)	(h) Net Proceeds to the Company (%)	(i) Cost Based on Net Proceeds (%)	(j) Amount Outstanding ($000)	(k) Annual Cost ($000)
1																
2	**Mortgage Bonds**															
3	5.800%	11-Aug-05	15-Sep-35	5.800%	2	175,000	99.81%	0.875%	1,531.25	0.17%	299.97	337.75	98.761%	5.8879%	175,000	10,304
4	6.170%	01-Sep-10	01-Sep-40	6.170%	2	50,000	100.00%	0.906%	453.04	0.08%	38.99	0.00	99.016%	6.2430%	50,000	3,121
5	4.970%	15-Oct-10	15-Oct-40	4.970%	2	50,000	100.00%	0.500%	250.00	0.04%	19.58	0.00	99.461%	5.0049%	50,000	2,502
6	3.190%	17-Dec-12	16-Dec-24	3.190%	2	51,500	100.00%	0.501%	258.27	0.03%	17.63	0.00	99.464%	3.2443%	39,615	1,285
7	3.390%	17-Dec-12	15-Dec-27	3.390%	2	35,500	100.00%	0.501%	178.03	0.04%	13.76	0.00	99.460%	3.4364%	35,500	1,220
8	4.310%	17-Dec-12	15-Dec-42	4.310%	2	263,000	100.00%	0.501%	1,318.92	0.03%	68.78	0.00	99.472%	4.3416%	263,000	11,418
9	3.950%	17-May-13	15-May-43	3.950%	2	425,000	99.84%	0.875%	3,718.75	0.16%	675.43	667.25	98.809%	4.0187%	425,000	17,079
10	3.125%	18-Aug-14	31-Aug-24	3.125%	2	250,000	99.90%	0.650%	1,625.00	0.14%	349.86	255.00	99.108%	3.2297%	115,385	3,727
11	4.350%	18-Aug-14	31-Aug-64	4.350%	2	250,000	99.14%	0.875%	2,187.50	0.12%	309.64	2,157.50	98.138%	4.4430%	250,000	11,107
12	4.100%	06-Nov-15	15-Nov-45	4.100%	2	250,000	99.91%	0.875%	2,187.50	0.18%	447.46	217.50	98.859%	4.1669%	250,000	10,417
13	3.250%	10-Aug-16	15-Aug-46	3.250%	2	450,000	99.22%	0.875%	3,937.50	0.18%	821.46	3,501.00	98.164%	3.3474%	450,000	15,063
14	3.950%	22-Feb-17	15-Jul-47	3.950%	2	350,000	99.58%	0.875%	3,062.50	0.19%	669.34	1,463.00	98.516%	4.0350%	350,000	14,122
15	3.18% (Private Placement)	28-Sep-17	28-Sep-32	3.180%	2	40,000	100.00%	0.301%	120.48	0.03%	12.80	0.00	99.667%	3.2082%	40,000	1,283
16	3.52% (Private Placement)	28-Sep-17	28-Sep-37	3.520%	2	125,000	100.00%	0.402%	501.98	0.04%	53.33	0.00	99.556%	3.5512%	125,000	4,439
17	3.86% (Private Placement)	28-Sep-17	28-Sep-52	3.860%	2	20,000	100.00%	0.703%	140.56	0.07%	14.93	0.00	99.223%	3.9009%	20,000	780
18	3.18% (Private Placement)	15-Nov-17	15-Nov-32	3.180%	2	60,000	100.00%	0.301%	180.71	0.03%	18.60	0.00	99.668%	3.2081%	60,000	1,925
19	3.52% (Private Placement)	15-Nov-17	15-Nov-37	3.520%	2	210,000	100.00%	0.402%	843.33	0.04%	86.81	0.00	99.557%	3.5511%	210,000	7,457
20	3.86% (Private Placement)	15-Nov-17	15-Nov-52	3.860%	2	30,000	100.00%	0.703%	210.83	0.07%	21.70	0.00	99.225%	3.9008%	30,000	1,170
21	4.050%	14-May-18	15-May-48	4.050%	2	550,000	98.97%	0.875%	4,812.50	0.20%	1,106.61	5,659.50	97.895%	4.1737%	550,000	22,955
22	3.68% (Private Placement)	01-Oct-18	01-Oct-27	3.680%	2	100,000	100.00%	0.145%	145.00	0.01%	13.99	0.00	99.841%	3.7009%	100,000	3,701
23	4.01% (Private Placement)	01-Oct-18	01-Oct-38	4.010%	2	215,000	100.00%	0.323%	694.00	0.03%	56.32	0.00	99.651%	4.0356%	215,000	8,677
24	4.28% (Private Placement)	01-Oct-18	01-Oct-57	4.280%	2	185,000	100.00%	0.629%	1,164.00	0.05%	87.47	0.00	99.324%	4.3160%	185,000	7,985
25	3.800%	13-Nov-18	15-Nov-28	3.800%	2	300,000	99.75%	0.650%	1,950.00	0.10%	305.05	744.00	99.000%	3.9217%	300,000	11,765
26	4.350%	13-Nov-18	15-Apr-49	4.350%	2	550,000	99.62%	0.875%	4,812.50	0.18%	985.10	2,101.00	98.564%	4.4363%	550,000	24,400
27	3.750%	28-May-19	15-Feb-50	3.750%	2	300,000	98.83%	0.875%	2,625.00	0.21%	632.06	3,498.00	97.748%	3.8758%	300,000	11,627
28	3.100%	03-Sep-19	15-Aug-50	3.100%	2	550,000	99.29%	0.875%	4,812.50	0.10%	526.98	3,899.50	98.320%	3.1857%	550,000	17,521
29	Floating Rate FMB	19-Sep-19	15-Sep-69	3.760%	2	75,649	100.00%	1.000%	756.49	0.99%	751.55	0.00	98.007%	3.8501%	75,649	2,913
30	3.500%	26-Mar-20	01-Aug-51	3.500%	2	575,000	100.00%	0.875%	5,031.25	0.22%	1,261.45	0.00	98.906%	3.5580%	575,000	20,459
31	2.500%	13-May-20	01-May-60	2.500%	2	525,000	100.00%	0.875%	4,593.75	0.17%	905.40	0.00	98.953%	2.5419%	525,000	13,345
32	Floating Rate FMB	20-May-20	20-May-70	3.760%	2	134,349	100.00%	1.000%	1,343.49	0.29%	390.52	0.00	98.709%	3.8180%	134,349	5,129
33	Floating Rate FMB	07-Oct-20	07-Oct-70	3.760%	2	126,497	100.00%	1.000%	1,264.97	0.25%	315.63	0.00	98.750%	3.8162%	126,497	4,827
34	2.650%	02-Aug-21	15-Aug-52	2.650%	2	300,000	99.92%	0.875%	2,625.00	0.19%	569.00	252.00	98.851%	2.7049%	300,000	8,115
35	3.600%	11-Aug-22	15-Aug-32	3.600%	2	350,000	99.93%	0.650%	2,275.00	0.20%	700.00	262.50	99.075%	3.7114%	350,000	12,990
36	4.200%	11-Aug-22	01-Sep-52	4.200%	2	450,000	99.93%	0.875%	3,937.50	0.20%	900.00	319.50	98.854%	4.2679%	450,000	19,206
37	4.650%	10-Jan-23	01-Mar-28	4.650%	2	425,000	99.81%	0.600%	2,550.00	0.20%	850.00	790.50	99.014%	4.8680%	425,000	20,689
38	4.625%	23-Feb-23	15-May-33	4.625%	2	700,000	100.00%	0.650%	4,550.00	0.20%	1,400.00	0.00	99.150%	4.7300%	700,000	33,110
39	5.24% (Private Placement)	15-May-23	15-May-26	5.240%	2	115,000	100.00%	0.875%	1,006.25	0.20%	230.00	0.00	98.925%	5.6345%	115,000	6,480
40	5.07% (Private Placement)	15-May-23	15-May-29	5.070%	2	50,000	100.00%	0.875%	437.50	0.20%	100.00	0.00	98.925%	5.2814%	50,000	2,641
41	5.17% (Private Placement)	15-May-23	15-May-32	5.170%	2	95,000	100.00%	0.875%	831.25	0.20%	190.00	0.00	98.925%	5.3219%	95,000	5,056
42	5.38% (Private Placement)	15-May-23	15-May-37	5.380%	2	140,000	100.00%	0.875%	1,225.00	0.20%	280.00	0.00	98.925%	5.4910%	140,000	7,687
43	New Debt Issue #1	01-Aug-23	01-Aug-53	5.290%	2	400,000	100.00%	0.875%	3,500.00	0.20%	800.00	0.00	98.925%	5.3625%	400,000	21,450
44	New Debt Issue #2	01-May-24	01-May-54	5.210%	2	500,000	100.00%	0.875%	4,375.00	0.20%	1,000.00	0.00	98.925%	5.2818%	384,615	20,315
45	New Debt Issue #3	01-Aug-24	01-Aug-54	5.210%	2	570,000	100.00%	0.875%	4,987.50	0.20%	1,140.00	0.00	98.925%	5.2818%	306,923	16,211
46	Total Mortgage Bonds														$ 10,841,533	$ 447,674
47																
48	**Other Long-Term Debt**															
49	PCRB - MSF LORB - 19	01-Oct-19	01-Oct-49	1.800%	2	75,000	100.00%	0.592%	443.75	0.89%	669.74	0.00	98.515%	1.8648%	$ 75,000	$ 1,399
50	PCRB - MSF LORB - 21	07-Oct-21	01-Apr-35	0.875%	2	35,000	100.00%	0.600%	210.00	0.90%	315.00	0.00	98.500%	0.9941%	35,000	348
51															$ 110,000	$ 1,747
52																
53																
54	Total Long-Term Debt														$ 10,951,533	$ 449,421
55																
56	Amortization of Losses on Reacquired Debt with Refunding (including Call Premiums)															4,305
57																
58	Total Long-Term Debt Before Unamortized Expense and Premium													4.14%	$ 10,951,533	$ 453,726
59																
60	Unamortized Debt Discount, Expense and Premium														(118,385)	
61																
62	Total Long-Term Debt Balance														$ 10,833,149	
63																
64	Annual Cost													4.14%		

Ties to 13-Month Average in Exhibit A-14 (MRB-2), Schedule D-1a, page 2

65

66 **Calculations:**

67 Column (i) = Yield formula based on inputs from column (b),column (c), column (d), column (d1), and column (h) calculated on an annualized basis.

68 Column (j) = represents the average amount of debt outstanding for the test year.

69 Column (k) = column (i)*column (j).

70 Lines 29, 32, and 33 Coupon Rate = Projected SOFR Rate of 4.06% (Average of Projected IHS and Blue Chip SOFR Rates) minus 0.30%.

71 Lines 6, 10, 44 and 45 - As this is a partial year debt outstanding, pro-rata balance and pro-rata interest expense are used which would result in the same cost rate as an annual analysis,

72 but provides a more accurate average debt balance for the Test Year. This would make the Total Debt balance line 62 tie to the debt balance shown on Exhibit A-_ (MRB-2), Schedule D-1a, page 2.

73 Line 56 - Amortization of losses on reacquired debt with refundings projected for the test year ending February 28, 2025.

				2023	2024
74					
75	Projected SOFR Rate	2024	Projected New Debt Issue Interest Rates	New Debt Issue #1	New Debt Issue #2 / #3
76			Projected 30-Year Treasury Rate		
77	I.H.S. Markit (January 2023)	4.42%	I.H.S. Markit (Jan. 2023)	4.03%	3.72%
78	Blue Chip (December 2022)	3.70%	Blue Chip (Feb. 1, 2023 for 2023 / Dec. 2022 for 2024)	3.85%	4.00%
79	Average of I.H.S. & Blue Chip	4.06%	Average of I.H.S & Blue Chip	3.94%	3.86%
80					
81			Add: Historical 30-Year Bond Spread	1.35%	1.35%
82				**5.29%**	**5.21%**

Schedule D-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Short-Term Debt
for the Projected Year Ending February 28, 2025
(in millions)

Case No.: U-21389
Exhibit No.: A-14 (MRB-5)
Schedule: D-3
Page: 1 of 2
Witness: MRBleckman
Date: May 2023

Line No.	Description	(a) Average Borrowings	(b) Cost of Borrowings	(c) Cost Rate
1	Short-Term Debt - Short-Term Liquidity Facilities	$ 242.7	$ 12.0	
2				
3	Short-Term Debt - Renewable Liability	51.3	2.1	
4				
5	Total Short-Term Debt	$ 294.0	$ 14.1	4.79%

Sources:

Column (a): Average borrowings per Exhibit A-14 (MRB-7), Schedule D-6.
Column (b): Short-Term Debt - Short-Term Liquidity Facilities cost per Exhibit A-14 (MRB-5), Schedule D-3, page 2.
Short-Term Debt - Renewable Liability cost equal to the average borrowings (column (a)) times the projected interest on borrowings rate of 4.06%, per Exhibit A-14 (MRB-5), Schedule D-3, page 2.
Column (c) = column (b)/column (a).

Schedule D-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Short-Term Debt - Short-Term Liquidity Facilities
for the Projected Year Ending February 28, 2025
(in millions)

Case No.: U-21389
Exhibit No.: A-14 (MRB-5)
Schedule: D-3
Page: 2 of 2
Witness: MRBleckman
Date: May 2023

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1	**Summary**				**Test Year Assumption**			
2	**Facility**	**Agreement Date**	**Expiration**	**Facility Amount**	**Less: Avg. Borrowings**	**Less: Letters of Credit**	**Amount Unused[a]**	**Upfront Fee Amort**
3					**(A)**	**(B)**	**(C)**	**(D)**
4	1. JPMorgan Revolver	Jun. 2018	Dec. 2027	$ 1,100.0	$ -	$ 29.3	$ 1,070.7	$ 0.3
5	2. Commercial Paper Facility	Sep. 2014	N/A	$ 500.0	$ 242.7	$ -	$ -	$ -
6	3. Scotiabank Revolver	Nov. 2018	Nov. 2024	$ 250.0	$ -	$ 27.3	$ 222.7	$ 0.3
7								
8								
9								
10	**Cost of Short-Term Debt - Short-Term Liquidity Facilities**							
11								
12	**(A)** **Interest on Borrowings** - Calculated on the projected drawn balance at SOFR plus the spread on borrowings.							
13								
14			Plus:	Projected	Avg.			
15	Facility	SOFR[b]	Spread	Rate	Borrowings	Cost		
16	1. JPMorgan Revolver	4.06%	0.875%	4.94%	$ -	$ -		
17	2. Commercial Paper Facility	4.06%	0.000%	4.06%	242.7	9.9		
18	3. Scotiabank Revolver	4.06%	0.750%	4.81%	-	-		
19						$ 9.9		
20								
21	**(B)** **Letter of Credit Fees** - Calculated on the projected letters of credit outstanding at a rate equal to the spread.							
22								
23				Projected	Letters			
24	Facility	Letter of Credit Type		Rate	of Credit	Cost		
25	1. JPMorgan Revolver	Regular Operating		0.875%	$ 29.3	$ 0.3		
26	2. Commercial Paper Facility	N/A		N/A	-	-		
27	3. Scotiabank Revolver	MISO Margin & Other		0.750%	27.3	0.2		
28						$ 0.5		
29								
30	**(C)** **Unused (Commitment) Fees** - Calculated on the unused portion of the revolver at a rate stated in the facility agreement.							
31								
32				Projected	Amount			
33				Rate	Unused[a]	Cost		
34	1. JPMorgan Revolver			0.075%	$ 1,070.7	$ 0.8		
35	2. Commercial Paper Facility			N/A	-	-		
36	3. Scotiabank Revolver			0.075%	$ 222.7	$ 0.2		
37						$ 1.0		
38								
39	**(D)** **Amortization / Expense of Facility Fees** - Fees paid upfront at the inception or amendment to the facility, amortized							
40	over the life of the facility.							
41						Annual		
42						Cost		
43	1. JPMorgan Revolver					$ 0.3		
44	2. Commercial Paper Facility					-		
45	3. Scotiabank Revolver					0.3		
46						$ 0.6		
47								
48								
49	**Total Cost of Short-Term Debt - Revolver / Commercial Paper**					**$ 12.0**		
50								
51								
52	[a] Commercial Paper drawn balances go against, or are "backstopped," by the Company's JPMorgan Revolver.							
53	To the extent amounts are borrowed under the Commercial Paper Facility, the availability of the JPMorgan Revolver are reduced.							
54	These borrowings do not, however, reduce the "unused" portion of the revolver in calculating the unused (commitment) fees.							
55	[b] Projected SOFR rate per Exhibit A-14 (MRB-4), Schedule D-2. Forecasted SOFR assumed to closely approximate commercial paper rate.							

Schedule D-4

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Cost of Preferred Stock
for the Projected Year Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-14 (MRB-6)
Schedule: D-4
Page: 1 of 1
Witness: MRBleckman
Date: May 2023

	(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No.	**Description**		**Annual Dividend**	**Par Value**	**Finance Expense**	**(Premium) Discount**	**Net Proceeds Received By Company**	**Number Of Shares Outstanding**	**Total Value Of Net Proceeds (000)**	**Cost Rates**	**Annual Cost (000)**
	PREFERRED STOCK:										
1	$4.500	Series	$4.500	$100.00	$0.00	$0.00	$100.00	373,148	$37,315	4.50%	$1,679

Calculations:
Column (i) = (column (h)*column (b)/column (f))/column (h).
Column (j) = column (h)*column (i).

Schedule D-6

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Short-Term Debt Utilization
for the Projected Year Ending February 28, 2025
(in millions)

Case No.: U-21389
Exhibit No.: A-14 (MRB-7)
Schedule: D-6
Page: 1 of 1
Witness: MRBleckman
Date: May 2023

Ending Short-Term Debt - Short-Term Liquidity Facilities

Line No.	(a) Actual Jan-22	(b) Actual Feb-22	(c) Actual Mar-22	(d) Actual Apr-22	(e) Actual May-22	(f) Actual Jun-22	(g) Actual Jul-22	(h) Actual Aug-22	(i) Actual Sep-22	(j) Actual Oct-22	(k) Actual Nov-22	(l) Actual Dec-22
1												
2	$ -	$ 238	$ -	$ -	$ 122	$ 77	$ 402	$ 34	$ 550	$ 682	$ 1,044	$ 1,095
3												
4												
5	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
6												
7	$ 500	$ 19	$ -	$ -	$ -	$ -	$ -	$ -	$ 320	$ 300	$ 521	$ 565
8												
9												
10	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
11												
12	$ 375	$ 354	$ 255	$ -	$ -	$ -	$ -	$ -	$ 290	$ 300	$ 485	$ 500
13												
14												
15	Jan-25	Feb-25										
16												
17	$ 290	$ 325										
18												
19	**Test Year 13-Month Avg**		**$ 243**									

Ending Short-Term Debt - Renewable Liability Balance [a]

20	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**
21	**Jan-22**	**Feb-22**	**Mar-22**	**Apr-22**	**May-22**	**Jun-22**	**Jul-22**	**Aug-22**	**Sep-22**	**Oct-22**	**Nov-22**	**Dec-22**
22												
23	$ 20	$ 29	$ 29	$ 35	$ 36	$ 32	$ 33	$ 32	$ 23	$ 27	$ 35	$ 32
24												
25												
26	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
27												
28	$ 32	$ 33	$ 33	$ 34	$ 34	$ 35	$ 35	$ 36	$ 36	$ 37	$ 37	$ 38
29												
30												
31	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
32												
33	$ 39	$ 41	$ 43	$ 45	$ 46	$ 48	$ 50	$ 51	$ 53	$ 55	$ 57	$ 58
34												
35												
36	Jan-25	Feb-25										
37												
38	$ 59	$ 61										
39												
40	**Test Year 13-Month Avg**		**$ 51**									
41												
42												

43 [a]Projected year-end Renewable Liability balances are consistent with the Company's Renewable Energy proceeding reflected in Case No. U-21197.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Current and Historical Credit Ratings
for the Projected Year Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-32 (MRB-8)
Page: 1 of 1
Witness: MRBleckman
Date: May 2023

Credit Ratings

Line No.		(a)	(b)	(c)	(d)	(e)	(f)
1			**Standard & Poors Ratings at Year End**				
2		**Current**	**2022**	**2021**	**2020**	**2019**	**2018**
3	**Consumers Energy Company**						
4	Senior Secured Debt	A	A	A	A	A	A
5	Commercial Paper	A-2	A-2	A-2	A-2	A-2	A-2
6	Senior Unsecured Debt	N/A	N/A	N/A	N/A	N/A	N/A
7	Hybrid Preferred Securities	N/A	N/A	N/A	N/A	N/A	N/A
8	Preferred Stock	N/A	N/A	N/A	N/A	N/A	N/A
9	Outlook	Stable	Stable	Stable	Stable	Stable	Stable
10							
11	**CMS Energy Corporation**						
12	Senior Secured Debt	N/A	N/A	N/A	N/A	N/A	N/A
13	Senior Unsecured Debt	BBB	BBB	BBB	BBB	BBB	BBB
14	Junior Subordinated Debt	BBB-	BBB-	BBB-	BBB-	BBB-	BBB-
15	Hybrid Preferred Securities	N/A	N/A	N/A	N/A	N/A	N/A
16	Preferred Stock	BBB-	BBB-	BBB-	N/A	N/A	N/A
17	Outlook	Stable	Stable	Stable	Stable	Stable	Stable
18							
19							
20			**Moody's Ratings at Year End**				
21		**Current**	**2022**	**2021**	**2020**	**2019**	**2018**
22	**Consumers Energy Company**						
23	Senior Secured Debt	A1	A1	A1	Aa3	Aa3	Aa3
24	Commercial Paper	P-2	P-2	P-2	P-1	P-1	P-1
25	Senior Unsecured Debt	N/A	N/A	N/A	N/A	N/A	N/A
26	Hybrid Preferred Securities	N/A	N/A	N/A	N/A	N/A	N/A
27	Preferred Stock	Baa1	Baa1	Baa1	A3	A3	A3
28	Outlook	Stable	Stable	Stable	Stable	Stable	Stable
29							
30	**CMS Energy Corporation**						
31	Senior Secured Debt	A3	A3	A3	A3	A3	A3
32	Senior Unsecured Debt	Baa2	Baa2	Baa2	Baa1	Baa1	Baa1
33	Junior Subordinated Debt	Baa3	Baa3	Baa3	Baa2	Baa2	Baa2
34	Hybrid Preferred Securities	N/A	N/A	N/A	N/A	N/A	N/A
35	Preferred Stock	Ba1	Ba1	Ba1	N/A	N/A	N/A
36	Outlook	Stable	Stable	Stable	Negative	Stable	Stable
37							
38							
39			**Fitch Ratings at Year End**				
40		**Current**	**2022**	**2021**	**2020**	**2019**	**2018**
41	**Consumers Energy Company**						
42	Senior Secured Debt	A+	A+	A+	A+	A+	A+
43	Commercial Paper	F-2	F-2	F-2	F-2	F-2	F-2
44	Senior Unsecured Debt	A	A	A	A	A	A
45	Hybrid Preferred Securities	N/A	N/A	N/A	N/A	N/A	N/A
46	Preferred Stock	BBB+	BBB+	BBB+	BBB+	BBB+	BBB+
47	Outlook	Stable	Stable	Stable	Stable	Stable	Stable
48							
49	**CMS Energy Corporation**						
50	Senior Secured Debt	BBB+	BBB+	BBB+	BBB+	BBB+	BBB+
51	Senior Unsecured Debt	BBB	BBB	BBB	BBB	BBB	BBB
52	Junior Subordinated Debt	BB+	BB+	BB+	BB+	BB+	BB+
53	Hybrid Preferred Securities	N/A	N/A	N/A	N/A	N/A	N/A
54	Preferred Stock	BB+	BB+	BB+	N/A	N/A	N/A
55	Outlook	Stable	Stable	Stable	Stable	Stable	Stable

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Recent Utility Corporate Bond Issuances
for the Projected Year Ending February 28, 2025

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Line	Issue				Amt		Ratings			Issue	
No.	Date	Ticker	Issuer	Type	($mm)	Coupon	Moody's	S&P	Maturity	Spread (bp)	Category
1	01/06/20	EIX	Southern California Edison Co (reopening)	Secured	100	2.850%	A3	A-	08/01/29	+90	
2	01/06/20	EIX	Southern California Edison Co	Secured	500	3.650%	A3	A-	02/01/50	+140	2
3	01/06/20	SRE	Southern California Gas	Secured	650	2.550%	Aa2	A+	02/01/30	+77	
4	01/06/20	DUK	Duke Energy Carolinas	Secured	500	2.450%	Aa2	A	02/01/30	+68	
5	01/06/20	DUK	Duke Energy Carolinas (reopening)	Secured	400	3.200%	Aa2	A	08/15/49	+88	1
6	01/07/20	ES	Eversource Energy	Unsecured	350	3.450%	Baa1	BBB+	01/15/50	+115	3
7	01/07/20	PEG	Public Service Electric & Gas	Secured	300	2.450%	Aa3	A	01/15/30	+65	
8	01/07/20	PEG	Public Service Electric & Gas	Secured	300	3.150%	Aa3	A	01/01/50	+85	1
9	01/08/20	SO	Georgia Power Company	Unsecured	700	2.100%	Baa1	A-	07/30/23	+50	
10	01/08/20	SO	Georgia Power Company	Unsecured	300	2.650%	Baa1	A-	09/15/29	+95	
11	01/08/20	SO	Georgia Power Company	Unsecured	500	3.700%	Baa1	A-	01/30/50	+135	2
12	01/22/20	NRUC	National Rural Utilities Cooperative Finance Corp	Unsecured	500	1.750%	A2	A	01/21/22	+27	
13	01/22/20	NRUC	National Rural Utilities Cooperative Finance Corp	Secured	500	2.400%	A1	A	03/15/30	+68	
14	01/28/20	BRKHEC	Nevada Power Company	Secured	425	2.400%	A2	A+	04/01/30	+78	
15	01/28/20	BRKHEC	Nevada Power Company	Secured	300	3.125%	A2	A+	08/01/50	+102	
16	02/11/20	DTE	DTE Electric	Secured	600	2.250%	Aa3	A	03/01/30	+68	
17	02/11/20	DTE	DTE Electric	Secured	500	2.950%	Aa3	A	03/01/50	+90	1
18	02/18/20	EXC	Commonwealth Edison	Secured	350	2.200%	A1	A	03/01/30	+68	
19	02/18/20	EXC	Commonwealth Edison	Secured	650	3.000%	A1	A	03/01/50	+100	1
20	02/18/20	FE	FirstEnergy Corporation	Unsecured	300	2.050%	Baa3	BBB-	03/01/25	+70	
21	02/18/20	FE	FirstEnergy Corporation	Unsecured	650	2.650%	Baa3	BBB-	03/01/30	+110	
22	02/18/20	FE	FirstEnergy Corporation	Unsecured	850	3.400%	Baa3	BBB-	03/01/50	+140	
23	03/03/20	ETR	Entergy Louisiana	Secured	350	2.900%	A2	A	03/15/51	+130	1
24	03/03/20	AEP	American Electric Power	Unsecured	400	2.300%	Baa1	BBB+	03/01/30	+130	
25	03/03/20	AEP	American Electric Power	Unsecured	400	3.250%	Baa1	BBB+	03/01/50	+165	3
26	03/04/20	EIX	Southern California Edison	Secured	400	2.250%	A3	A-	06/01/30	+125	
27	03/04/20	EIX	Southern California Edison (reopening)	Secured	700	3.650%	A3	A-	02/01/50	+170	2
28	03/05/20	ETR	Entergy Texas (reopening)	Secured	175	3.550%	Baa1	A	09/30/49	+138	1
29	03/10/20	DUK	Duke Energy Indiana	Secured	550	2.750%	Aa3	A	04/01/50	+165	1
30	03/13/20	ETR	Entergy Arkansas (reopening)	Secured	100	4.000%	A2	A	06/01/28	+175	
31	03/13/20	AEP	Ohio Power Company	Unsecured	350	2.600%	A2	A-	04/01/30	+170	
32	**03/17/20**	**CMS**	**Consumers Energy**	**Secured**	**575**	**3.500%**	**Aa3**	**A**	**08/01/51**	**+200**	1
33	03/17/20	D	Dominion Energy, Inc.	Unsecured	400	3.300%	Baa2	BBB	03/15/25	+265	
34	03/17/20	D	Dominion Energy, Inc.	Unsecured	350	3.600%	Baa2	BBB	03/15/27	+275	
35	03/17/20	ONCRTX	Oncor Electric Delivery Company	Secured	400	2.750%	A2	A+	05/15/30	+175	
36	03/17/20	ONCRTX	Oncor Electric Delivery Company	Secured	400	3.700%	A2	A+	05/15/50	+205	
37	03/17/20	AEE	Union Electric Corp	Secured	465	2.950%	A2	A	03/15/30	+200	
38	03/20/20	BRKHEC	Berkshire Hathaway Energy Company	Unsecured	1,250	4.050%	A3	A-	04/15/25	+355	
39	03/23/20	ES	NSTAR Electric	Unsecured	400	3.950%	A1	A	04/01/30	+325	
40	03/24/20	NEE	Florida Power & Light Company	Secured	1,100	2.850%	Aa2	A+	04/01/25	+238	
41	03/25/20	BRKHEC	Berkshire Hathaway Energy Company	Unsecured	1,100	3.700%	A3	A-	04/15/30	+285	
42	03/25/20	BRKHEC	Berkshire Hathaway Energy Company	Unsecured	900	4.250%	A3	A-	04/15/50	+285	2
43	03/26/20	ED	Consolidated Edison Company of New York	Unsecured	600	3.350%	Baa1	A-	04/01/30	+255	
44	03/26/20	ED	Consolidated Edison Company of New York	Unsecured	1,000	3.950%	Baa1	A-	04/01/50	+255	2
45	03/27/20	XEL	Xcel Energy	Unsecured	600	3.400%	Baa1	BBB+	06/01/30	+270	
46	03/30/20	EXC	Exelon Corporation	Unsecured	1,250	4.050%	Baa2	BBB	04/15/30	+338	
47	03/30/20	EXC	Exelon Corporation	Unsecured	750	4.700%	Baa2	BBB	04/15/50	+338	4
48	03/30/20	EIX	Southern California Edison (reopening)	Secured	600	3.700%	A3	A-	08/01/25	+275	
49	03/30/20	LNT	Wisconsin Electric Power & Light	Unsecured	350	3.650%	A3	A	04/01/50	+235	1
50	03/30/20	OGE	Oklahoma Gas & Electric	Unsecured	300	3.250%	A3	A-	04/01/30	+260	
51	03/30/20	AEP	AEP Transmission	Unsecured	525	3.650%	A2	A-	04/01/50	+235	2
52	03/31/20	DTE	DTE Electric Co.	Secured	600	2.625%	Aa3	A	03/01/31	+195	
53	03/31/20	D	Dominion Energy	Unsecured	1,500	3.375%	Baa2	BBB	04/01/30	+280	
54	03/31/20	SRE	San Diego Gas & Electric	Secured	400	3.320%	A2	A	04/15/50	+200	1
55	03/31/20	AEE	Ameren Corporation	Unsecured	800	3.500%	Baa1	BBB	01/15/31	+285	
56	03/31/20	EIX	Edison International	Unsecured	400	4.950%	Baa3	BBB-	04/15/25	+463	
57	03/31/20	IDA	Idaho Power (reopening)	Secured	220	4.200%	A1	A-	03/01/48	+210	
58	04/01/20	NEE	NextEra Energy Capital Holdings	Unsecured	1,250	2.750%	Baa1	BBB+	05/01/25	+240	
59	04/01/20	PPL	PPL Capital Funding	Unsecured	1,000	4.125%	Baa2	BBB+	04/15/30	+350	
60	04/01/20	SO	Southern Company	Unsecured	1,000	3.700%	Baa2	BBB+	04/30/30	+310	
61	04/02/20	EVRG	Evergy Kansas Central	Secured	500	3.450%	A2	A	04/15/50	+220	1
62	04/06/20	BRKHEC	PacifiCorp	Secured	400	2.700%	A1	A+	09/15/30	+205	
63	04/06/20	BRKHEC	PacifiCorp	Secured	600	3.300%	A1	A+	03/15/51	+205	
64	04/06/20	FTSCN	Tucson Electric Power	Unsecured	350	4.000%	A3	A-	04/15/50	+275	2
65	04/07/20	AGR	Avangrid	Unsecured	750	3.200%	Baa1	BBB	04/15/25	+275	
66	04/07/20	NI	NiSource	Unsecured	1,000	3.600%	Baa2	BBB+	05/01/30	+290	
67	04/07/20	NGGLN	Narragansett Electric	Unsecured	600	3.395%	A3	A-	04/19/30	+265	
68	04/08/20	AES	IPALCO Enterprises Inc	Secured	475	4.250%	Baa3	BBB-	05/01/30	+350	
69	04/08/20	AWK	American Water	Unsecured	500	2.800%	Baa1	A	05/01/30	+210	
70	04/08/20	AWK	American Water	Unsecured	500	3.450%	Baa1	A	05/01/50	+210	1
71	04/13/20	WTRG	Essential Utilities	Unsecured	500	2.704%	Baa2	A-	04/15/30	+195	
72	04/13/20	WTRG	Essential Utilities	Unsecured	600	3.351%	Baa2	A-	04/15/50	+195	2
73	04/29/20	OGS	ONE Gas Inc	Unsecured	300	2.000%	A2	A	05/15/30	+145	
74	**04/29/20**	**CMS**	**Consumers Energy**	**Secured**	**525**	**2.500%**	**Aa3**	**A**	**05/01/60**	**+130**	
75	05/05/20	NEE	NextEra Energy Capital Holdings	Unsecured	2,000	2.250%	Baa1	BBB+	06/01/30	+160	
76	05/06/20	PEG	Public Service Electric & Gas	Secured	375	2.700%	Aa3	A	05/01/50	+130	1
77	05/06/20	TVA	Tennessee Valley Authority	Unsecured	1,000	0.750%	Aaa	AA+	05/15/25	+43	
78	05/08/20	XEL	Public Service Co of Colorado	Secured	375	1.900%	A1	A	01/15/31	+125	
79	05/08/20	XEL	Public Service Co of Colorado	Secured	375	2.700%	A1	A	01/15/51	+140	1
80	05/11/20	ITC	ITC Holdings	Unsecured	700	2.950%	Baa2	BBB+	05/14/30	+225	
81	05/11/20	XEL	Southwestern Public Service Co	Secured	350	3.150%	A3	A	05/01/50	+175	1
82	05/12/20	EXC	Exelon Generation	Unsecured	900	3.250%	Baa2	BBB+	05/14/25	+295	
83	05/12/20	AEP	Appalachian Power	Unsecured	500	3.700%	Baa1	A-	05/01/50	+235	2
84	05/13/20	DUK	Duke Energy Corporation	Unsecured	500	2.450%	Baa1	BBB+	06/01/30	+185	
85	05/13/20	ETR	Entergy Corporation	Unsecured	600	2.800%	Baa2	BBB	06/15/30	+225	
86	05/13/20	ETR	Entergy Corporation	Unsecured	600	3.750%	Baa2	BBB	06/15/50	+250	4
87	05/14/20	PSD	Puget Energy	Secured	650	4.100%	Baa3	BBB-	06/15/30	+350	
88	05/18/20	EVRG	Evergy Metro Inc	Secured	400	2.250%	A2	A+	06/01/30	+155	
89	05/18/20	DUK	Duke Energy Ohio	Secured	400	2.125%	A2	A	06/01/30	+140	
90	05/18/20	DUK	Piedmont Natural Gas	Unsecured	400	3.350%	A3	A-	06/01/50	+195	2
91	05/18/20	XEL	Northern States Power Co/WI	Secured	100	3.050%	Aa3	A	05/01/51	+170	1
92	05/19/20	PNW	Arizona Public Service Co	Unsecured	600	3.350%	A2	A-	05/15/50	+195	2
93	05/19/20	PPL	Kentucky Utilities	Secured	500	3.300%	A1	A	06/01/50	+190	1
94	05/19/20	ETR	Entergy Mississppi	Secured	170	3.500%	A2	A	06/01/51	+215	1
95	05/26/20	LNT	Interstate Power & Light Company	Unsecured	400	2.300%	Baa1	A-	06/01/30	+165	
96	06/01/20	EXC	PECO Energy	Secured	350	2.800%	Aa3	A	06/15/50	+135	1
97											
98	FRN: Floating Rate Note										
99	SOFR: Secured Overnight Financing Rate										
100	3mL: Three-Month London Interbank Offered Rate (LIBOR)										
101	Source: Barclays Bank										

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Recent Utility Corporate Bond Issuances
for the Projected Year Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-33 (MRB-9)

Witness: MRBleckman
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Line	Issue				Amt		Ratings			Issue	
No.	Date	Ticker	Issuer	Type	($mm)	Coupon	Moody's	S&P	Maturity	Spread (bp)	Category
1	06/01/20	SWX	Southwest Gas Corporation	Unsecured	450	2.200%	A3	A-	06/15/30	+155	
2	06/02/20	D	The East Ohio Gas Company	Unsecured	500	1.300%	A2	BBB+	06/15/25	+100	
3	06/02/20	D	The East Ohio Gas Company	Unsecured	500	2.000%	A2	BBB+	06/15/30	+135	
4	06/02/20	D	The East Ohio Gas Company	Unsecured	800	3.000%	A2	BBB+	06/15/50	+160	3
5	06/02/20	EXC	Baltimore Gas & Electric	Unsecured	400	2.900%	A3	A	06/15/50	+147	1
6	06/02/20	CNP	CenterPoint Energy Houston Electric	Secured	300	2.900%	A2	A	07/01/50	+143	1
7	06/03/20	FE	FirstEnergy Corporation	Unsecured	300	1.600%	Baa3	BBB-	01/15/26	+125	
8	06/03/20	FE	FirstEnergy Corporation	Unsecured	450	2.250%	Baa3	BBB-	09/01/30	+150	
9	06/08/20	DUK	Duke Energy Florida	Secured	500	1.750%	A1	A	06/15/30	+90	
10	06/08/20	XEL	Northern States Power Co/MN	Secured	700	2.600%	Aa3	A	06/01/51	+105	1
11	06/10/20	PNW	Pinnacle West Capital Corporation	Unsecured	500	1.300%	A3	BBB+	06/15/25	+95	
12	06/12/20	BKH	Black Hills Corporation	Unsecured	400	2.500%	Baa2	BBB+	06/15/30	+185	
13	06/16/20	PCG	Pacific Gas & Electric	Secured	500	FRN	Baa3	BBB-	06/16/22	3mL+148	
14	06/16/20	PCG	Pacific Gas & Electric	Secured	2,500	1.750%	Baa3	BBB-	06/16/22	+155	
15	06/16/20	PCG	Pacific Gas & Electric	Secured	1,000	2.100%	Baa3	BBB-	08/01/27	+155	
16	06/16/20	PCG	Pacific Gas & Electric	Secured	2,000	2.500%	Baa3	BBB-	02/01/31	+175	
17	06/16/20	PCG	Pacific Gas & Electric	Secured	1,000	3.300%	Baa3	BBB-	08/01/40	+180	
18	06/16/20	PCG	Pacific Gas & Electric	Secured	1,925	3.500%	Baa3	BBB-	08/01/50	+200	
19	06/17/20	IDA	Idaho Power	Secured	80	1.900%	A1	A-	06/15/30	+120	
20	06/23/20	NGGLN	Niagara Mohawk Power	Unsecured	600	1.960%	A3	A-	06/15/30	+125	
21	06/23/20	NGGLN	Niagara Mohawk Power	Unsecured	500	3.025%	A3	A-	06/15/50	+155	2
22	06/29/20	AEP	AEP Texas	Unsecured	600	2.100%	Baa1	A-	07/01/30	+150	
23	07/28/20	NEE	Florida Power & Light Company	Unsecured	1,250	FRN	A1	A	07/28/23	3mL+38	
24	08/03/20	DTE	DTE Energy Co	Unsecured	800	1.050%	Baa2	BBB	06/01/25	+85	
25	08/04/20	PEG	Public Service Electric and Gas Co	Secured	375	2.050%	Aa3	A	08/01/50	+90	1
26	08/05/20	FTSCN	Tucson Electric Power Co	Unsecured	300	1.500%	A3	A-	08/01/30	+100	
27	08/11/20	ES	Eversource Energy	Unsecured	300	0.800%	Baa1	BBB+	08/15/25	+55	
28	08/11/20	ES	Eversource Energy	Unsecured	600	1.650%	Baa1	BBB+	08/15/30	+100	
29	08/11/20	ES	Eversource Energy (reopening)	Unsecured	300	3.450%	Baa1	BBB+	01/15/50	+125	3
30	08/12/20	NI	NiSource Inc	Unsecured	1,250	0.950%	Baa2	BBB+	08/15/25	+70	
31	08/12/20	NI	NiSource Inc	Unsecured	750	1.700%	Baa2	BBB+	02/15/31	+103	
32	08/12/20	PEG	Public Service Enterprise Group	Unsecured	550	0.800%	Baa1	BBB	08/15/25	+55	
33	08/12/20	PEG	Public Service Enterprise Group	Unsecured	550	1.600%	Baa1	BBB	08/15/30	+95	
34	08/12/20	ES	Public Service Co of New Hampshire	Secured	150	2.400%	A1	A+	09/01/50	+110	
35	08/17/20	DUK	Duke Energy Progress	Unsecured	700	FRN	A2	A-	02/18/22	3mL+18	
36	08/17/20	DUK	Duke Energy Progress	Secured	600	2.500%	Aa3	A	08/15/50	+110	1
37	08/17/20	SO	Southern Co Gas Capital Corp	Unsecured	500	1.750%	Baa1	A-	01/15/31	+110	
38	08/17/20	OGLETH	Oglethorpe Power Corp	Secured	450	3.750%	Baa1	BBB+	08/01/50	+240	3
39	08/24/20	SO	Alabama Power	Unsecured	600	1.450%	A1	A	09/15/30	+85	
40	08/24/20	ETR	Entergy Corp	Unsecured	800	0.900%	Baa2	BBB	09/15/25	+70	
41	09/08/20	PNW	Arizona Public Service Co	Unsecured	400	2.650%	A2	A-	09/15/50	+125	2
42	09/08/20	ETR	Entergy Arkansas	Secured	675	2.650%	A2	A	06/15/51	+125	1
43	09/08/20	DUK	Duke Energy Corporation (reopening)	Unsecured	350	2.450%	A2	A	06/01/30	+103	
44	09/08/20	D	Dominion Energy Inc	Unsecured	1,000	FRN	Baa2	BBB	09/15/23	3mL+53	
45	09/08/20	DUK	Duke Energy Corporation	Unsecured	650	0.900%	A2	A	09/15/25	+63	
46	09/14/20	WEC	WEC Energy Group	Unsecured	700	0.550%	Baa1	BBB+	09/15/23	+40	
47	09/14/20	SRE	Southern California Gas	Unsecured	300	FRN	A2	A	09/14/23	3mL+35	
48	09/16/20	AQNCN	Liberty Utilities	Unsecured	600	2.050%	NR	BBB	09/15/30	+140	
49	09/17/20	EDPPL	EDP Finance BV	Unsecured	850	1.710%	Baa3	NR	01/28/28	+125	
50	09/17/20	DQE	Duquesne Light Holdings Inc	Unsecured	350	2.532%	Baa3	BBB-	10/01/30	+185	
51	09/22/20	SRE	San Diego Gas & Electric Company	Secured	800	1.700%	A2	A	10/01/30	+105	
52	09/22/20	XEL	Xcel Energy	Unsecured	500	0.500%	Baa1	BBB+	10/15/23	+38	
53	09/23/20	ATO	Atmos Energy	Unsecured	600	1.500%	A1	A	01/15/31	+88	
54	09/23/20	AGR	New York State Electric & Gas	Unsecured	200	1.950%	A3	A-	10/01/30	+130	
55	09/23/20	CNP	CenterPoint Energy Resources	Unsecured	500	1.750%	A3	BBB+	10/01/30	+108	
56	09/23/20	ONCRTX	Oncor Electric Delivery Company	Secured	450	0.550%	A2	A+	10/01/25	+40	
57	09/28/20	EIX	Southern California Edison Company	Secured	350	1.200%	A3	A-	02/01/26	+97	
58	09/28/20	ETR	Entergy Texas, Inc.	Secured	600	1.750%	Baa1	A	03/15/31	+113	
59	09/28/20	PPL	PPL Electric Utilities	Secured	250	FRN	A1	A	09/28/23	3mL+25	
60	09/29/20	DTE	DTE Energy	Unsecured	750	0.550%	Baa2	BBB	11/01/22	+45	
61	09/29/20	NRUC	National Rural Utilities Cooperative Finance Corp	Secured	400	1.350%	A1	A	03/15/31	+73	
62	10/01/20	NGGLN	New England Power Company	Unsecured	400	2.807%	A3	A-	10/06/50	+135	2
63	10/01/20	AEE	Ameren Missouri	Secured	550	2.625%	A2	A	03/15/51	+118	1
64	10/05/20	WEC	WEC Energy	Unsecured	500	1.375%	Baa1	BBB+	10/15/27	+85	
65	10/05/20	WEC	WEC Energy	Unsecured	450	1.800%	Baa1	BBB+	10/15/30	+105	
66	10/27/20	BRKHEC	Berkshire Hathaway Energy Company	Unsecured	500	1.650%	A3	A-	05/15/31	+90	
67	10/27/20	BRKHEC	Berkshire Hathaway Energy Company	Unsecured	1,500	2.850%	A3	A-	05/15/51	+128	2
68	11/09/20	AEE	Ameren Illinois	Secured	375	1.550%	A1	A	11/15/30	+65	
69	11/09/20	ETR	Entergy Louisiana	Secured	300	1.600%	A2	A	12/15/30	+70	
70	11/09/20	ETR	Entergy Louisiana LLC (reopening)	Secured	300	2.900%	A2	A	03/15/51	+95	1
71	11/09/20	ED	Consolidated Edison Co of NY	Unsecured	600	3.000%	Baa1	A-	12/01/60	+128	
72	11/12/20	PCG	Pacific Gas & Electric	Secured	1,450	FRN	Baa3	BBB-	11/15/21	3mL+137.5	
73	11/16/20	ES	The Connecticut Light & Power Co	Secured	400	0.750%	A1	A+	12/01/25	+35	
74	11/16/20	PNW	Arizona Public Service Co (reopening)	Unsecured	105	2.600%	A2	A-	08/15/29	+75	
75	11/16/20	AGR	Rochester Gas & Electric	Secured	200	1.850%	A1	A	12/01/30	+95	
76	11/17/20	NRG	Alexander Funding Trust	Secured	900	1.841%	Baa3	BBB-	11/15/23	+163	
77	11/17/20	NRG	NRG Energy Inc	Secured	500	2.000%	Baa3	BBB-	12/02/25	+163	
78	11/17/20	NRG	NRG Energy Inc	Secured	900	2.450%	Baa3	BBB-	12/02/27	+185	
79	11/17/20	ETR	Entergy Louisiana LLC	Secured	1,100	0.620%	A2	A	11/17/23	+40	
80	11/17/20	LNT	Alliant Energy Finance LLC	Unsecured	200	1.400%	Baa2	BBB+	03/15/26	+105	
81	11/18/20	AEP	American Electric Power	Unsecured	600	FRN	Baa2	BBB+	11/01/23	3mL+48	
82	11/18/20	AEP	American Electric Power	Unsecured	450	0.750%	Baa2	BBB+	11/01/23	+55	
83	11/18/20	AEP	American Electric Power	Unsecured	450	1.000%	Baa2	BBB+	11/01/25	+65	
84	11/19/20	AES	The AES Corporation	Unsecured	800	1.375%	Ba1	BBB-	01/15/26	+100	
85	11/19/20	AES	The AES Corporation	Unsecured	1,000	2.450%	Ba1	BBB-	01/15/31	+160	
86	11/19/20	NGGLN	Massachusetts Electric Co	Unsecured	500	1.729%	A3	A-	11/24/30	+88	
87	11/30/20	ED	Consolidated Edison Inc	Unsecured	650	0.650%	Baa2	BBB+	12/01/23	+47	
88	12/01/20	D	Virginia Electric & Power Co	Unsecured	900	2.450%	A2	BBB+	12/15/50	+85	3
89	12/01/20	EIX	Southern California Edison Co	Secured	900	FRN	A3	A-	12/03/21	3mL+27	
90	**12/02/20**	**CMS**	**Consumers Energy**	**Secured**	**300**	**0.350%**	**Aa3**	**A**	**06/01/23**	**+20**	
91	12/07/20	WGL	Washington Gas Light Co (reopening)	Unsecured	100	3.650%	A3	A-	09/15/49	+110	2
92	01/05/21	EIX	Southern California Edison Co (reopening)	Secured	150	2.250%	A3	A-	06/06/30	+85	
93	01/05/21	EIX	Southern California Edison Co	Secured	750	2.950%	A3	A-	02/01/51	+127	2
94	01/05/21	AEP	Ohio Power	Unsecured	450	1.625%	A3	A-	01/15/31	+68	
95	01/05/21	SO	Southern Power	Unsecured	400	0.900%	Baa1	BBB+	01/15/26	+57	
96	02/01/21	NRUC	National Rural Utilities Cooperative Finance Corp	Unsecured	500	0.350%	A2	A	02/08/24	+20	
97	02/01/21	NRUC	National Rural Utilities Cooperative Finance Corp	Secured	350	1.650%	A1	A	06/15/31	+60	
98	02/17/21	NEE	Nextera Energy Capital Holdings	Unsecured	1,650	FRN	Baa1	BBB+	02/22/23	+27	
99	02/17/21	EIX	SCE Recovery Funding LLC	Secured	100	2.510%	Aaa	AAA	11/15/43	+60	
100	02/17/21	EIX	SCE Recovery Funding LLC	Secured	138	0.861%	Aaa	AAA	11/15/33	+30	

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Recent Utility Corporate Bond Issuances
for the Projected Year Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-33 (MRB-9)
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Witness: MRBleckman
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Line	Issue				Amt		Ratings			Issue	
No.	Date	Ticker	Issuer	Type	($mm)	Coupon	Moody's	S&P	Maturity	Spread (bp)	Category
1	02/17/21	EIX	SCE Recovery Funding LLC	Secured	100	1.942%	Aaa	AAA	05/15/38	+65	
2	02/22/21	SO	Georgia Power Company	Unsecured	750	3.250%	Baa1	A-	03/15/51	+107	2
3	02/22/21	NRUC	National Rural Utilities Cooperative Finance Corp	Unsecured	600	1.000%	A2	A	06/15/26	+45	
4	02/22/21	XEL	Public Service Co of Colorado	Secured	750	1.875%	A1	A-	06/15/31	+58	
5	02/23/21	XEL	Southwestern Public Service Company (reopening)	Secured	250	3.150%	A3	A	05/01/50	+95	1
6	02/23/21	SO	The Southern Company	Unsecured	600	0.600%	Baa2	BBB+	02/26/24	+38	
7	02/23/21	SO	The Southern Company	Unsecured	400	1.750%	Baa2	BBB+	03/15/28	+80	
8	02/24/21	AEE	Ameren Corporation	Unsecured	450	1.750%	Baa1	BBB	03/15/28	+75	
9	02/26/21	CNP	CenterPoint Energy Resources	Unsecured	1,000	FRN	A3	BBB+	03/02/23	3mL+50	
10	02/26/21	CNP	CenterPoint Energy Resources	Unsecured	700	0.700%	A3	BBB+	03/02/23	+60	
11	03/01/21	EXC	PECO Energy	Secured	375	3.050%	Aa3	A	03/15/51	+82	1
12	03/02/21	EXC	Commonwealth Edison Co	Secured	700	3.125%	A1	A	03/15/51	+90	1
13	03/02/21	ETR	Entergy Corporation	Unsecured	650	1.900%	Baa2	BBB	06/15/28	+87	
14	03/02/21	PEG	Public Service Electric and Gas Co	Secured	450	0.950%	Aa3	A	03/15/26	+32	
15	03/02/21	PEG	Public Service Electric and Gas Co	Secured	450	3.000%	Aa3	A	03/01/51	+77	1
16	03/02/21	ETR	Entergy Corporation	Unsecured	650	2.400%	Baa2	BBB	06/15/31	+107	
17	03/03/21	EXC	Atlantic City Electric Company	Secured	350	2.300%	A2	A	03/15/31	+83	
18	03/04/21	ATO	Atmos Energy	Unsecured	1,100	0.625%	A1	A-	03/09/23	+48	
19	03/04/21	ATO	Atmos Energy	Unsecured	1,100	FRN	A1	A-	03/09/23	3mL+38	
20	03/04/21	ETR	Entergy Louisiana LLC	Secured	500	3.100%	A2	A	06/15/41	+95	
21	03/04/21	ETR	Entergy Louisiana LLC	Secured	500	2.350%	A2	A	06/15/32	+85	
22	03/08/21	DUK	Piedmont Natural Gas	Unsecured	350	2.500%	A3	BBB+	03/15/31	+83	
23	03/08/21	CNP	CenterPoint Energy Houston Electric	Secured	700	3.350%	A2	A	04/01/51	+105	1
24	03/08/21	CNP	CenterPoint Energy Houston Electric	Secured	400	2.350%	A2	A	04/01/31	+80	
25	03/08/21	OGS	ONE Gas Inc	Unsecured	1,000	0.850%	A3	BBB+	03/11/23	+70	
26	03/08/21	OGS	ONE Gas Inc	Unsecured	800	FRN	A3	BBB+	03/11/23	3mL+61	
27	03/08/21	OGS	ONE Gas Inc	Unsecured	700	1.100%	A3	BBB+	03/11/24	+80	
28	03/08/21	PCG	Pacific Gas and Electric Co	Secured	1,500	1.367%	Baa3	BBB-	03/10/23	+120	
29	03/08/21	PCG	Pacific Gas and Electric Co	Secured	450	4.200%	Baa3	BBB-	06/01/41	+200	
30	03/08/21	PCG	Pacific Gas and Electric Co	Secured	450	3.250%	Baa3	BBB-	06/01/31	+167	
31	03/08/21	AEP	Southwestern Electric Power Co	Unsecured	500	1.650%	Baa2	A-	03/15/26	+80	
32	03/08/21	ES	Eversource Energy	Unsecured	350	2.550%	Baa1	BBB+	03/15/31	+100	
33	03/09/21	AEP	Appalachian Power	Unsecured	400	2.700%	Baa1	A-	04/01/31	+120	
34	03/09/21	ETR	Entergy Mississippi LLC (reopening)	Secured	200	3.500%	A2	A	06/01/51	+115	1
35	03/15/21	NEE	NextEra Energy Capital Holdings	Unsecured	2,000	0.650%	Baa1	BBB+	03/01/23	+50	
36	03/15/21	NEE	NextEra Energy Capital Holdings	Unsecured	500	FRN	Baa1	BBB+	03/01/23	SOFR+54	
37	03/15/21	TE	Tampa Electric	Unsecured	400	2.400%	A3	BBB+	03/15/21	+83	
38	03/15/21	TE	Tampa Electric	Unsecured	400	3.450%	A3	BBB+	03/15/51	+108	3
39	03/16/21	WEC	WEC Energy Group	Unsecured	600	0.800%	Baa1	BBB+	03/15/24	+48	
40	03/17/21	FE	FirstEnergy Transmission	Unsecured	500	2.866%	Baa2	BB	09/15/28	+155	
41	03/22/21	DTE	DTE Electric Company	Secured	575	1.900%	Aa3	A	04/01/28	+58	
42	03/22/21	DTE	DTE Electric Company	Secured	425	3.250%	Aa3	A	04/01/51	+90	1
43	03/23/21	XEL	Northern States Power Co/MN	Secured	425	3.200%	Aa3	A	04/01/52	+85	1
44	03/23/21	XEL	Northern States Power Co/MN	Secured	425	2.250%	Aa3	A	04/01/31	+65	
45	03/24/21	D	Dominion Energy Inc	Unsecured	600	1.450%	Baa2	BBB	04/15/26	+65	
46	03/24/21	D	Dominion Energy Inc	Unsecured	500	3.300%	Baa2	BBB	04/01/41	+110	
47	03/24/21	ETR	Entergy Arkansas LLC	Secured	400	3.350%	A2	A	06/15/52	+105	1
48	03/24/21	EIX	Southern California Edison	Secured	350	0.700%	A3	A-	04/03/23	+60	
49	03/24/21	EIX	Southern California Edison	Secured	400	FRN	A3	A-	04/03/23	SOFR+64	
50	03/24/21	EIX	Southern California Edison	Secured	700	1.100%	A3	A-	04/01/24	+80	
51	03/24/21	EIX	Southern California Edison	Secured	400	FRN	A3	A-	04/01/24	SOFR+83	
52	03/29/21	DUK	Duke Energy Carolinas	Secured	450	3.450%	Aa3	A	04/15/51	+105	1
53	03/29/21	DUK	Duke Energy Carolinas	Secured	550	2.550%	Aa3	A	04/15/31	+85	
54	04/07/21	FE	Monongahela Power (reopening)	Secured	200	3.550%	A3	BBB	05/15/27	+120	
55	04/07/21	BRKHEC	Northern Natural Gas	Unsecured	550	3.400%	A2	A	10/16/51	+110	1
56	04/15/21	WTRG	Essential Utilities	Unsecured	400	2.400%	Baa2	A-	05/01/31	+88	
57	04/27/21	AEP	Indiana Michigan Power Co	Unsecured	450	3.250%	A3	A-	05/01/51	+100	2
58	04/29/21	FE	Toledo Edison	Secured	150	2.650%	A2	BBB	05/01/28	+138	
59	05/03/21	SO	The Southern Company	Pref/Hybrid	1,000	3.750%	Baa3	BBB	09/15/51	+292	4
60	05/04/21	AEP	AEP Texas	Unsecured	450	3.450%	Baa2	A-	05/15/51	+120	2
61	05/05/21	NEE	Florida Power & Light Co	Unsecured	1,000	FRN	A1	A	05/10/23	SOFR+25	
62	05/06/21	FTSCN	Tuscon Electic Power Company	Unsecured	325	3.250%	A3	A-	05/01/51	+105	2
63	05/10/21	AWK	American Water Capital Corp	Unsecured	550	3.250%	Baa1	A	06/01/51	+93	1
64	05/10/21	AWK	American Water Capital Corp	Unsecured	550	2.300%	Baa1	A	06/01/31	+73	
65	05/11/21	CNP	CenterPoint Energy	Unsecured	500	2.650%	Baa2	BBB	06/01/31	+105	
66	05/11/21	CNP	CenterPoint Energy	Unsecured	700	FRN	Baa2	BBB	05/13/24	SOFR+65	
67	05/11/21	CNP	CenterPoint Energy	Unsecured	500	1.450%	Baa2	BBB	06/01/26	+70	
68	05/13/21	SR	Spire Missouri	Secured	305	3.300%	A1	A	06/01/51	+90	1
69	05/20/21	FE	Mid-Atlantic Interstate Transmission (reopening)	Unsecured	150	4.100%	A3	BB+	05/15/28	+125	
70	05/24/21	ES	NSTAR Electric Company	Unsecured	300	3.100%	A1	A	06/01/51	+83	1
71	05/24/21	OGE	OGE Energy Corporation	Unsecured	500	0.703%	Baa1	BBB	05/26/23	+55	
72	05/24/21	OGE	Oklahoma Gas and Electric Company	Unsecured	500	0.553%	A3	A-	05/26/23	+40	
73	05/25/21	EMACN	Emera US Finance	Unsecured	450	2.639%	Baa3	BBB-	06/15/31	+108	
74	05/25/21	EMACN	Emera US Finance	Unsecured	300	0.833%	Baa3	BBB-	06/15/24	+53	
75	06/01/21	PCG	Pacific Gas & Electric Company	Secured	800	3.000%	Baa3	BBB-	06/15/28	+180	
76	06/01/21	ES	Public Service Co of New Hampshire	Secured	350	2.200%	A1	A+	06/15/31	+62	
77	06/02/21	NEE	NextEra Energy Capital Holdings	Unsecured	1,500	1.900%	Baa1	BBB+	06/15/28	+65	
78	06/03/21	ED	Consolidated Edison Company of New York	Unsecured	750	2.400%	Baa1	A-	06/15/31	+80	
79	06/03/21	ED	Consolidated Edison Company of New York	Unsecured	750	3.600%	Baa1	A-	06/15/61	+130	
80	06/03/21	PSD	Puget Energy Inc	Secured	500	2.379%	Baa3	BBB-	06/15/28	+108	
81	06/07/21	EXC	Baltimore Gas & Electric	Unsecured	600	2.250%	A3	A	06/15/31	+70	
82	06/07/21	DUK	Duke Energy	Unsecured	1,000	2.550%	Baa2	BBB	06/15/31	+100	
83	06/07/21	DUK	Duke Energy	Unsecured	500	FRN	Baa2	BBB	06/10/23	SOFR+25	
84	06/07/21	DUK	Duke Energy	Unsecured	750	3.300%	Baa2	BBB	06/15/41	+115	
85	06/07/21	DUK	Duke Energy	Unsecured	750	3.500%	Baa2	BBB	06/15/51	+125	4
86	06/07/21	SO	Alabama Power Company	Unsecured	600	3.125%	A1	A	07/15/51	+88	1
87	06/08/21	FE	Jersey Central Power and Light	Unsecured	500	2.750%	A3	BB+	03/01/32	+125	
88	06/08/21	WEC	Wisconsin Electric Power Co	Unsecured	300	1.700%	A2	A-	06/15/28	+50	
89	06/09/21	EIX	Southern California Edison	Secured	475	FRN	A3	A-	06/13/22	SOFR+50	
90	06/09/21	EIX	Southern California Edison	Secured	450	3.650%	A3	A-	06/01/51	+148	2
91	06/09/21	EIX	Southern California Edison	Secured	450	2.500%	A3	A-	06/01/31	+105	
92	06/09/21	AEE	Union Electric Company	Secured	525	2.150%	A2	A	03/15/32	+67	
93	06/21/21	PPL	PPL Electric Utilities	Secured	650	FRN	A1	A	06/24/24	SOFR+33	
94	06/21/21	ES	Connecticut Light & Power Company	Secured	425	2.050%	A1	A+	07/01/31	+60	
95	06/22/21	DQE	Duquesne Light Holdings Inc	Unsecured	400	2.775%	Baa3	BBB-	01/07/32	+130	
96	06/22/21	AEE	Ameren Illinois Co	Secured	100	0.375%	A1	A	06/15/23	+15	
97	06/22/21	AEE	Ameren Illinois Co	Secured	350	2.900%	A1	A	06/15/51	+80	1
98	06/24/21	SO	Mississippi Power Company	Unsecured	200	FRN	Baa1	A-	06/28/24	SOFR+30	
99	06/24/21	SO	Mississippi Power Company	Unsecured	325	3.100%	Baa1	A-	07/30/51	+105	2
100	07/07/21	ENELIM	Enel Finance International NV	Unsecured	1,000	2.250%	Baa1	BBB+	07/12/31	+100	

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Case No.: U-21389
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Witness: MRBleckman
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Line	Issue				Amt		Ratings			Issue	
No.	Date	Ticker	Issuer	Type	($mm)	Coupon	Moody's	S&P	Maturity	Spread (bp)	Category
1	07/07/21	ENELIM	Enel Finance International NV	Unsecured	750	2.875%	Baa1	BBB+	07/12/41	+110	
2	07/07/21	ENELIM	Enel Finance International NV	Unsecured	1,000	1.875%	Baa1	BBB+	07/12/28	+85	
3	07/07/21	ENELIM	Enel Finance International NV	Unsecured	1,250	1.375%	Baa1	BBB+	07/12/26	+70	
4	07/07/21	BRKHEC	Pacificorp	Secured	1,000	2.900%	A1	A+	06/15/52	+98	
5	07/20/21	BRKHEC	MidAmerican Energy Company	Secured	500	2.700%	Aa2	A+	08/01/52	+85	
6	**08/02/21**	**CMS**	**Consumers Energy Company**	**Secured**	**300**	**2.650%**	**A1**	**A**	**08/15/52**	**+78**	**1**
7	08/02/21	AEP	AEP Transmission	Unsecured	450	2.750%	A2	A-	08/15/51	+90	**2**
8	08/02/21	EIX	Southern California Edison Co	Secured	400	0.700%	A3	A-	08/01/23	+50	
9	08/02/21	EIX	Southern California Edison Co	Secured	450	0.975%	A3	A-	08/01/24	+60	
10	08/05/21	EXC	Commonwealth Edison Co	Secured	450	2.750%	A1	A	09/01/51	+87	**1**
11	08/09/21	SRE	San Diego Gas and Electric	Secured	750	2.950%	A1	A	08/15/51	+100	**1**
12	08/09/21	DUK	Duke Energy Progress	Secured	450	2.900%	Aa3	A	08/15/51	+93	**1**
13	08/09/21	DUK	Duke Energy Progress	Secured	650	2.000%	Aa3	A	08/15/31	+70	
14	08/10/21	D	Dominion Energy	Unsecured	1,000	2.250%	Baa2	BBB	08/15/31	+92	
15	08/10/21	ES	Eversource Energy	Unsecured	350	FRN	Baa1	BBB+	08/15/23	SOFR+25	
16	08/10/21	ES	Eversource Energy	Unsecured	300	1.400%	Baa1	BBB+	08/15/26	+60	
17	08/10/21	ES	NSTAR Electric Company	Unsecured	300	1.950%	A1	A	08/15/31	+67	
18	08/17/21	PEG	Public Service Electric and Gas Co	Secured	425	1.900%	Aa3	A	08/15/31	+68	
19	08/18/21	SWX	Southwest Gas Corp	Unsecured	300	3.180%	Baa1	A-	08/15/51	+128	**2**
20	08/23/21	BKH	Black Hills Corporation	Unsecured	600	1.037%	Baa2	BBB+	08/23/24	+60	
21	09/07/21	EXC	PECO Energy	Secured	375	2.850%	Aa3	A	09/15/51	+88	**1**
22	09/07/21	SO	Southern Co Gas Capital Corp	Unsecured	450	3.150%	Baa1	A-	09/30/51	+123	**2**
23	09/08/21	PSD	Puget Sound Energy	Secured	450	2.893%	A2	A-	09/15/51	+95	**2**
24	09/08/21	CNL	Cleco Power	Unsecured	325	FRN	A3	BBB+	06/15/23	SOFR+50	
25	09/09/21	AES	Ohio Power	Unsecured	500	2.900%	A3	A-	10/01/51	+103	**2**
26	09/13/21	SO	The Southern Company	Pref/Hybrid	1,250	1.875%	A-	BBB	09/15/81	+211	
27	09/13/21	TVA	Tennessee Valley Authority	Unsecured	500	1.500%	Aaa	AA+	09/15/31	+18	
28	09/13/21	LNT	Wisconsin Power & Light	Unsecured	300	1.950%	A3	A	09/16/31	+63	
29	09/21/21	AGR	New York State Electric & Gas	Unsecured	350	2.150%	Baa1	A-	10/01/31	+85	
30	09/21/21	ATO	Atmos Energy Corp	Unsecured	600	2.850%	A1	A-	02/15/52	+103	**2**
31	09/23/21	DUK	Duke Energy Corp	Pref/Hybrid	500	3.250%	Baa3	BBB-	01/15/82	+232	
32	09/28/21	ETR	Entergy Louisiana	Secured	1,000	0.950%	A2	A	10/01/24	+45	
33	10/27/21	NEE	NextEra Energy Capital Holdings Inc	Unsecured	1,300	FRN	Baa1	BBB+	11/03/23	SOFR+40	
34	10/29/21	XEL	Xcel Energy Inc	Unsecured	500	1.750%	Baa1	BBB+	03/15/27	+62	
35	10/29/21	XEL	Xcel Energy Inc	Unsecured	300	2.350%	Baa1	BBB+	11/15/31	+82	
36	11/01/21	AEP	Southwestern Electric Power Co	Unsecured	650	3.250%	Baa2	A-	11/01/51	+130	**2**
37	11/04/21	PEG	Public Service Enterprise Group	Unsecured	750	0.841%	Baa2	BBB	11/08/23	+43	
38	11/04/21	PEG	Public Service Enterprise Group	Unsecured	750	2.450%	Baa2	BBB	11/15/31	+95	
39	11/05/21	SO	Southern Company	Unsecured	600	FRN	Baa2	BBB	05/10/23	SOFR+37	
40	11/10/21	AEP	American Electric Power Co Inc	Pref/Hybrid	750	3.875%	Baa3	BBB	02/15/62	+268	
41	11/10/21	ETR	Entergy Mississippi LLC	Secured	200	2.550%	A2	A	12/01/33	+105	
42	11/10/21	ONCRTX	Oncor Electric Delivery	Secured	300	2.750%	A2	A+	05/15/30	+58	
43	11/10/21	ONCRTX	Oncor Electric Delivery	Secured	500	2.700%	A2	A+	11/15/51	+88	
44	11/10/21	PCG	Pacific Gas & Electric Company	Secured	900	1.700%	Baa3	BBB-	11/15/23	+125	
45	11/10/21	PCG	Pacific Gas & Electric Company	Secured	300	FRN	Baa3	BBB-	11/14/22	SOFR+115	
46	11/10/21	PCG	Pacific Gas & Electric Company	Secured	550	3.250%	Baa3	BBB-	06/01/31	+158	
47	11/10/21	WEC	Wisconsin Public Service	Unsecured	450	2.850%	A2	A-	11/15/51	+95	**2**
48	11/15/21	SO	Alabama Power Company	Unsecured	700	3.000%	A1	A-	03/15/52	+100	**2**
49	11/15/21	AEE	Ameren Corp	Unsecured	500	1.950%	Baa1	BBB	03/15/27	+70	
50	11/15/21	SRE	Sempra Energy	Pref/Hybrid	1,000	4.125%	Baa3	BBB-	04/01/52	+287	
51	11/15/21	D	Virginia Electric and Power Co	Unsecured	500	2.300%	A2	BBB+	11/15/31	+70	
52	11/15/21	D	Virginia Electric and Power Co	Unsecured	500	2.950%	A2	BBB+	11/15/51	+95	**3**
53	11/16/21	NEE	Florida Power & Light Co	Secured	1,200	2.875%	Aa2	A+	12/04/51	+85	
54	11/16/21	LNT	Interstate Power and Light Co	Unsecured	300	3.100%	Baa1	A-	11/30/51	+110	**2**
55	11/18/21	D	Dominion Energy South Carolina	Secured	400	2.300%	A3	A	12/01/31	+72	
56	11/29/21	FE	American Transmission Systems	Unsecured	600	2.650%	A3	BBB	01/15/32	+115	
57	11/29/21	ED	Consolidated Edison Co of New York Inc	Unsecured	600	3.200%	Baa1	A-	12/01/51	+132	**2**
58	11/29/21	ED	Consolidated Edison Co of New York Inc (reopening)	Unsecured	150	2.400%	Baa1	A-	06/15/31	+87	
59	11/29/21	DUK	Duke Energy Florida	Secured	650	2.400%	A1	A	12/15/31	+90	
60	11/29/21	DUK	Duke Energy Florida	Secured	500	3.000%	A1	A	12/15/51	+115	**1**
61	12/01/21	D	Dominion Energy Inc	Pref/Hybrid	750	4.350%	Ba1	BBB-	04/15/27	+320	
62	12/01/21	EIX	Southern California Edison Co	Secured	550	FRN	A3	A-	12/02/22	SOFR+47	
63	12/01/21	SR	Spire Missouri Inc	Secured	300	FRN	A1	A	12/02/24	SOFR+50	
64	12/06/21	WEC	WEC Energy Group	Unsecured	500	2.200%	Baa1	BBB+	12/15/28	+85	
65	12/08/21	NEE	NextEra Energy Capital Holdings	Unsecured	1,000	1.875%	Baa1	BBB+	01/15/27	+62	
66	12/08/21	NEE	NextEra Energy Capital Holdings	Unsecured	1,000	2.440%	Baa1	BBB+	01/15/32	+92	
67	12/08/21	NEE	NextEra Energy Capital Holdings	Unsecured	500	3.000%	Baa1	BBB+	01/15/52	+112	**3**
68	12/09/21	NEE	NextEra Energy Capital Holdings	Pref/Hybrid	600	3.800%	Baa2	BBB	03/15/82	+255	
69	01/03/22	AEP	American Electric Power Co Inc	Unsecured	805	2.031%	Baa3	BBB+	03/15/24	+85	
70	01/04/22	NGGLN	Niagara Mohawk Power	Unsecured	400	2.759%	Baa1	BBB+	01/10/31	+105	
71	01/04/22	D	Virginia Electric and Power Company	Unsecured	600	2.400%	A2	BBB+	03/30/32	+70	
72	01/04/22	D	Virginia Electric and Power Company (reopening)	Unsecured	400	2.950%	A2	BBB+	11/15/51	+98	**3**
73	01/06/22	SRE	Sempra Infrastructure Partners LP	Unsecured	400	3.250%	Baa3	BBB-	01/15/32	+165	
74	01/10/22	EIX	Southern California Edison Company	Secured	500	2.750%	A3	A-	02/01/32	+98	
75	01/10/22	EIX	Southern California Edison Company	Secured	700	3.450%	A3	A-	02/01/52	+135	**2**
76	01/11/22	ATO	Atmos Energy Corp (reopening)	Unsecured	200	2.625%	A1	A-	09/15/29	+68	
77	01/12/22	AQNCN	Algonquin Power & Utilities	Pref/Hybrid	750	4.750%	NR	BB+	01/18/82	+325	
78	01/12/22	NEE	Florida Power & Light Company	Unsecured	1,000	FRN	A1	A	01/12/24	SOFR+38	
79	01/12/22	NEE	Florida Power & Light Company	Secured	1,500	2.450%	Aa2	A+	02/03/32	+73	
80	01/12/22	NGGLN	KeySpan Gas East Corp	Unsecured	400	3.586%	Baa1	BBB+	01/18/52	+150	**3**
81	02/15/22	FTSCN	Tucson Electric Power Co	Unsecured	325	3.250%	A3	A-	05/15/32	+125	
82	02/16/22	DTE	DTE Electric Company	Secured	500	3.000%	Aa3	A	03/01/32	+100	
83	02/16/22	DTE	DTE Electric Company	Secured	400	3.650%	Aa3	A	03/01/52	+130	**1**
84	02/16/22	PCG	Pacific Gas and Electric Co	Secured	1,000	3.250%	Baa3	BBB-	02/16/24	+175	
85	02/16/22	PCG	Pacific Gas and Electric Co	Secured	400	4.200%	Baa3	BBB-	03/01/29	+220	
86	02/16/22	PCG	Pacific Gas and Electric Co	Secured	450	4.400%	Baa3	BBB-	03/01/32	+240	
87	02/16/22	PCG	Pacific Gas and Electric Co	Secured	550	5.250%	Baa3	BBB-	03/01/52	+290	
88	02/22/22	ES	Eversource Energy	Unsecured	650	2.900%	Baa1	BBB+	03/01/27	+105	
89	02/22/22	ES	Eversource Energy	Unsecured	650	3.375%	Baa1	BBB+	03/01/32	+145	
90	02/23/22	LNT	Alliant Energy Finance LLC	Unsecured	350	3.600%	Baa2	BBB+	03/01/32	+165	
91	02/23/22	CNP	CenterPoint Energy Houston Electric	Secured	300	3.000%	A2	A	03/01/32	+107	
92	02/23/22	CNP	CenterPoint Energy Houston Electric	Secured	500	3.600%	A2	A	03/01/52	+137	**1**
93	03/01/22	DUK	Duke Energy Carolinas	Secured	500	2.850%	Aa3	A	03/15/32	+115	
94	03/01/22	DUK	Duke Energy Carolinas	Secured	650	3.550%	Aa3	A	03/15/52	+145	**1**
95	03/02/22	EXC	Exelon Corporation	Unsecured	650	2.750%	Baa2	BBB	03/15/27	+100	
96	03/02/22	EXC	Exelon Corporation	Unsecured	650	3.350%	Baa2	BBB	03/15/32	+145	
97	03/02/22	EXC	Exelon Corporation	Unsecured	700	4.100%	Baa2	BBB	03/15/52	+180	**4**
98	03/02/22	ETR	Entergy Arkansas (reopening)	Secured	200	4.200%	A2	A	04/01/49	+160	
99	03/02/22	SO	Alabama Power Company	Unsecured	700	3.050%	A1	A-	03/15/32	+120	
100	03/07/22	SRE	San Diego Gas & Electric Company	Secured	500	3.000%	A1	A	03/15/32	+128	

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Recent Utility Corporate Bond Issuances
for the Projected Year Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-33 (MRB-9)
Page: 5 of 6
Witness: MRBleckman
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Line	Issue				Amt		Ratings			Issue	
No.	Date	Ticker	Issuer	Type	($mm)	Coupon	Moody's	S&P	Maturity	Spread (bp)	Category
1	03/07/22	SRE	San Diego Gas & Electric Company	Secured	500	3.700%	A1	A	03/15/52	+155	1
2	03/08/22	SRE	Southern California Gas Company	Unsecured	700	2.950%	A2	A	04/15/27	+125	
3	03/08/22	AVA	Avista Corporation	Secured	400	4.000%	A3	A-	04/01/52	+175	2
4	03/08/22	EXC	Commonwealth Edison	Secured	300	3.150%	A1	A	03/15/32	+130	
5	03/08/22	EXC	Commonwealth Edison	Secured	450	3.850%	A1	A	03/15/52	+160	1
6	03/09/22	PEG	Public Service Electric & Gas Company	Secured	500	3.100`%	A1	A	03/15/32	+120	
7	03/10/22	EVRG	Evergy Missouri West	Secured	250	3.761%	A3	A	03/15/32	+175	
8	03/11/22	NGGLN	Boston Gas Company	Unsecured	400	3.757%	Baa1	BBB+	03/16/32	+175	
9	03/14/22	PSD	Puget Energy Inc	Secured	450	4.224%	Baa3	BBB-	03/15/32	+210	
10	03/14/22	DUK	Duke Energy Progress	Secured	500	3.400%	Aa3	A	04/01/32	+130	
11	03/14/22	DUK	Duke Energy Progress	Secured	400	4.000%	Aa3	A	04/01/52	+155	1
12	03/17/22	NEE	NextEra Energy Capital Holdings	Unsecured	1,100	2.940%	Baa1	BBB+	03/21/24	+100	
13	03/17/22	NEE	NextEra Energy Capital Holdings	Unsecured	400	FRN	Baa1	BBB+	03/21/24	SOFR+102	
14	03/17/22	SWX	Southwest Gas	Unsecured	600	4.050%	Baa1	BBB	03/15/32	+190	
15	03/21/22	AEE	Union Electric	Secured	525	3.900%	A2	A	04/01/52	+135	1
16	03/21/22	SRE	Sempra Energy	Unsecured	750	3.300%	Baa2	BBB	04/01/25	+102	
17	03/21/22	SRE	Sempra Energy	Unsecured	500	3.700%	Baa2	BBB	04/01/29	+140	
18	04/04/22	OGLETH	Oglethorpe Power Corp	Secured	500	4.500%	Baa1	BBB+	04/01/47	+205	
19	04/19/22	BRKHEC	Berkshire Hathaway Energy Company	Unsecured	1,000	4.600%	A3	A-	05/01/53	+163	2
20	04/27/22	NRUC	National Rural Utilities Cooperative Finance Corp	Secured	300	3.450%	A2	A-	06/15/25	+75	
21	05/02/22	SO	Georgia Power Co	Unsecured	700	4.700%	Baa1	BBB+	05/15/32	+175	
22	05/02/22	SO	Georgia Power Co	Unsecured	800	5.125%	Baa1	BBB+	05/15/52	+210	3
23	05/02/22	AWK	American Water Capital Corp	Unsecured	800	4.450%	Baa1	A	06/01/32	+150	
24	05/02/22	XEL	Northern States Power Co/MN	Secured	500	4.500%	Aa3	A	06/01/52	+148	1
25	05/03/22	XEL	Xcel Energy	Unsecured	700	4.600%	Baa1	BBB+	06/01/32	+167	
26	05/03/22	PCG	PG&E Wildfire Recovery Funding	Secured	540	3.594%	Aaa	AAA	6/1/2030	+60	
27	05/03/22	PCG	PG&E Wildfire Recovery Funding	Secured	540	4.263%	Aaa	AAA	6/1/2036	+125	
28	05/03/22	PCG	PG&E Wildfire Recovery Funding	Secured	360	4.377%	Aaa	AAA	6/1/2039	+125	
29	05/03/22	PCG	PG&E Wildfire Recovery Funding	Secured	1,260	4.451%	Aaa	AAA	12/1/2047	+125	
30	05/03/22	PCG	PG&E Wildfire Recovery Funding	Secured	900	4.674%	Aaa	AAA	12/1/2051	+160	
31	05/05/22	SO	Southern Company	Unsecured	863	4.475%	Baa3	BBB	08/01/24	+155	
32	05/05/22	SO	Southern Company	Unsecured	863	5.113%	Baa3	BBB	08/01/27	+200	
33	05/10/22	VST	Vistra Operations Company	Secured	400	4.875%	Baa3	BBB-	05/13/24	+225	
34	05/10/22	VST	Vistra Operations Company	Secured	1,100	5.125%	Baa3	BBB-	05/13/25	+238	
35	05/10/22	DUK	Piedmont Natural Gas Company	Unsecured	400	5.050%	A3	BBB+	05/15/52	+197	3
36	05/10/22	XEL	Public Service Co of Colorado	Secured	300	4.100%	A1	A	06/01/32	+120	
37	05/10/22	XEL	Public Service Co of Colorado	Secured	400	4.500%	A1	A	06/01/52	+145	1
38	05/12/22	ES	NSTAR Electric Company	Unsecured	450	4.550%	A1	A	06/01/52	+157	1
39	05/16/22	AEP	AEP Texas	Unsecured	500	4.700%	Baa2	A-	05/15/32	+185	
40	05/16/22	AEP	AEP Texas	Unsecured	500	5.250%	Baa2	A-	05/15/52	+215	2
41	05/16/22	D	Virginia Electric and Power Company	Unsecured	600	3.750%	A2	BBB+	05/15/27	+98	
42	05/16/22	D	Virginia Electric and Power Company	Unsecured	600	4.625%	A2	BBB+	05/15/52	+160	3
43	05/17/22	EXC	PECO Energy Company	Secured	350	4.600%	Aa3	A	05/15/52	+147	1
44	05/17/22	ONCRTX	Oncor Electric Delivery Company	Secured	400	4.150%	A2	A+	06/01/32	+122	
45	05/17/22	ONCRTX	Oncor Electric Delivery Company	Secured	400	4.600%	A2	A+	06/01/52	+147	
46	05/18/22	WTRG	Essential Utilities	Unsecured	500	5.300%	Baa2	A-	05/01/52	+225	2
47	05/18/22	EIX	Southern California Edison	Secured	300	4.200%	A3	A-	06/01/25	+140	
48	05/18/22	EIX	Southern California Edison	Secured	600	4.700%	A3	A-	06/01/27	+185	
49	05/18/22	EIX	Southern California Edison	Secured	350	5.450%	A3	A-	06/01/52	+240	2
50	05/23/22	XEL	Southwestern Public Service Co	Secured	200	5.150%	A3	A	06/01/52	+210	1
51	06/01/22	EXC	Baltimore Gas & Electric	Unsecured	500	4.550%	A3	A	06/01/52	+145	1
52	06/06/22	PCG	Pacific Gas and Electric	Secured	450	4.950%	Baa3	BBB-	06/08/25	+205	
53	06/06/22	PCG	Pacific Gas and Electric	Secured	450	5.450%	Baa3	BBB-	06/15/27	+245	
54	06/06/22	PCG	Pacific Gas and Electric	Secured	600	5.900%	Baa3	BBB-	06/15/32	+290	
55	06/07/22	NI	NISource Inc	Unsecured	350	5.000%	Baa2	BBB+	06/15/52	+190	3
56	06/07/22	AEP	AEP Transmission	Unsecured	550	4.500%	A2	A-	06/15/52	+140	2
57	06/07/22	CNP	CenterPoint Energy Resources	Unsecured	500	4.400%	A3	BBB+	07/01/32	+145	
58	06/08/22	ENELIM	Enel Finance International N.V.	Unsecured	750	4.250%	Baa1	BBB+	06/15/25	+145	
59	06/08/22	ENELIM	Enel Finance International N.V.	Unsecured	750	4.625%	Baa1	BBB+	06/15/27	+165	
60	06/08/22	ENELIM	Enel Finance International N.V.	Unsecured	1,000	5.000%	Baa1	BBB+	06/15/32	+215	
61	06/08/22	ENELIM	Enel Finance International N.V.	Unsecured	1,000	5.500%	Baa1	BBB+	06/15/52	+240	3
62	06/08/22	DUK	Duke Energy Corporation	Unsecured	600	3.100%	Baa2	BBB	06/15/28	+130	
63	06/08/22	DUK	Duke Energy Corporation	Unsecured	500	3.850%	Baa2	BBB	06/15/34	+175	
64	06/21/22	NEE	NextEra Energy Capital Holdings	Unsecured	750	4.200%	Baa1	BBB+	06/20/24	+100	
65	06/21/22	NEE	NextEra Energy Capital Holdings	Unsecured	1,000	4.450%	Baa1	BBB+	06/20/25	+110	
66	06/21/22	NEE	NextEra Energy Capital Holdings	Unsecured	1,250	4.625%	Baa1	BBB+	07/15/27	+125	
67	06/21/22	NEE	NextEra Energy Capital Holdings	Unsecured	1,000	5.000%	Baa1	BBB+	07/15/32	+170	
68	06/22/22	ES	Eversource Energy	Unsecured	900	4.200%	Baa1	BBB+	06/27/24	+115	
69	06/22/22	ES	Eversource Energy	Unsecured	600	4.600%	Baa1	BBB+	07/01/27	+140	
70	07/07/22	TE	Tampa Electric	Unsecured	300	3.875%	A3	BBB+	7/12/2024	+85	
71	07/07/22	TE	Tampa Electric	Unsecured	300	5.000%	A3	BBB+	7/15/2052	+180	3
72	07/13/22	PCG	PG&E Wildfire Recovery Funding	Secured	613	4.017%	Aaa	AAA	07/08/27	+100	
73	07/13/22	PCG	PG&E Wildfire Recovery Funding	Secured	600	4.719%	Aaa	AAA	08/11/34	+170	
74	07/13/22	PCG	PG&E Wildfire Recovery Funding	Secured	500	5.078%	Aaa	AAA	06/24/39	+183	
75	07/13/22	PCG	PG&E Wildfire Recovery Funding	Secured	1,150	5.209%	Aaa	AAA	12/07/44	+190	
76	07/13/22	PCG	PG&E Wildfire Recovery Funding	Secured	1,037	5.097%	Aaa	AAA	06/14/50	+195	
77	**08/01/22**	**CMS**	**Consumers Energy**	**Secured**	**350**	**3.600%**	**A1**	**A**	**08/15/32**	**+100**	
78	**08/01/22**	**CMS**	**Consumers Energy**	**Secured**	**450**	**4.200%**	**A1**	**A**	**09/01/52**	**+125**	**1**
79	08/01/22	EIX	Edison International	Unsecured	400	4.700%	Baa3	BBB-	08/15/25	+190	
80	08/02/22	NEE	NextEra Energy Capital Holdings	Unsecured	1,500	4.255%	Baa1	BBB+	09/01/24	+105	
81	08/02/22	NGGLN	Brooklyn Union Gas Company	Unsecured	400	4.632%	Baa2	BBB+	08/05/27	+177	
82	08/02/22	NGGLN	Brooklyn Union Gas Company	Unsecured	400	4.866%	Baa2	BBB+	08/05/32	+212	
83	08/03/22	DTE	DTE Energy Company	Unsecured	1,300	4.220%	Baa2	BBB	09/01/24	+113	
84	08/04/22	OGS	One Gas Inc	Unsecured	300	4.250%	A3	BBB+	09/01/32	+165	
85	08/08/22	DUK	Duke Energy Corporation	Unsecured	900	4.300%	Baa2	BBB	03/15/28	+142	
86	08/08/22	DUK	Duke Energy Corporation	Unsecured	1,150	4.500%	Baa2	BBB	08/15/32	+177	
87	08/08/22	DUK	Duke Energy Corporation	Unsecured	1,150	5.000%	Baa2	BBB	08/15/52	+202	4
88	08/08/22	LNT	Wisconsin Power & Light	Unsecured	600	3.950%	A3	A	09/01/32	+132	
89	08/09/22	D	Dominion Energy Inc	Unsecured	400	4.350%	Baa2	BBB	08/15/32	+165	
90	08/09/22	D	Dominion Energy Inc	Unsecured	600	4.850%	Baa2	BBB	08/15/52	+190	4
91	08/09/22	SO	Alabama Power Company	Unsecured	550	3.750%	A1	A-	09/01/27	+80	
92	08/09/22	SO	Alabama Power Company	Unsecured	450	3.940%	A1	A-	09/01/32	+115	
93	08/10/22	NRUC	National Rural Utilities Cooperative Finance	Unsecured	400	4.150%	A1	A-	12/15/32	+140	
94	08/15/22	AEE	Ameren Illinois Company	Secured	500	3.850%	A1	A	09/01/32	+108	
95	08/16/22	EXC	PECO Energy Company	Secured	425	4.375%	Aa3	A	08/15/52	+127	1
96	08/18/22	ETR	Entergy Louisiana LLC	Secured	500	4.750%	A2	A	09/15/52	+163	1
97	08/22/22	ETR	Entergy Texas Inc	Secured	325	5.000%	A3	A	09/15/52	+178	1
98	09/06/22	SO	Southern Company Gas	Unsecured	500	5.150%	Baa1	BBB+	09/15/32	+185	
99	09/06/22	ONCRTX	Oncor Electric Delivery	Secured	700	4.550%	A2	A+	09/15/32	+123	
100	09/06/22	ONCRTX	Oncor Electric Delivery	Secured	500	4.950%	A2	A+	09/15/52	+148	

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Recent Utility Corporate Bond Issuances
for the Projected Year Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-33 (MRB-9)
Page: 6 of 6
Witness: MRBleckman
Date: May 2023

Line No.	(a) Issue Date	(b) Ticker	(c) Issuer	(d) Type	(e) Amt ($mm)	(f) Coupon	(g) Ratings Moody's	(h) Ratings S&P	(i) Maturity	(j) Issue Spread (bp)	(k) Category
1	09/08/22	ITC	ITC Holdings Corporation	Unsecured	600	4.950%	Baa2	BBB+	09/22/27	+158	
2	09/08/22	TVA	Tennessee Valley Authority	Unsecured	500	4.250%	Aaa	AA+	09/15/52	+100	
3	09/12/22	CNP	CenterPoint Energy Houston Electric	Secured	500	4.450%	A2	A	10/01/32	+115	
4	09/12/22	CNP	CenterPoint Energy Houston Electric	Secured	300	4.850%	A2	A	10/01/52	+138	**1**
5	09/12/22	ES	NSTAR Electric Company	Unsecured	400	4.950%	A1	A	09/15/52	+147	**1**
6	09/12/22	NGGLN	Niagara Mohawk Power	Unsecured	500	5.783%	Baa1	BBB+	09/16/52	+225	**3**
7	09/14/22	WEC	Wisconsin Electric Power Company	Unsecured	500	4.750%	A2	A-	09/30/32	+135	
8	09/22/22	WEC	WEC Energy Group	Unsecured	500	5.000%	Baa1	BBB+	09/27/25	+90	
9	09/22/22	WEC	WEC Energy Group	Unsecured	400	5.150%	Baa1	BBB+	10/01/27	+128	
10	09/22/22	FE	Ohio Edison	Unsecured	300	5.500%	A3	BBB	01/15/33	+185	
11	09/28/22	ATO	Atmos Energy	Unsecured	300	5.450%	A1	A-	10/15/32	+152	
12	09/28/22	ATO	Atmos Energy	Unsecured	500	5.750%	A1	A-	10/15/52	+195	**2**
13	10/03/22	SO	The Southern Co	Unsecured	500	5.150%	Baa2	BBB	10/06/25	+110	
14	10/03/22	SO	The Southern Co	Unsecured	500	5.700%	Baa2	BBB	10/15/32	+205	
15	10/03/22	EDPPL	EDP Finance BV	Unsecured	500	6.300%	Baa3	BBB	10/11/27	+245	
16	10/06/22	ENELIM	Enel Finance International NV	Unsecured	750	6.800%	Baa1	BBB+	10/14/25	+275	
17	10/06/22	ENELIM	Enel Finance America LLC	Unsecured	1,000	7.100%	Baa1	BBB+	10/14/27	+325	
18	10/06/22	ENELIM	Enel Finance International NV	Unsecured	1,250	7.500%	Baa1	BBB+	10/14/32	+400	
19	10/06/22	ENELIM	Enel Finance International NV	Unsecured	1,000	7.750%	Baa1	BBB+	10/14/52	+440	**3**
20	10/17/22	BRKHEC	Nevada Power Company	Secured	400	5.900%	A2	A+	05/01/53	+190	
21	10/20/22	NRUC	National Rural Utilities Cooperative Finance	Unsecured	500	5.450%	A2	A-	10/30/25	+85	
22	10/20/22	NRUC	National Rural Utilities Cooperative Finance	Unsecured	350	5.800%	A2	A-	01/15/33	+158	
23	10/31/22	AEP	American Electric Power Co Inc	Unsecured	500	5.750%	Baa2	BBB+	11/1/2027	+155	
24	10/31/22	AEP	American Electric Power Co Inc	Unsecured	500	5.950%	Baa2	BBB+	11/1/2032	+195	
25	11/03/22	EIX	Southern California Edison Co	Secured	750	5.950%	A3	A-	11/1/2032	+190	
26	11/03/22	EIX	Southern California Edison Co	Secured	750	5.850%	A3	A-	11/1/2027	+150	
27	11/04/22	PEG	Public Service Enterprise Group	Unsecured	700	5.850%	Baa2	BBB	11/15/2027	+155	
28	11/04/22	PNW	Arizona Public Service Co	Unsecured	400	6.350%	A3	BBB+	12/15/2032	+220	
29	11/07/22	EIX	Edison International	Unsecured	550	6.950%	Baa3	BBB-	11/15/2029	+280	
30	11/07/22	WEC	Wisconsin Public Service	Unsecured	300	5.350%	A2	A-	11/10/2025	+72	
31	11/07/22	SRE	Southern California Gas Co	Secured	600	6.350%	Aa3	A+	11/15/2052	+205	
32	11/07/22	DUK	Duke Energy Florida	Secured	500	5.950%	A1	A	11/15/2052	+167	**1**
33	11/08/22	AES	Indianapolis Power & Light	Secured	350	5.650%	A2	A-	12/1/2032	+155	
34	11/08/22	AEE	Ameren Illinois Co	Secured	350	5.900%	A1	A	12/1/2052	+163	**1**
35	11/09/22	ED	Consolidated Edison Co of New York Inc	Unsecured	700	6.150%	Baa1	A-	11/15/2052	+185	**2**
36	11/16/22	D	Dominion Energy	Unsecured	850	5.375%	Baa2	BBB	11/15/32	+175	
37	11/18/22	PCG	PG&E Recovery Funding LLC	Secured	215	5.045%	Aaa	AAA	07/15/34	+105	
38	11/18/22	PCG	PG&E Recovery Funding LLC	Secured	200	5.256%	Aaa	AAA	01/15/40	+135	
39	11/18/22	PCG	PG&E Recovery Funding LLC	Secured	568	5.536%	Aaa	AAA	07/15/49	+140	
40	11/21/22	NGGLN	New England Power Company	Unsecured	300	5.936%	A3	BBB+	11/25/52	+200	**3**
41	11/28/22	EVRG	Evergy Missouri West	Secured	300	5.150%	A3	A	12/15/2027	+130	
42	11/29/22	SWX	Southwest Gas Corp	Unsecured	300	5.800%	Baa1	BBB	12/1/2027	+190	
43	11/29/22	BRKHEC	PacifiCorp	Secured	1,100	5.350%	A1	A+	12/1/2053	+153	
44	11/30/22	PEG	Public Service Electric and Gas Co	Secured	400	4.900%	A1	A	12/15/32	+113	
45	12/05/22	DUK	Duke Energy Corporation	Unsecured	500	5.000%	Baa2	BBB	12/08/25	+88	
46	12/05/22	DUK	Duke Energy Corporation	Unsecured	500	5.000%	Baa2	BBB	12/08/27	+123	
47	12/07/22	NRUC	National Rural Utilities Cooperative Finance Corp	Unsecured	400	4.800%	A2	A-	3/15/2028	+120	
48	01/03/23	ES	Connecticut Light & Power Company	Secured	500	5.250%	A1	A+	01/15/53	+135	
49	01/03/23	OGE	Oklahoma Gas & Electric	Unsecured	450	5.400%	A3	A-	01/15/33	+165	
50	01/03/23	EXC	Commonwealth Edison	Secured	400	4.900%	A1	A	02/01/33	+115	
51	01/03/23	EXC	Commonwealth Edison	Secured	575	5.300%	A1	A	02/01/53	+140	**1**
52	01/03/23	DUK	Duke Energy Carolinas	Secured	900	4.950%	Aa3	A	1/15/2033	+120	
53	01/03/23	DUK	Duke Energy Carolinas	Secured	900	5.350%	Aa3	A	1/15/2053	+145	**1**
54	01/03/23	AEP	Public Service Co. of Oklahoma	Unsecured	475	5.250%	Baa1	A-	1/15/2033	+150	
55	01/03/23	ETR	Entergy Arkansas	Secured	425	5.150%	A2	A	1/15/2033	+140	
56	**01/03/23**	**CMS**	**Consumers Energy**	**Secured**	**425**	**4.650%**	**A1**	**A**	**3/1/2028**	**+75**	
57	01/04/23	PCG	Pacific Gas and Electric	Secured	750	6.150%	Baa3	BBB-	1/15/2033	+250	
58	01/04/23	PCG	Pacific Gas and Electric	Secured	750	6.750%	Baa3	BBB-	1/15/2053	+295	
59	01/04/23	ES	Public Service New Hampshire	Secured	300	5.150%	A1	A+	1/15/2053	+133	
60	01/10/23	WEC	WEC Energy Group	Unsecured	650	4.750%	Baa1	BBB+	1/9/2026	+85	
61	01/10/23	WEC	WEC Energy Group	Unsecured	450	4.750%	Baa1	BBB+	1/15/2028	+113	

	Average Spread 2020-Mid-Jan. 2023
(1) 30-year Debt Issuance A Rated Securities	**+130**
(2) 30-year Debt Issuance A- Rated Securities	**+154**
(3) 30-year Debt Issuance BBB+ Rated Securities	**+159**
(4) 30-year Debt Issuance BBB Rated Securities	**+225**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Peer Company Commission Authorized Equity Ratios
for the Projected Year Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-34 (MRB-10)
Page: 1 of 1
Witness: MRBleckman
Date: May 2023

(a) Line No.	(b) State	(c) Company	(d) Docket #	(e) Case Type	(f) Date Authorized	(g) Common Equity %
1	Illinois	Ameren Illinois Company	D-22-0297	Electric	12/01/22	50.00%
2	Arizona	Arizona Public Service Co.	D-E-01345A-19-0236	Electric	11/02/21	54.67%
3	California	Pacific Gas and Electric Company	A-22-04-008	Electric	12/15/22	52.00%
4	Wisconsin	Wisconsin Electric Power Company	D-5-UR-110	Electric	12/29/22	59.01%
5	Wisconsin	Wisconsin Public Service Corporation	D-6690-UR-127	Electric	12/22/22	53.79%
6	Wisconsin	Northern States Power Co.	D-4220-UR-125	Electric	11/18/21	52.50%
7	North Dakota	Northern States Power Co.	C-PU-20-441	Electric	08/18/21	52.50%
8	Colorado	Public Service Company of Colorado	D-21AL-0317E	Electric	03/16/22	55.92%
9	Texas	Southwestern Public Service Co	D-49831	Electric	08/27/20	54.62%
10	New Mexico	Southwestern Public Service Co	C-20-00238-UT	Electric	02/16/22	54.72%
11	Average Equity Ratio					**53.97%**

Source: Individual state commission electronic docket records search.

Selection Criteria:
1. Regulated subsidiary of the Company's ROE proxy group in Case No. U-21224
2. Rate order issued from January 1, 2020 through December 31, 2022.
3. Rate order available through online docket search that includes an authorized equity ratio
4. For each regulated subsidiary, latest authorized equity ratio for each state / jurisdiction.

Note: Excludes final orders received by in-state proxy DTE Energy as well as the Company.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
State Regulatory Evaluations
for the Projected Year Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-35 (MRB-11)
Page: 1 of 1
Witness: MRBleckman
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f) (d) x (e)
Line No.	**Tier**	**State**	**Company**	**Equity Ratio**	**ROE**	**Rate of Return**
1	Tier 1A	Alabama	Alabama Power	55.00%	10.87%	5.98%
2	Tier 1B	Florida	FPL	59.60%	10.60%	6.32%
3		Georgia	Georgia Power	56.00%	10.50%	5.88%
4		Pennsylvania	UGI (PA)	54.02%	9.85%	5.32%
5	Tier 1C[1]	Wisconsin	WEC	52.33%	10.14%	5.31%
6		Mississippi	Mississippi Power	53.00%	10.00%	5.30%
7		Iowa	IPL (IA)	51.00%	10.00%	5.10%
8		Michigan	Consumers Energy	50.75%	9.90%	5.02%
9		North Carolina	Duke Energy	52.00%	9.60%	4.99%
10		Michigan	Pro Forma - Consumers Energy	51.00%	9.70%	4.95%

Source: February 24, 2023 S&P Global Market Intelligence Report - RRA Regulatory Focus - State Regulatory Evaluations - Energy.

Columns (d) & (e): Company materials, S&P Global IQ, Sell-side and Credit Rating reports.

[1]Tennesse excluded as the Tennessee Valley Authority (TVA) is regulated at the federal level.

MOODY'S
INVESTORS SERVICE

CREDIT OPINION
10 May 2021

Update

Rate this Research

RATINGS

Consumers Energy Company

Domicile	Jackson, Michigan, United States
Long Term Rating	Baa1
Type	Pref. Stock - Dom Curr
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

Consumers Energy Company

Update following downgrade to A1 secured

Summary

Consumers Energy Company's (Consumers Energy) credit reflects its operating profile as a vertically integrated electric and gas utility in a credit supportive regulatory environment in Michigan. Historically, Consumers Energy had produced strong and consistent credit metrics, including a cash flow from operations before working capital (CFO pre-WC) to debt ratio in the mid-20% range. However, metrics began to weaken slightly starting in 2018 primarily due to the gradual erosion in its allowed return on equity (ROE) and equity capitalization through rate case outcomes. In addition, tax reform had a negative impact on its credit metrics. By 2019, CFO pre-WC to debt for Consumers Energy had fallen to about 20%.

Consumers Energy's stand-alone financial performance has historically been affected by the significant debt at its parent company CMS Energy Corporation (CMS, Baa2 stable). CMS has made progress in reducing consolidated leverage as well as the percentage of parent debt in its capital structure, although it remains around 30% of total consolidated debt. All of Consumers' outstanding debt obligations are secured.

Recent developments

On 3 May 2021, we downgraded the ratings of Consumers Energy due to its weakened credit metrics. Although the regulatory environment in Michigan remains relatively credit supportive, the outcome of recent rate cases has put pressure on its credit metric ratios and we do not expect the ratios to recover back to historical levels.

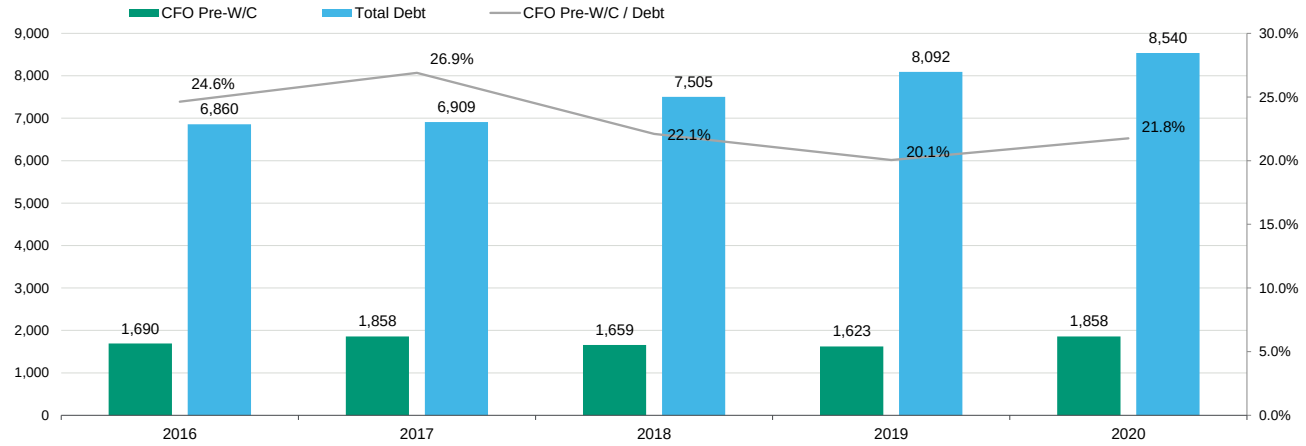
In the latest electric rate case, the Michigan Public Service Commission (MPSC) authorized a 9.9% ROE and 51.1% equity capitalization. In the previous electric rate case, which was settled and approved in January 2019, the stated ROE was 10% and the assumed capital structure included a 52.5% equity capitalization. Considering both the continued robust utility investment program totaling over $13 billion over the next five years and the lower ROE and equity capitalization, we expect Consumers Energy to produce a CFO pre-WC to debt ratio of around 20% over the next 2-3 years.

The rapid spread of the coronavirus outbreak, severe global economic shock, low oil prices, and asset price volatility are creating a severe and extensive credit shock across many sectors, regions and markets. The combined credit effects of these developments are unprecedented. We regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety.

We expect Consumers Energy to be relatively resilient to recessionary pressures because of its rate regulated utility business. We continue to monitor changes in customers' usage, utility bill payment delinquency, and the regulatory response to counter these effects on

earnings and cash flow. We see these issues as temporary and not reflective of the core operations or long-term financial or credit profile of Consumers Energy.

Exhibit 1
Historical CFO Pre-WC, Total Debt and CFO Pre-WC to Debt



Source: Moody's Financial Metrics

Credit strengths

» Credit supportive regulation despite financial pressure from recent rate case outcomes

» Regulatory framework provides transparency and timely cost recovery

Credit challenges

» Weakened financial metrics compared to historical levels

» Maintaining continued regulatory support amid a robust capital investment program

» High leverage at the parent company

Rating outlook

The stable outlook reflects our expectation that financial metrics will remain at current levels and that Consumers Energy will continue to benefit from a consistent and generally credit supportive regulatory environment. The stable outlook also incorporates our view that Consumers Energy will maintain prudent financial policies while managing through its robust investment cycle and that debt levels at either the parent or utility will not increase materially.

Factors that could lead to an upgrade

A rating upgrade could be considered if credit metrics improve such that CFO pre-WC to debt is above 21% on a sustained basis. In addition, if the Michigan regulatory framework becomes even more formulaic, transparent or timely with its suite of recovery mechanisms for Consumers Energy, a rating upgrade could be possible.

Factors that could lead to a downgrade

A rating downgrade could be considered if there is a material deterioration in the credit supportiveness of the Michigan regulatory environment; or if the CFO pre-WC to debt ratio declines below 18% on a sustained basis.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

Key indicators

Exhibit 2
Consumers Energy Company Key Indicators

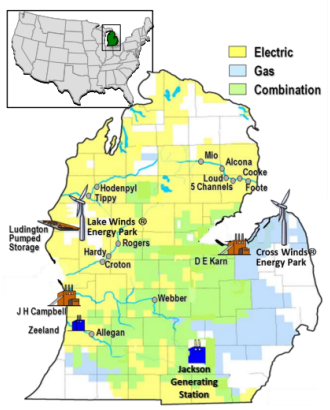
	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20
CFO Pre-W/C + Interest / Interest	6.9x	7.2x	6.3x	6.2x	6.6x
CFO Pre-W/C / Debt	24.6%	26.9%	22.1%	20.1%	21.8%
CFO Pre-W/C – Dividends / Debt	17.4%	19.3%	15.0%	12.7%	14.3%
Debt / Capitalization	43.4%	46.1%	46.4%	46.0%	44.5%

All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
Source: Moody's Financial Metrics

Profile

Consumers Energy Company (Consumers Energy) is a vertically integrated electric and gas utility serving approximately 6.8 million customers in the state of Michigan with a rate base of approximately $20 billion. Consumers Energy's electric operations account for approximately two thirds of its revenue, cash flow and asset base. Consumers Energy is the primary subsidiary of CMS Energy Corporation (CMS), representing over 90% of its consolidated operating revenue. In addition to Consumers Energy, CMS owns approximately 1,838 gross MW of unregulated, primarily natural gas-fired, generation located mostly within Michigan, and EnerBank, a FDIC-insured industrial bank providing unsecured consumer installment loans for financing home improvements. These businesses contribute modestly to consolidated results, and do not materially increase CMS's consolidated business risk profile.

Exhibit 3
Consumers Energy's Service Territory



Source: Company Presentations

Detailed credit considerations

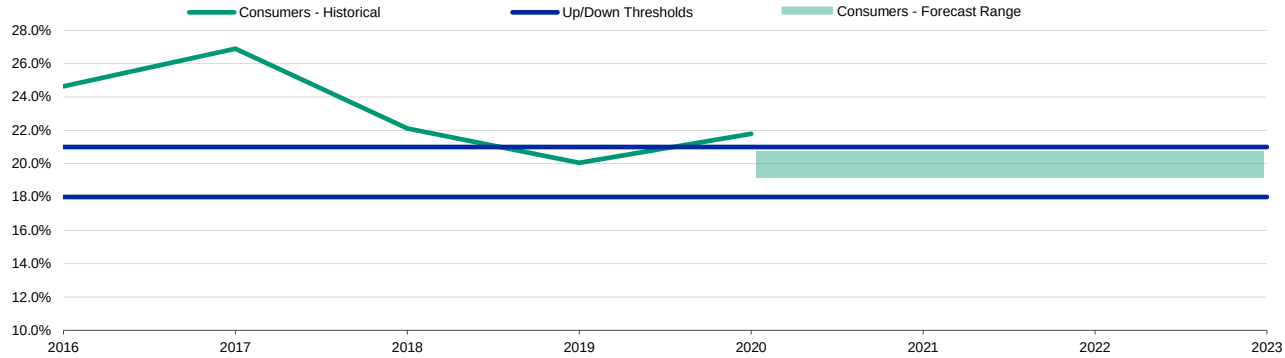
Weak credit metrics expected through high capital investment cycle

Consumers Energy had historically maintained strong financial metrics with its CFO pre-WC to debt in the mid-20% range. However, metrics began to weaken starting in 2018 primarily due a gradually declining ROE and a lower regulatory equity capital structure. Also, tax reform and an elevated capital expenditure program added downward pressure on the company's credit metric ratios. By 2019, the utility's CFO pre-WC to debt had fallen closer to 20%, reducing financial flexibility.

Consumers' capital program has increased from about $1.2 billion in 2012 to about $2.3 billion in 2020 and, as noted below, is expected to remain elevated. As of year-end 2020, CFO pre-WC to debt was weaker than its 3-year average CFO pre-WC to debt realized between 2017 and 2019. Considering both the continued robust utility investment program totaling over $13 billion over the next five years and the lower ROE and equity capitalization, we expect Consumers Energy to maintain these lower CFO pre-WC to debt ratios of around 20% over the next 2-3 years.

Exhibit 4

Consumers Energy Historical and Projected CFO pre-WC to Debt



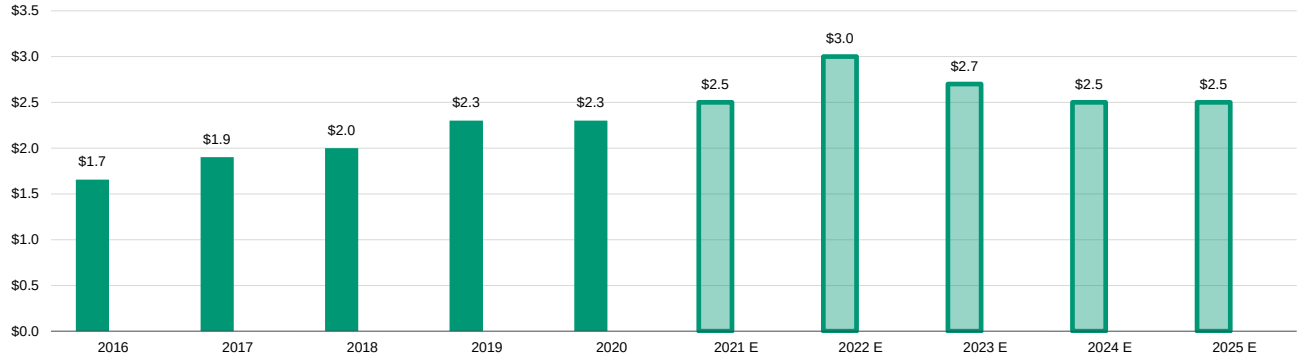
The up/down financial metric thresholds represent one of several factors that could result in an upgrade or downgrade of the rating if the metric is sustained above or below those levels.
Source: Moody's Financial Metrics and Estimates

Capital spending remains elevated

Consumers Energy is currently in the midst of a large capital investment plan and expects to spend approximately $13 billion from 2021 to 2025. The magnitude of the plan, which is intended to improve reliability and efficiency while moving the company to a less carbon intensive future, will require continued regulatory support in order to maintain the company's current financial profile. In 2021, projected investments are approximately $2.5 billion compared to around $2.3 billion in 2020, $2.3 billion in 2019, and $2.0 billion in 2018.

Exhibit 5

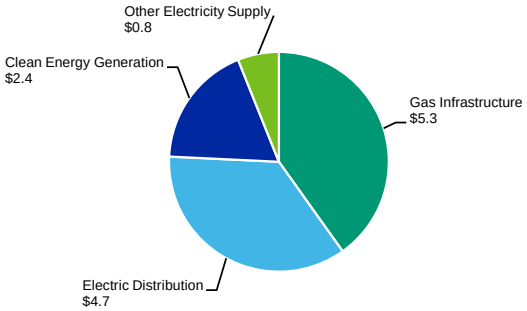
Consumers Energy's elevated capital program will extend through 2025
$ billions



Source: Company Investor Presentation

Over the 2021-2025 period, projected capital investments will include maintenance capital of about $10 billion (approximately $4.7 billion for electric operations and $5.3 billion for gas utility operations), and $2.4 billion for clean energy generation and $800 million for other electric supply needed to comply with state and federal laws and regulations. Consumers Energy's goal to keep rate increases modest should help to maintain regulatory support for the recovery of this spending. Funding for these forecasted investments will be provided by internally generated cash flow, the issuance of debt at Consumers and equity contributions from CMS.

Exhibit 6
Planned Capital Expenditures 2021 - 2025
$ billions



Source: Company 10K

Credit supportive regulatory environment despite financial pressure from rate case outcomes

Consumers Energy is regulated in Michigan by the MPSC, which has a regulatory framework that we view to be more credit supportive than most other states. As a result of 2008 and 2016 energy legislation in Michigan, the regulatory framework was streamlined, improving both the rate case process and the timeliness of cost recovery. The 2016 legislation provided additional assurance of utility investment recovery by expanding the certificate of necessity (CON) process, which had already included pre-construction approval for large generating resources, into an integrated resource planning (IRP) process. The IRP process considers a wide range of factors including fuel cost, demand forecasts, resource adequacy, competitive pricing, environmental mandates and transmission options before constructing major projects. The legislation also lowered the threshold for major projects to $100 million from $500 million.

In June 2019, the MSPC approved Consumers Energy's latest IRP, which included a plan to reduce its carbon emissions by more than 90% from its 2005 levels by 2040. The plan included the retirement of the 503 MW Karn coal plant by 2023. Also, under Consumers Energy's renewable energy plan, the MPSC has approved the acquisition of up to 525 MW of new wind generation projects and authorized the utility to earn a 10.7% ROE on any projects approved by the MPSC. Also, the MPSC approved a 20-year Purchase Power Agreement (PPA) under which Consumers will purchase 100 MW of renewable capacity, energy and renewable energy credits from a 149 MW solar generating facility in Michigan, which is expected to be operational in 2022. The company plans to file its next IRP in June 2021, which will focus further on accelerating decarbonization, as well as maintaining grid reliability and resilience.

While Michigan's electricity restructuring had initially contemplated full competition in generation, the 2008 legislation limited the number of customers able to choose an alternative supplier at 10% of the prior year load in the utility's service territory. The December 2016 legislation maintained the 10% retail open access (ROA) limit but also provided the possibility for a periodic downward adjustments if ROA demand is below the 10% cap. The 2016 legislation also required, for the first time, that competitive retail suppliers demonstrate adequacy of electric supply for a multi-year period.

Timeliness of cost recovery based on a prescriptive suite of recovery mechanisms

Michigan utilities benefit from numerous formulaic rate adjustment mechanisms that provide a high degree of cash flow stability and assurance of recovery. For example, Consumers Energy has forward-looking Power Supply Cost Recovery (PSCR) and Gas Cost Recovery (GCR) mechanisms that are intended to ensure that it can recover prudently incurred power and gas supply costs. The PSCR covers fuel and purchased power costs as well as transmission and emission allowance costs. Differences between actual and forecast costs are deferred for recovery or refunded in the following year. The PSCR is a surcharge mechanism and provides a degree of base rate and cash flow stability, a credit positive. The GCR mechanism may be adjusted monthly within a capped range to minimize over/under recoveries, although interim gas inventory buildup could substantially increase the company's working capital financing when gas prices sharply increase.

Gas utilities in the state also benefit from revenue decoupling mechanisms (RDM) and programs designed to assure recovery of needed infrastructure improvements. Consumers Energy's RDM compares and adjusts for differences between weather normalized actual and authorized revenues. Consumers Energy's enhanced infrastructure replacement program (EIRP) is a MPSC authorized 25-year incremental investment program to upgrade natural gas infrastructure, including replacing approximately 540 miles of cast iron pipe and other high-risk components. Consumers currently projects that it will spend about $100 million per year under the EIRP. These expenditures are recoverable through base rates.

Financial pressure from recent rate case outcomes

Consumers maintains an active regulatory schedule with its electric and gas general rate cases typically filed annually in an alternating pattern. The utility currently has an electric rate case pending.

Consumers' last electric rate case was completed in December 2020. The MPSC approved a $90 million electric rate increase based on a 9.9% ROE and 51.1% equity layer. The order also approved the recovery of $12.6 million related to investment in the distribution system. While we had expected the commission to maintain the 10% authorized ROE, we recognize the downward pressure on the ROE due to low Treasury rates.

In March 2021, Consumers filed an electric rate case application with the MPSC seeking a $225 million annual increase, based on a 10.5% ROE and 52% equity layer. The company also requested recovery of $121 million of new infrastructure investments related to the 2019 IRP, distribution system reliability and technology enhancements. We expect the rate case to conclude by the end of the year. If the rate case results in another decrease in both ROE and equity layer, we expect the utility's already weakened metrics to be further pressured.

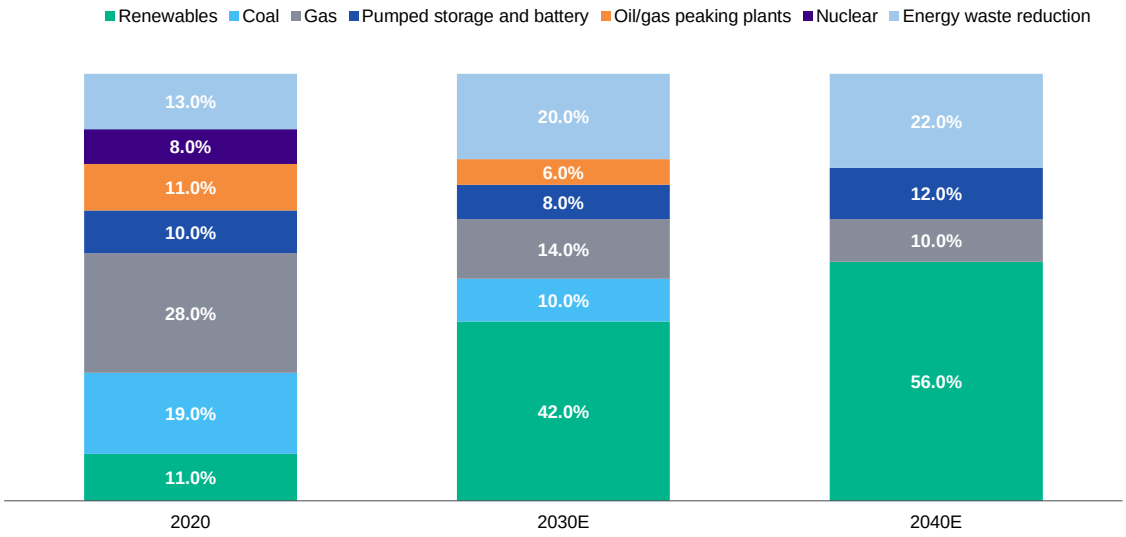
Consumers' latest gas rate case was settled in September 2020. The MPSC authorized a $144 million revenue increase, 9.9% ROE, 52.05% equity layer (both unchanged from the previous rate case), and continuation of a revenue decoupling mechanism. The company's rate base valuation was $7.42 billion. As part of the settlement agreement, Consumers agreed not to file its next gas rate case until 1 December 2021. Between 1 October 2021 and 30 September 2022, the company will accelerate the amortization of tax liabilities in an amount forecasted to be approximately $84.5 million.

ESG considerations

Environmental

CMS is strongly positioned for the carbon transition with strategies and plans in place that substantially mitigate its carbon transition exposure. Consumers is currently in a transition to phase out its coal-fired generation and targets a reduction in its CO2 emissions by more than 90% from its 2005 levels by 2040. Michigan's regulatory framework supports the utility's transition plan by allowing certain investment cost recovery and renewable energy plan surcharges, for example.

Exhibit 7
Clean Energy Plan Electric Capacity by Fuel Source (MW)

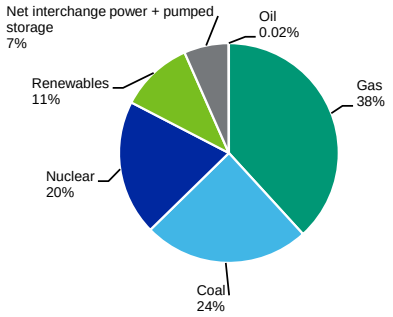


Source: Company filings

In June 2018, Consumers Energy filed its first ever IRP with the MPSC pursuant to the 2016 energy law, in accordance with requirements laid out in the legislation. The IRP was approved by the MPSC in June 2019. The IRP outlined a series of steps the company will take to reach its goal of a 90% carbon emissions reduction and to eliminate its use of coal generation by 2040. The combination and timeline of these programs are aimed at ensuring that the energy it provides remains reliable and affordable over the long-term.

Among the steps outlined in the plan is the termination of its PPA with the Palisades Nuclear Power Plant as well as the closing of units 1 and 2 (503 MW) of the Karn coal-fired plant and replacing it with 525 MW of wind and solar generation. The wind generation capacity addition has been approved by the commission through the Renewable Energy Plan. The IRP also included Consumers Energy's intention to fully exit coal generation by 2040 by closing all three units (1.3 GW) of the J.H. Campbell coal-fired plant. This capacity will be replaced over the next two decades with 5 GW of new solar generation by 2030 and an additional 1 GW by 2040. Even before the approval of the IRP, Consumers had been actively reducing its carbon footprint and moving toward more energy efficient, cleaner generating resources. Consumers' generating capacity has shifted from 41% coal in 2005 to 24% in 2020.

Exhibit 8
2020 Owned and Purchased Generation Supply
GWh



Source: Company filings

In 2020, over half of Consumers Energy's electric generation was provided through long-term power purchase agreements (PPAs) or market purchases. The majority of this production came from two PPAs, one with the 1,240 MW MCV gas-fired facility (approximately 16% of 2020 electric supply) that terminates in March 2025 and a second with the 813 MW Palisades nuclear facility (approximately 10% of 2020 electric supply) that is scheduled to terminate in 2022. The Palisades PPA is not expected to be renewed when it expires, while the company proposed to extend the MCV PPA for another five years in its IRP, albeit at a lower price. We expect that the utility will replace any ensuing energy and capacity shortfall with a mix of renewable generation and demand side management initiatives.

Michigan state statutes allow utilities to securitize related regulatory assets and stranded costs and the MPSC has a history of approving securitization bonds. Most recently, in 2020, the MPSC issued a securitization financing order to authorize Consumers to issue securitization bonds in order to finance the recovery of the remaining book value of Karn units 1 and 2, which are expected to retire in 2023. Prior to this in 2013, the MPSC authorized Consumers Energy's issuance of securitization bonds to finance the recovery of the remaining book value of seven smaller coal-fired electric generating plants that were retired in April 2016 and three smaller natural gas-fired units that were retired in June 2015. Approximately $378 million of securitization bonds were issued through a securitization subsidiary in 2014. Principal and interest payments are made semi-annually through the maturity of the bonds in 2029. We expect similar regulatory treatment would be possible for other future plant retirements.

Social

Social risks are primarily related to Consumers Energy's customer and regulatory relations as well as demographic and societal trends. Consumers Energy's regulatory environment as well as its interaction with the MPSC are important in considering the utility's social risk. Also, the safety and reliability of its operations are extremely important social considerations. Given recent developments related to the COVID-19 pandemic, there is a possibility of increasing social risk, should unemployment remain high, making customers less able to absorb rate increases.

Governance

As a subsidiary of CMS, corporate governance considerations include the financial policy and risk management of its parent company. We note that a stable financial position is an important characteristic for managing environmental and social risks.

Liquidity analysis

We expect Consumers Energy's liquidity profile to be adequate over the next 12-18 months.

Consumers Energy has access to an $850 million secured revolving credit facility expiring in June 2023 and as of 31 December 2020, its net availability was $843 million after having $7 million letters of credit outstanding. The facility includes a sustainability linked pricing metric, which permits an interest rate reduction for meeting targets related to environmental sustainability, specifically renewable generation, and highlights its commitment to shifting its exposure to a greater renewable content. Consumers Energy also maintains a $250 million secured credit facility terminating in November 2022. These credit facilities provide support for working capital needs and act as a backstop to Consumer Energy's $500 million commercial paper program. The credit facilities do not include a material adverse change representation for new borrowings, and have only one financial covenant, setting the maximum debt to capital at less than 65%. At the period ending 31 December 2020, debt to capital was 49%.

As of 31 December 2020, Consumers had no commercial paper outstanding under its CP program, no borrowings under its various credit facilities and $38 million of letters of credit outstanding on a consolidated basis. In September and December 2020, Consumers redeemed its $375 million first mortgage bond due in 2022 and its $300 million term loan facility due in January 2021, respectively.

The utility's continuing capital expenditure program and dividend policy result in negative free cash flow for the foreseeable future. However, the company has a reasonable amount of external liquidity, demonstrated market access, and regularly receives capital contributions from its parent.

For the last twelve months ended 31 December 2020, Consumers generated approximately $1.2 billion of cash from operations (CFO), invested $2.2 billion in capital investments and distributed $639 million in dividend payments to CMS, resulting in negative free cash flow (FCF) of approximately $1.6 billion that was offset by parent contributions of $650 million and incremental long-term debt. Consumers' policy is to grow its dividend with earnings, maintaining a payout ratio in the 80% range.

Structural considerations

Consumer Energy's strong stand-alone financial performance has been pressured by significant debt at CMS, the parent company. As of year-end 2020, CMS had approximately $7 billion of consolidated debt outside of Consumers Energy, or approximately 46% of its consolidated total reported debt. Of this amount, approximately $2.8 billion represented deposits of EnerBank, an insured industrial bank wholly owned by CMS, and is supported by approximately $2.8 billion of notes receivable. Excluding self-funding EnerBank, we estimate that CMS's parent level debt to be approximately $4.2 billion or about 34% of the total of Consumers Energy plus pure parent level debt. This still remains as a key driver of the relatively wide differential between the Consumers Energy and CMS credit profiles.

Rating methodology and scorecard factors

Exhibit 9

Methodology Scoring Factors

Consumers Energy Company

Regulated Electric and Gas Utilities Industry [1][2]	Current FY 12/31/2020		Moody's 12-18 Month Forward View As of Date Published [3]	
Factor 1 : Regulatory Framework (25%)	**Measure**	**Score**	**Measure**	**Score**
a) Legislative and Judicial Underpinnings of the Regulatory Framework	A	A	A	A
b) Consistency and Predictability of Regulation	Aa	Aa	Aa	Aa
Factor 2 : Ability to Recover Costs and Earn Returns (25%)				
a) Timeliness of Recovery of Operating and Capital Costs	Aa	Aa	Aa	Aa
b) Sufficiency of Rates and Returns	A	A	A	A
Factor 3 : Diversification (10%)				
a) Market Position	Baa	Baa	Baa	Baa
b) Generation and Fuel Diversity	Baa	Baa	Baa	Baa
Factor 4 : Financial Strength (40%)				
a) CFO pre-WC + Interest / Interest (3 Year Avg)	6.4x	Aa	6.8x - 7x	Aa
b) CFO pre-WC / Debt (3 Year Avg)	21.3%	Baa	19% - 21%	Baa
c) CFO pre-WC – Dividends / Debt (3 Year Avg)	14.0%	Baa	12% - 14%	Baa
d) Debt / Capitalization (3 Year Avg)	45.6%	Baa	44% - 46%	Baa
Rating:				
Scorecard-Indicated Outcome Before Notching Adjustment		A2		A2
HoldCo Structural Subordination Notching		0		0
a) Scorecard-Indicated Outcome		A2		A2
b) Actual Rating Assigned		A1*		A1*

* Senior Secured Rating.
[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
[2] As of 12/31/2020.
[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.
Source: Moody's Financial Metrics

Appendix

Exhibit 10

Cash Flow and Credit Metrics

CF Metrics	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20
As Adjusted					
FFO	**1,739**	**1,825**	**1,760**	**1,752**	**1,994**
+/- Other	-49	33	-101	-129	-136
CFO Pre-WC	**1,690**	**1,858**	**1,659**	**1,623**	**1,858**
+/- ΔWC	64	-65	1	-15	25
CFO	**1,754**	**1,793**	**1,660**	**1,608**	**1,883**
- Div	500	523	532	593	638
- Capex	1,673	1,649	1,834	2,100	2,184
FCF	**-419**	**-379**	**-706**	**-1,085**	**-939**
(CFO Pre-W/C) / Debt	24.6%	26.9%	22.1%	20.1%	21.8%
(CFO Pre-W/C - Dividends) / Debt	17.4%	19.3%	15.0%	12.7%	14.3%
FFO / Debt	25.4%	26.4%	23.5%	21.6%	23.3%
RCF / Debt	18.1%	18.9%	16.4%	14.3%	15.9%
Revenue	6,064	6,222	6,464	6,376	6,189
Interest Expense	288	298	315	312	332
Net Income	615	634	527	725	799
Total Assets	20,026	21,179	22,096	23,699	25,399
Total Liabilities	14,139	14,746	15,251	16,053	16,862
Total Equity	5,888	6,434	6,845	7,647	8,538

All figures and ratios are calculated using Moody's estimates and standard adjustments. Periods are Financial Year-End unless indicated. LTM = Last Twelve Months
Source: Moody's Financial Metrics

Exhibit 11

Peer Comparison Table

	Consumers Energy Company A1 (Stable)			DTE Electric Company (P)A2 (Stable)			DTE Gas Company A3 (Stable)			Northern States Power Company (Minnesota) A2 (Stable)			Wisconsin Power and Light Company A3 (Stable)		
(In US millions)	Dec-18	FYE Dec-19	FYE Dec-20	FYE Dec-18	FYE Dec-19	FYE Dec-20	FYE Dec-18	FYE Dec-19	FYE Dec-20	FYE Dec-19	FYE Dec-19	FYE Dec-20	FYE Dec-18	FYE Dec-19	FYE Dec-20
Revenue	6,464	6,376	6,189	5,298	5,224	5,506	1,415	1,462	1,396	5,122	5,112	5,101	1,453	1,476	1,395
CFO Pre-W/C	1,659	1,623	1,858	1,833	1,791	2,051	337	368	409	1,355	1,362	1,345	446	425	475
Total Debt	7,505	8,092	8,540	7,641	8,495	9,154	1,826	1,997	2,168	5,414	6,363	6,703	2,175	2,328	2,596
CFO Pre-W/C + Interest / Interest	6.3x	6.2x	6.6x	6.8x	6.3x	6.9x	5.5x	5.5x	6.0x	6.7x	6.5x	6.5x	6.5x	6.6x	6.5x
CFO Pre-W/C / Debt	22.1%	20.1%	21.8%	24.0%	21.1%	22.4%	18.5%	18.4%	18.9%	25.0%	21.4%	20.1%	20.5%	18.2%	18.3%
CFO Pre-W/C – Dividends / Debt	15.0%	12.7%	14.3%	18.0%	15.3%	16.5%	12.3%	12.3%	12.6%	16.6%	14.1%	14.0%	14.1%	12.1%	12.1%
Debt / Capitalization	46.4%	46.0%	44.5%	46.0%	47.2%	46.4%	43.9%	44.2%	43.9%	43.0%	45.0%	43.8%	44.6%	44.0%	45.0%

All figures & ratios calculated using Moody's estimates & standard adjustments. FYE = Financial Year-End.
Source: Moody's Financial Metrics

Ratings

Exhibit 12

Category	Moody's Rating
CONSUMERS ENERGY COMPANY	
Outlook	Stable
Sr Sec Bank Credit Facility	A1
First Mortgage Bonds	A1
Bkd Senior Secured	A1
Pref. Stock	Baa1
Commercial Paper	P-2
PARENT: CMS ENERGY CORPORATION	
Outlook	Stable
Sr Unsec Bank Credit Facility	Baa2
Senior Unsecured	Baa2
Jr Subordinate	Baa3

Source: Moody's Investors Service

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Industry Top Trends

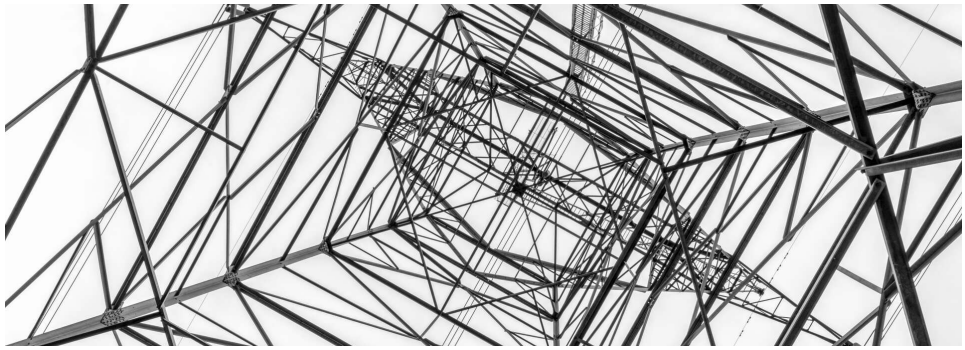
S&P Global Ratings

North America Regulated Utilities

The industry's outlook remains negative

January 23, 2023

This report does not constitute a rating action



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What's changed?

Credit Quality. For the third consecutive year, downgrades outpaced upgrades and the industry's median rating fell to 'BBB+' from 'A-'.

Interest rates. Interest rates increased by about 400 basis points during 2022, pressuring the industry's financial performance.

Securitization. In 2022, the industry benefited from the issuance of about $15 billion in securitization bonds, recovering storm, hurricane, and wildfire costs.

What are the key assumptions for 2023?

Inflation decreases. S&P Global's economist expects consumer price index (CPI) to decrease to below 4% by year-end 2023.

Robust capital spending. The industry's 2022 capital spending was at an all-time high of more than $190 billion and we expect it will be even higher in 2023.

Increasing asset sales. To support the funding of the industry's capital spending, we expect sales of minority interests in utilities and sales of non-utility assets to exceed $20 billion in 2023.

What are the key risks around the baseline?

Commodity prices. Natural gas prices remain significantly above their pre-inflation price of about $2.50/mmBTU, pressuring the customer bill.

Regulatory risk. The customer bill is increasing, which could pressure the industry's ability to effectively manage regulatory risk.

Physical risks. Recovery of severe winter storms, hurricanes, tornadoes, and wildfires may become increasingly challenging as the pace of such incidents appear to be intensifying.

Ratings Trends: North America Regulated Utilities

Chart 1

Ratings distribution

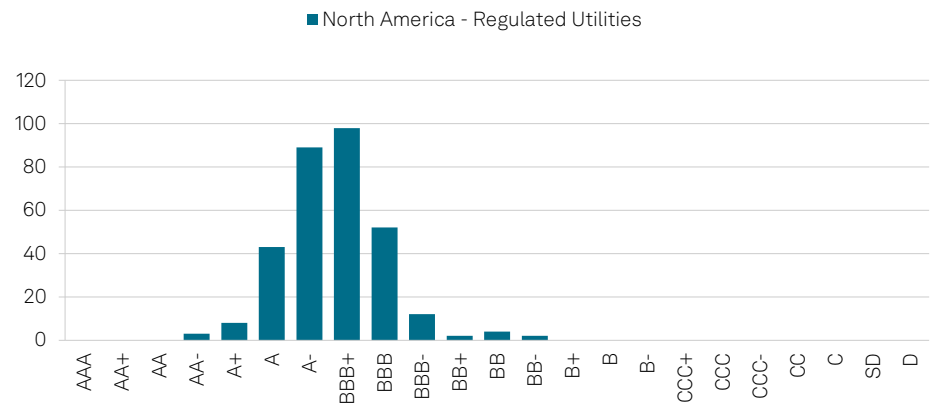


Chart 2

Ratings outlooks

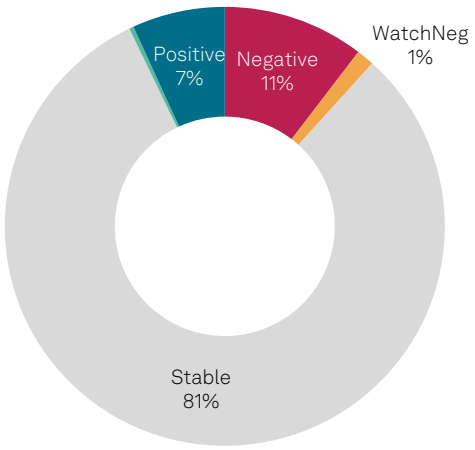
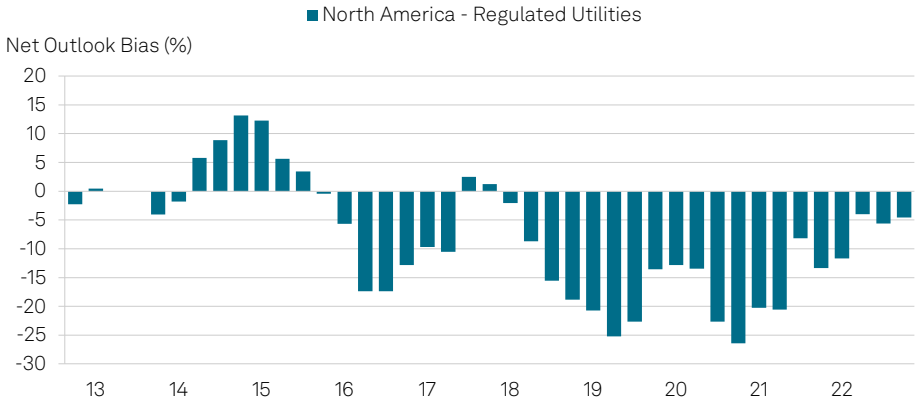


Chart 3

Ratings outlook net bias



Source: S&P Global Ratings. Ratings data measured at quarter-end.

Industry Credit Metrics: North America Regulated Utilities

Chart 4
Debt / EBITDA (median, adjusted)

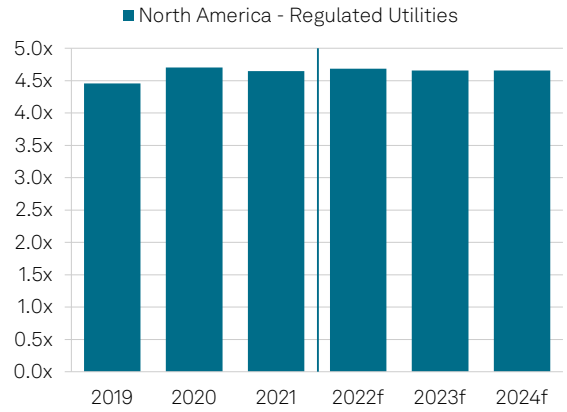


Chart 5
FFO / Debt (median, adjusted)

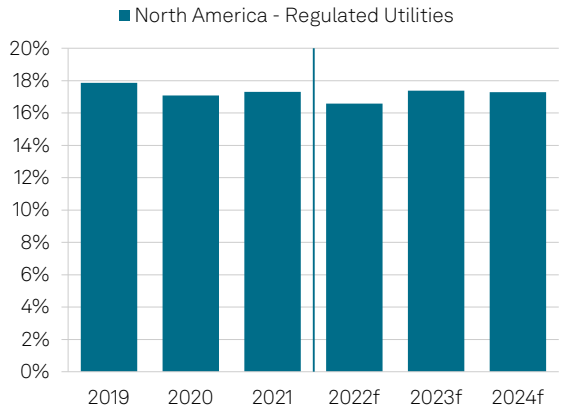


Chart 6
Cash flow and primary uses

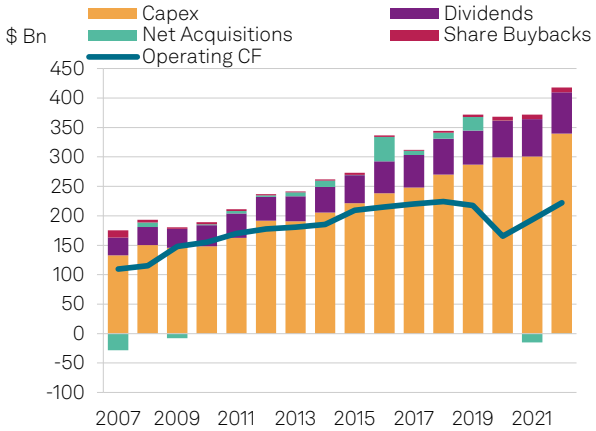
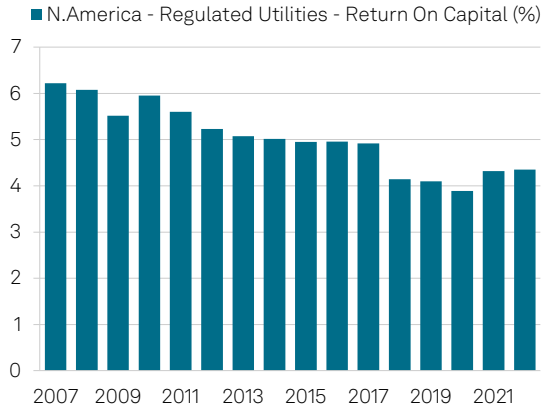


Chart 7
Return on capital employed



Source: S&P Global Ratings, S&P Capital IQ.
Revenue growth shows local currency growth weighted by prior-year common-currency revenue share. All other figures are converted into U.S. dollars using historic exchange rates. Forecasts are converted at the last financial year-end spot rate. FFO—Funds from operations. Most recent (2022) figures for cash flow and primary uses and return on capital employed use the last 12 months' data.

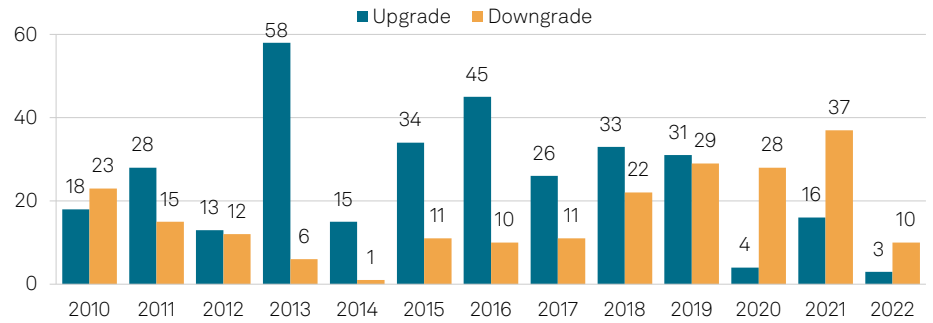
Industry Outlook

Ratings trends and outlook

The industry outlook remains negative and has been negative since early 2020. Over this timeframe downgrades have outpaced upgrades by more than 3:1 (see chart 8). While the industry's percentage of negative outlooks has decreased to about 15% from 35% at year-end 2020, prolonged inflationary risks or a deeper-than-expected recession could harm the industry's credit quality in 2023.

Chart 8

North America Regulated Utilities Upgrades And Downgrades



Data as of Jan. 11, 2023. Source: S&P Global Ratings.

Main assumptions about 2023 and beyond

1. Minimal financial cushion

More than 40% of the industry is strategically managing their financial performance with only minimal financial cushion, reflecting funds from operations (FFO) to debt that is less than 100 basis points above the downgrade threshold. Because utility cash flows are typically more stable than those of many other industries, this strategy of limiting excess credit capacity works well under ordinary conditions. However, when unexpected risks occur or base case assumptions deviate from expectations, the utility's credit quality can weaken, as we've seen over the past three years.

2. Consistent access to the capital markets

Because of the industry's high capital spending and consistent dividends, negative discretionary cashflow is regularly more than $100 billion annually. To fund this large deficit, the industry requires consistent access to the capital markets. Rising interest rates, decreasing equity prices, and inflation could hamper consistent access the capital markets, potentially pressuring credit quality. Typically, most of the funding of negative discretionary cashflow is from new debt issuance with the balance from common equity, hybrid securities, and asset sales. For 2023, we expect the industry will rely on a lower percentage of common equity compared to prior years and instead rely on a higher percentage of asset sales.

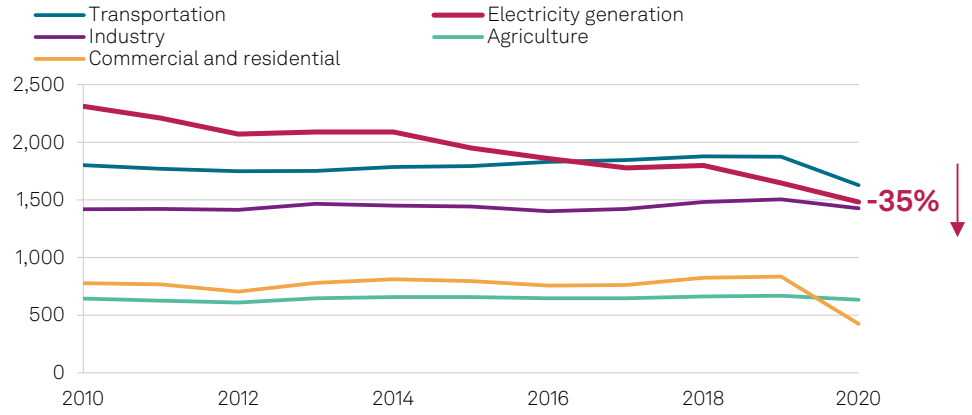
3. Energy transition

Over the past decade, the utility industry reduced its reliance on coal-fired generation by more than 50% and more than doubled its generation from renewable energy. We expect that by the end of the decade it will reduce coal-fired generation by about another 50% and will fully phase out coal by about 2040.

The industry is aggressively reducing its greenhouse gas (GHG) emissions. Over the past decade, the industry reduced its GHG emissions by about 35%, mostly by replacing coal-fired generation with natural-gas-fired generation, which has about half the carbon emissions (see chart 9). However, we expect that during this decade GHG emissions will decrease by closer to 50% because the remaining coal closures will mostly be replaced with renewable generation and batteries.

Chart 9

Greenhouse Gas Emissions By Economic Sector (2010-2020)

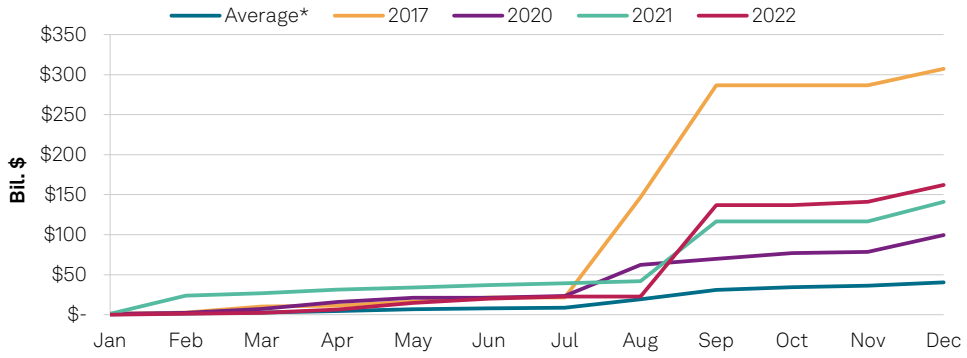


Source: U.S. Environmental Protection Agency.

Physical risks appear to be continuing at a record pace. During the past several years, the U.S. has experienced record levels of damages from storms and hurricanes, driving costs up for utilities (see chart 10). Accordingly, we downgraded several utilities when these rising costs led to higher leverage and weakening financial measures. Downgrades would have been substantially higher if not for regulators permitting the use of securitization, which we view as credit-supportive. For 2023, we again expect that the industry will significantly rely on securitization to recover more than $5 billion of storm related costs.

Chart 10

U.S. Weather And Climate Billion Dollar Disaster Cost

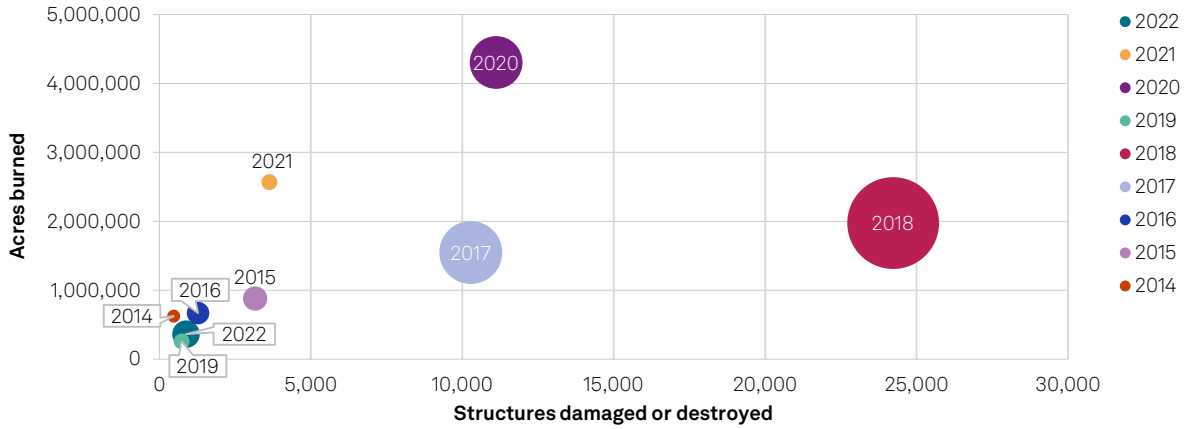


*1980-2022 average. Source: National Oceanic and Atmospheric Administration.

California Wildfires. While other physical risks (such as severe storms) affected many utilities during 2022, California wildfires were less destructive for the second consecutive year (see chart 11). California utilities are most exposed to wildfire risks because of climate change and inverse condemnation. During the past several years California utilities have been proactively reducing their risks by investing in technology and system hardening. The technology helps the utility to predict the timing and location of a high-wind event, and utilities have found that proactively shutting down parts of their system is an effective way to avoid a catastrophic wildfire.

Chart 11

California Annual Wildfire Activity



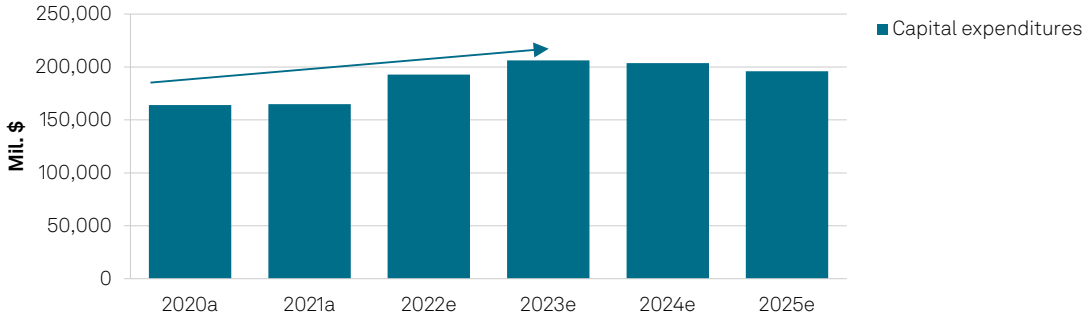
Bubble size represents number of fatalities. Source: The California Department of Forestry and Fire Protection.

Net-zero goals could be delayed. Most of the industry is committed to a net-zero emissions date between 2030 and 2050. As customer bill pressure increases, the industry may be forced to slow the pace of the energy transition, delaying the timeframe to reach net zero carbon emission.

Large projects could become more challenging. We expect the industry's 2023 capital spending to reach a record of more than $200 billion, but given the macro risks large projects--including offshore wind--could become increasingly challenged (see chart 12). Supply chain delays and rising interest rates increase the probability that projects are not completed on time and on budget. While these risks affect all projects, larger and more complex projects are disproportionally affected, increasing the probability that some of these projects could be delayed or even canceled.

Chart 12

North America Regulated Utilities Rising Capital Expenditures



Data as of Jan. 11, 2023. Capital expenditures represent North American investor-owned electric, gas, and water utilities. a--Actual. e--Estimate. Source: S&P Global Ratings.

Credit metrics and financial policy

Over the past decade the industry's financial measures have weakened from a combination of rising capital spending, regulatory lag, and lower authorized return on equity (ROE). The industry's return on capital was about 6% a decade ago and today is closer to 4%. More recently, we have seen instances where not only is the authorized ROE lowered but also the equity ratio is lowered. These results have weakened the industry's financial measures, pressuring credit quality. Under our base case of moderating inflationary risks during 2023, we expect the industry's credit measures to generally remain flat. However, if inflationary risks persist, it may further pressure the customer bill, potentially decreasing the level of regulatory credit support, weakening the industry's financial performance.

Key risks or opportunities around the baseline

1. Inflation reduction act (IRA)

While this legislation will benefit much of the industry, there are aspects of the law that will be detrimental to a few companies. The key benefits are the expansion of tax credits and the transferability of these credits. The legislation provides long-term tax credits for renewables, batteries, nuclear power, and hydrogen. We expect the use of these credits will significantly increase because of the relatively easy transferability of these tax credit. Conversely, the IRA also establishes an alternative minimal tax, which we expect will increase taxes for large transmission and distribution holding companies, pressuring their financial measures.

2. Recession

S&P Global's economists forecast the likelihood of a 2023 recession at greater than 50%. Should the recession be more severe than expected, unemployment could rise faster than expected, increasing the industry's uncollectibles and pressuring its financial measures.

3. Affordability of customer bill

Customer bills may become less affordable because of rising commodity prices, interest rates, inflation, and capital spending. During 2022, Henry Hub natural gas prices, the U.S. benchmark, peaked at about $9 per mmBTU. Although prices have since retreated to about $4/mmBTU and the forward curve reflects $3.50-$4.50/mmBTU, they remain substantially higher than pre-inflation levels, pressuring the customer bill. While we estimate the industry's average electric bill represents only about 2.5% of after-tax household income, sharp increases and bill volatility often results in increasing customer dissatisfaction that can ultimately heighten regulatory scrutiny and constrain the industry's ability to effectively manage regulatory risk.

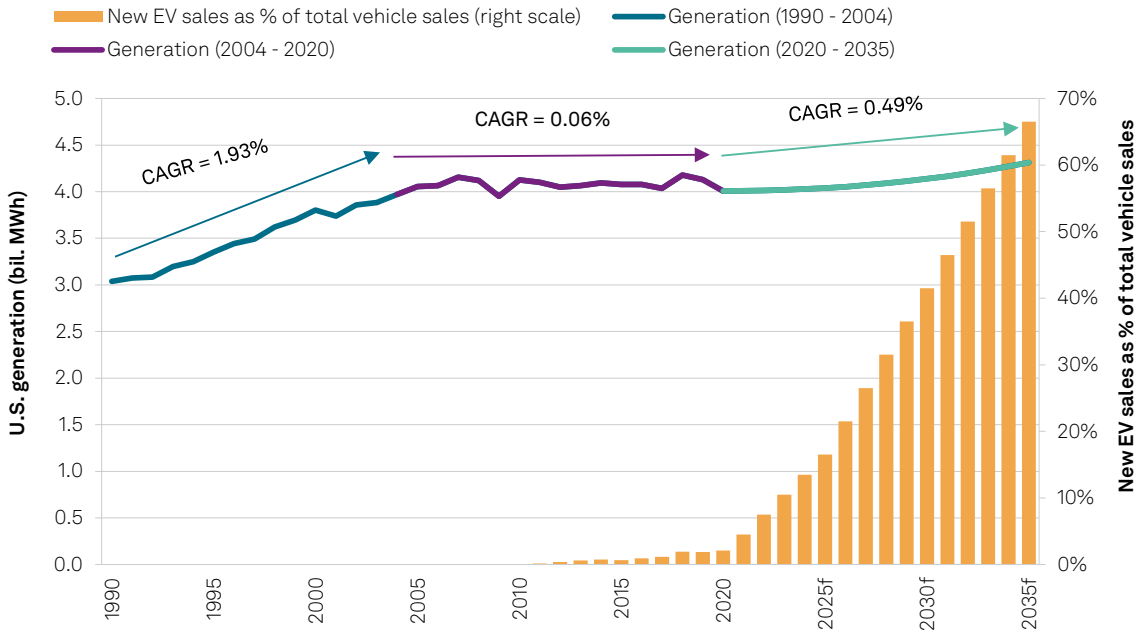
Political interference could increase. As the customer bill continues to increase, the industry could experience increasing political interference, which we view as negative for credit quality. Most recently, the Canadian province of Nova Scotia enacted an amendment to the Public Utilities Act that overrode the regulatory process of the Nova Scotia Utility and Review Board, limiting rate increases. We viewed this as political interference that will undermine the regulatory construct, materially weakening the regulatory jurisdiction's predictability, and increase the uncertainty for its utilities and stakeholders. As such, we downgraded Nova Scotia Power Inc. by two notches.

Growth of electric vehicles. While electric vehicles represented only about 6% of new U.S. car sales in 2022, we expect that by 2025 they will represent 15%-20%, leading to higher electricity sales (see chart 13). Should this growth trend persist, it is likely that by the next decade electric

vehicles will materially contribute to the industry's sales growth, despite our expectations for continued conservation, which is the driver for flat sales growth over the last decade and a half.

Chart 13

U.S. Electric Vehicle Growth: Poised To Boost Demand



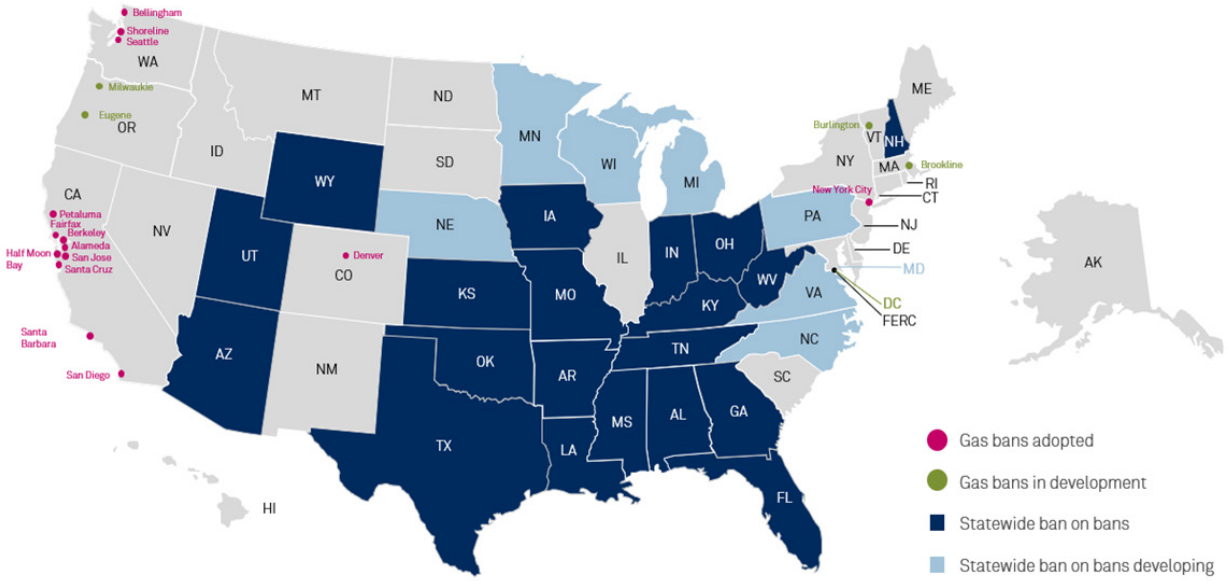
f--Forecast. CAGR--Compound annual growth rate. Sources: EIA, Alternative Fuels Data Center, S&P Global Ratings.

New technologies to reduce GHG emission. We believe an additional benefit of the IRA is it encourages further investments in carbon-free technologies. We expect the industry will continue to invest in hydrogen and renewable natural gas, and that these technologies will blend within the natural gas distribution system and account for up to 5% of the electric generation portfolio by 2040.

Rising risks for the natural gas local distribution industry. The industry's sales growth is becoming more challenging, with several cities banning new gas connections (see chart 14). While all industries typically require growth to increase valuations, credit quality could be preserved if this regulated industry can consistently reduce its regulatory lag and maintain regulatory support for its existing assets, despite its growth challenges.

Chart 14

Ban On New Gas Connections



Data as of Nov. 1, 2022. Source: S&P Global Ratings.

Security. The 2021 breach of the Colonial Pipeline highlights the cybersecurity risks facing critical infrastructure assets. More recently, the shooting attack on Duke Energy's North Carolina substation that caused more than 45,000 customers to be without power underscores the industry's ongoing physical security risks. Overall, the industry's ongoing vigilance in these areas is critical to maintaining its credit quality.

Related Research

- North American Utility Regulatory Jurisdictions Update: Nova Scotia Assessment Revised Downward Again After Passage Of Bill 212, Dec. 1, 2022
- Inflation And High Yields: N.A. Power & Utilities: Inflation Could Create Some Pressure For Utilities, Nov. 29, 2022
- Although Not Immune, North American Investor-Owned Utilities Are Still Well-Positioned To Handle Inflation, Aug. 18, 2022
- Constructive Financial Policy Is Determining Credit Quality--Not Equity Pricing--For N.A. Regulated Utilities, June 8, 2022
- Utilities' Early Retirement Of Coal Generation Increases Uncertainty Over Recouping Stranded Investments, April 11, 2022

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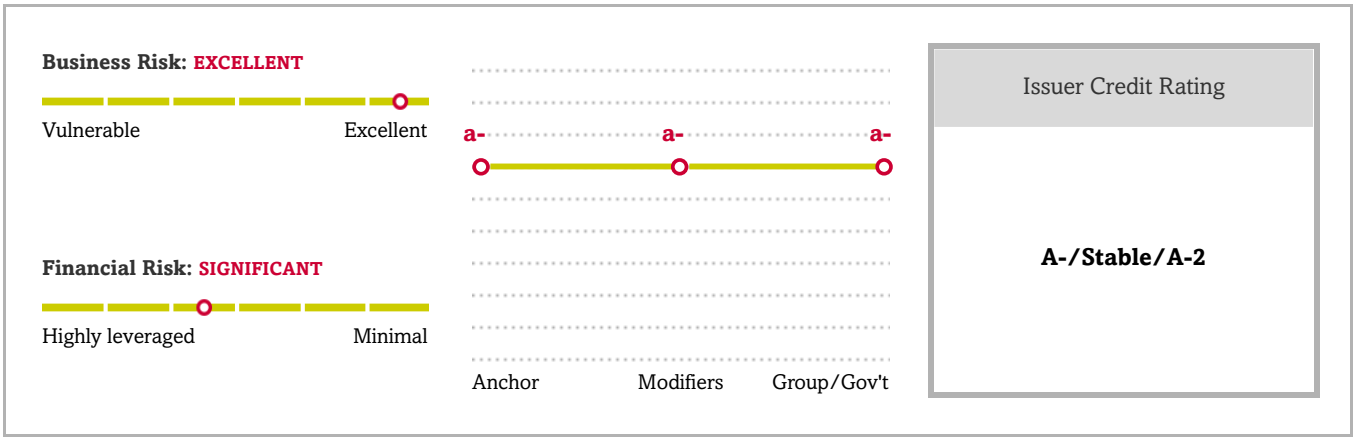
Related Criteria

Consumers Energy Co.



Credit Highlights

Overview

Key strengths	Key risks
Larger-than-average vertically integrated electric utility and gas distribution utility.	Limited geographic and regulatory diversity makes the company largely dependent on Michigan regulators to sustain credit quality.
Favorable regulatory construct in Michigan.	Significant exposure to carbon emission risk through high reliance on natural gas and coal-fired generation.
Effectively managed the associated risks of the COIVD-19 pandemic.	Negative discretionary cash flow, reflecting robust capital spending, necessitating constant access to fairly priced capital markets.
Sufficient insulating measures for higher rating than group credit profile.	

The above-average regulatory environment in Michigan should continue to allow for consistent and constructive regulatory outcomes. Consumers Energy Co.'s most recent electric rate case order led to an increase in revenue of about $90 million. This revenue increase incorporates the return of remaining deferred taxes from the Tax Cuts and Jobs Act (TCJA) to electric customers and reflects a lower return on equity (ROE; 9.9% compared to 10%) and a lower equity ratio (51.11% compared to 52.50%). Although we view resolving the effects of tax reform through this rate case as favorable, if lower ROEs and a lower equity ratio persist, credit quality could weaken.

The most recent gas rate case order led to an increase in revenue by $144 million and maintained a consistent ROE of 9.9% and equity ratio of 52.05%. However, this outcome was slightly offset by a stay-out agreement that restricts Consumers Energy from filing another gas rate case before December 2021. We believe this outcome, while supportive of credit quality, may eventually lead to some regulatory lag because of the stay-out provision.

Because we assess the lower ROE and equity ratio in the electric rate case and the stay-out provision on the gas side as one-time decisions, we expect that the utility will continue to effectively manage regulatory risk through the use of various constructive rate mechanisms made available by the Michigan Public Service Commission (MPSC). In general, we view Michigan's regulatory construct as above average compared to peers because of the benefit of forward-looking test years, a stream-lined 10-month rate case process, and various constructive rate mechanisms--such as power supply and natural gas cost rider adjustments and partial decoupling for the gas

business--which help the company earn its allowed ROE and minimize regulatory lag.

The company effectively managed COVID-19-related risks. Given Consumers Energy's mostly residential customer base (about 60%), the company's exposure to the large commercial and industrial sales declines across the industry has been more limited than for many of its peers. Additionally, the company achieved cost savings of about $100 million during the year by reducing operating and maintenance expenses, and it continues to pursue other cost efficiency strategies, offsetting incremental COVID-19-related expenses. Additionally, Consumers Energy received a constructive order from the MPSC in April 2020, which reduced the effect of bad debt expense on earnings by allowing the company to defer incremental uncollectible accounts related to the pandemic.

The company's elevated utility capital spending plan prioritizes infrastructure upgrades and renewable energy. Over the next five years, Consumers Energy plans to spend about $9.4 billion to maintain and upgrade its gas infrastructure and electric distribution systems. The capital plan includes elevated investment of about $5 billion in the gas segment, as well as about $2.8 billion in electric supply projects, which primarily focus on renewable generation.

Consumers Energy has significant carbon emissions through its heavy reliance on natural gas and coal generation. While most of Consumers Energy's electricity is generated from natural gas (about 37%) and coal (about 29%), the company intends to reduce its carbon exposure through its Clean Energy Plan. The plan includes a 2040 long-term goal to significantly reduce carbon emissions of its owned generation by more than 90% from 2005 and eliminate coal-sourced electric generation. The plan also provides the foundation for the utility to achieve net-zero carbon emissions by 2040.

We expect Consumers Energy's consolidated credit measures to remain in the middle of the range for its financial risk profile category. Although we expect some modest weakening in financial metrics as a result of the recent electric rate case order, as well as some potential regulatory lag, we believe the company will continue to manage its funds from operations (FFO) to debt at about 20% over the next three years, consistent with the middle of the range for its financial risk profile category.

Outlook: Stable

The stable rating outlook on Consumers Energy reflects our expectation that management will focus on its core utility operations and reach constructive regulatory outcomes to avoid increasing business risk. We expect Consumers Energy will maintain stand-alone financial measures consistent with the middle of the range for its financial risk profile category, specifically FFO to debt at about 20%.

Downside scenario

We could lower our rating on Consumers Energy if its stand-alone financial measures weaken such that FFO to debt weakens to consistently below 15%. We could also lower our rating on Consumers Energy if we lower our rating on its parent, CMS Energy Corp.

Upside scenario

Although less likely, we could raise our rating on Consumers Energy if we raise our rating on CMS Energy and Consumers Energy's stand-alone financial measures improve, reflecting FFO to debt of consistently above 20%.

Our Base-Case Scenario

Assumptions

- Consistent rate case filings and use of existing regulatory mechanisms;
- Elevated capital spending over the forecast period averaging $2.4 billion annually;
- Annual dividends of $600 million-$900 million annually;
- Equity distributions to parent CMS Energy, averaging $530 million annually;
- All debt maturities are refinanced; and
- Continued negative discretionary cash flow will be financed in a balanced manner to support the regulated capital structure.

Key metrics

Table 1

Consumers Energy Co.--Key Metrics*

	2019a	2020e	2021e
FFO to debt (%)	22.1	20-22	19-21
Debt to EBITDA (x)	3.7	3.5-4.5	4-5
FFO interest coverage	7.2	6.5-7.5	6-7

*All figures adjusted by S&P Global Ratings. a--Actual. e--Estimate. FFO--Funds from operations.

Company Description

Consumers Energy is a subsidiary of CMS Energy and operates as an electric and gas utility serving about 3.6 million customers in Michigan. Consumers Energy's electric business operates as a vertically integrated utility that generates, distributes, and sells electricity. The electric utility sources about half of its generation from purchased power, rather than from its own plants. The company also sells, stores, and transports natural gas. It is based in Jackson, Mich.

Peer Comparison

Table 2

Consumers Energy Co.--Peer Comparison

Industry sector: Combo

	Consumers Energy Co.	DTE Electric Co.	Alliant Energy Corp.	Ameren Corp.	WEC Energy Group Inc.
Rating as of Jan. 19, 2021	A-/Stable/A-2	A-/Stable/A-2	A-/Stable/A-2	BBB+/Stable/A-2	A-/Stable/A-2
	--Fiscal year ended Dec. 31, 2019--				

Table 2

Consumers Energy Co.--Peer Comparison (cont.)

Industry sector: Combo

	Consumers Energy Co.	DTE Electric Co.	Alliant Energy Corp.	Ameren Corp.	WEC Energy Group Inc.
(Mil. $)					
Revenue	6,341.5	5,224.0	3,647.7	5,910.0	7,523.1
EBITDA	2,251.6	2,297.4	1,384.2	2,396.0	2,727.6
FFO	1,823.4	1,942.7	1,099.5	1,991.7	2,250.1
Interest expense	335.2	464.8	300.2	433.3	541.3
Cash interest paid	296.2	308.8	305.3	391.3	502.4
Cash flow from operations	1,688.4	1,739.7	629.5	2,132.7	2,401.9
Capital expenditure	2,190.9	2,192.3	1,612.9	2,422.0	2,302.9
FOCF	(502.5)	(452.6)	(983.4)	(289.3)	99.0
DCF	(1,094.5)	(946.6)	(1,316.0)	(793.3)	(796.2)
Cash and short-term investments	11.0	12.0	16.3	16.0	37.5
Debt	8,237.6	9,086.9	7,206.1	9,728.8	13,145.8
Equity	7,737.0	7,195.0	5,305.1	8,130.0	10,489.4
Adjusted ratios					
EBITDA margin (%)	35.5	44.0	37.9	40.5	36.3
Return on capital (%)	7.7	8.2	7.7	7.7	7.6
EBITDA interest coverage (x)	6.7	4.9	4.6	5.5	5.0
FFO cash interest coverage (x)	7.2	7.3	4.6	6.1	5.5
Debt/EBITDA (x)	3.7	4.0	5.2	4.1	4.8
FFO/debt (%)	22.1	21.4	15.3	20.5	17.1
Cash flow from operations/debt (%)	20.5	19.1	8.7	21.9	18.3
FOCF/debt (%)	(6.1)	(5.0)	(13.6)	(3.0)	0.8
DCF/debt (%)	(13.3)	(10.4)	(18.3)	(8.2)	(6.1)

FFO--Funds from operations. FOCF--Free operating cash flow. DCF--Discretionary cash flow.

Business Risk: Excellent

Our assessment of Consumers Energy's business risk profile reflects the company's lower-risk electric and natural gas utility operations. Consumers Energy is a larger-than-average utility that serves about 1.8 million electric customers and about 1.8 million natural gas customers throughout Michigan. In addition, about 80% of the company's electric customer revenue base is residential and commercial, providing stable cash flow and mitigating the company's exposure to industrial cyclicality. Consumers Energy is a wholly owned subsidiary of CMS Energy and contributes about 95% of CMS Energy's consolidated operations.

The MPSC regulates Consumers Energy. We view the regulatory environment in Michigan as above average

compared to peers as demonstrated through the company's benefit from forward-looking test years and a stream-lined 10-month rate case process. Consumers Energy also receives other constructive rate mechanisms, such as the Power Supply Cost Recovery and Gas Cost Recovery adjustment riders, as well as partial decoupling for the gas business, which annually reconciles actual weather-normalized non-fuel revenues with the revenues approved by the MPSC. These constructive rate mechanisms enable Consumers Energy to generally earn its allowed ROE and minimize regulatory lag.

The company's most recent electric rate case became effective in January 2021, and it increased revenue by about $90 million. The order incorporated an equity ratio of 51.11%, an ROE of 9.9%, and the return of deferred tax liabilities from the TCJA to electric customers through rates. The order also approved the recovery of the balance of the financial compensation mechanism (FCM) approved in Consumers Energy's most recent integrated resource plan. We view the FCM as a constructive rate mechanism because it gives Consumers Energy another way to recover interim expenses by allowing the company to earn a financial incentive on certain power purchase agreements approved after Jan. 1, 2019, through a surcharge. Additionally, the company received approval of a new distributed generation tariff to replace the previous net metering tariff. We view this tariff as a useful mechanism to help Consumers Energy meet its demand response goals pursuant to Michigan's 2016 Energy Law. Although we do not view the lower equity ratio and ROE as supportive of credit quality, we believe this outcome is partially mitigated by the resolution of the effects of tax reform and the incorporation of new constructive rate mechanisms within the rate case. The most recent gas rate case order went into effect in October 2020, and it increased revenue by about $144 million. The order included an equity ratio of 52.05%, an ROE of 9.9%, a stay-out agreement restricting the company from filing another gas rate case before 2021, and it accelerated amortization of certain tax liabilities beginning in October 2021. We view the outcome of this gas rate case as overall supportive of credit quality, despite some potential regulatory lag.

Financial Risk: Significant

We assess Consumers Energy's financial measures using our medial volatility table, reflecting the company's lower-risk regulated electric and gas utility operations and its effective management of regulatory risk. Under our base-case scenario, we expect elevated capital spending averaging $2.4 billion annually over the forecast period, 2021 collective revenue increases of about $234 million from the recent gas and electric rate cases, and a gas rate case stay-out until December 2021. We anticipate financial measures that are consistent with the middle of the company's financial risk category. Specifically, we forecast FFO to debt averaging about 20% over the outlook period.

Financial summary

Table 3

Consumers Energy Co.--Financial Summary

Industry sector: Combo

	--Fiscal year ended Dec. 31--				
	2019	**2018**	**2017**	**2016**	**2015**
(Mil. $)					
Revenue	6,341.5	6,430.1	6,186.8	6,029.5	6,081.8
EBITDA	2,251.6	2,151.9	2,267.1	2,168.3	2,010.8

Table 3

Consumers Energy Co.--Financial Summary (cont.)

Industry sector: Combo

	--Fiscal year ended Dec. 31--				
	2019	**2018**	**2017**	**2016**	**2015**
FFO	1,823.4	1,665.1	1,953.7	1,820.4	1,779.5
Interest expense	335.2	354.9	347.4	332.8	340.3
Cash interest paid	296.2	330.9	314.4	297.8	315.3
Cash flow from operations	1,688.4	1,533.1	1,791.7	1,768.4	1,814.5
Capital expenditure	2,190.9	1,920.3	1,721.1	1,753.7	1,615.1
FOCF	(502.5)	(387.2)	70.6	14.7	199.4
DCF	(1,094.5)	(918.2)	(453.4)	(486.3)	(276.6)
Cash and short-term investments	11.0	39.0	44.0	131.0	50.0
Gross available cash	11.0	39.0	44.0	131.0	50.0
Debt	8,237.6	7,774.2	7,037.4	6,734.0	7,106.7
Equity	7,737.0	6,920.0	6,488.0	5,939.0	5,546.0
Adjusted ratios					
EBITDA margin (%)	35.5	33.5	36.6	36.0	33.1
Return on capital (%)	7.7	7.9	9.8	9.7	10.1
EBITDA interest coverage (x)	6.7	6.1	6.5	6.5	5.9
FFO cash interest coverage (x)	7.2	6.0	7.2	7.1	6.6
Debt/EBITDA (x)	3.7	3.6	3.1	3.1	3.5
FFO/debt (%)	22.1	21.4	27.8	27.0	25.0
Cash flow from operations/debt (%)	20.5	19.7	25.5	26.3	25.5
FOCF/debt (%)	(6.1)	(5.0)	1.0	0.2	2.8
DCF/debt (%)	(13.3)	(11.8)	(6.4)	(7.2)	(3.9)

FFO--Funds from operations. FOCF--Free operating cash flow. DCF--Discretionary cash flow.

Reconciliation

Table 4

Consumers Energy Co.--Reconciliation Of Reported Amounts With S&P Global Ratings' Adjusted Amounts

	--Fiscal year ended Dec. 31, 2019--								
Consumers Energy Co. reported amounts (mil. $)									
	Debt	**Shareholders' equity**	**Revenue**	**EBITDA**	**Operating income**	**Interest expense**	**S&P Global Ratings' adjusted EBITDA**	**Cash flow from operations**	**Capital expenditure**
	7,369.0	7,700.0	6,376.0	2,105.0	1,130.0	297.0	2,251.6	1,601.0	2,085.0
S&P Global Ratings' adjustments									
Cash taxes paid	--	--	--	--	--	--	(132.0)	--	--
Cash interest paid	--	--	--	--	--	--	(279.0)	--	--
Reported lease liabilities	106.0	--	--	--	--	--	--	--	--
Operating leases	--	--	--	9.0	1.5	1.5	(1.5)	7.5	--

Table 4

Consumers Energy Co.--Reconciliation Of Reported Amounts With S&P Global Ratings' Adjusted Amounts (cont.)

Postretirement benefit obligations/deferred compensation	194.3	--	--	--	--	--	--	--	--
Accessible cash and liquid investments	(11.0)	--	--	--	--	--	--	--	--
Capitalized interest	--	--	--	--	--	4.0	(4.0)	(4.0)	(4.0)
Share-based compensation expense	--	--	--	21.0	--	--	--	--	--
Securitized stranded costs	(251.0)	--	(34.5)	(34.5)	(8.5)	(8.5)	8.5	(26.0)	--
Power purchase agreements	545.8	--	--	130.1	20.2	20.2	(20.2)	109.9	109.9
Asset-retirement obligations	374.5	--	--	21.0	21.0	21.0	--	--	--
Nonoperating income (expense)	--	--	--	--	10.0	--	--	--	--
Noncontrolling interest/minority interest	--	37.0	--	--	--	--	--	--	--
Debt: Other	(90.0)	--	--	--	--	--	--	--	--
Total adjustments	868.6	37.0	(34.5)	146.6	44.2	38.2	(428.2)	87.4	105.9
S&P Global Ratings' adjusted amounts									
	Debt	**Equity**	**Revenue**	**EBITDA**	**EBIT**	**Interest expense**	**Funds from operations**	**Cash flow from operations**	**Capital expenditure**
	8,237.6	7,737.0	6,341.5	2,251.6	1,174.2	335.2	1,823.4	1,688.4	2,190.9

Liquidity: Adequate

As of Sept. 30, 2020, we assess Consumers Energy's liquidity as adequate to cover its needs over the next 12 months, even if consolidated EBITDA declines 10%. We expect the company's liquidity sources will exceed uses by more than 1.1x during this period. Our assessment also reflects Consumers Energy's sound relationships with banks, satisfactory standing in the credit markets, and generally prudent risk management.

Principal liquidity sources	Principal liquidity uses
• Cash of about $199 million; • Credit facility availability of about $1.09 billion; and • Estimated cash FFO of about $1.99 billion.	• Long-term debt maturities of about $557 million; • Working capital outflows of about $274 million; • Maintenance capital spending of about $1.29 billion; and • Dividends of about $690 million.

Environmental, Social, And Governance

We assess Consumers Energy's environmental risks as somewhat higher than peers' to reflect the relatively higher percentage of electricity generated from fossil fuels. We assess the company's social and governance risk factors as in line with those of its peers.

About 37% of Consumers Energy's owned and purchased generation use is from natural gas, 29% is from coal, 19% is from nuclear, and 10% is from renewables. The company's significant reliance on fossil fuels exposes it to the potential for changing environmental regulations that may result in higher operating costs, require significant capital investment, lead to premature plant closures, or increase operating risks. However, the company has been offsetting some of these risks through strategic reduction of its environmental liabilities through coal plant retirements and by increasing the proportion of natural gas and renewables in its generation portfolio. The utility's capital plan and its ongoing investment in MPSC-approved wind and solar projects demonstrate a commitment to invest in renewable generation. These planned utility investments are in line with the company's Clean Energy Plan, which includes a 2040 long-term goal to reduce carbon emissions of owned generation by more than 90% from 2005, eliminate the use of coal-sourced electric generation, and target net-zero carbon emissions.

On the gas side, the company's older assets are susceptible to natural gas leaks, which emit methane. Although aging infrastructure poses a clear operational risk, the company plans significant investment in gas infrastructure upgrades over the next few years and has announced a net-zero methane goal from its natural gas delivery system by 2030.

Group Influence

Under our group rating methodology, we consider CMS Energy as the parent of the group with a group credit profile (GCP) of 'bbb+'. We assess Consumers Energy as a core subsidiary of CMS Energy because we view the utility as integral to the group's identity, highly unlikely to be sold (95% of the consolidated company), and having a strong commitment from management, given the company's emphasis on maintaining the size of the regulated utility operations relative to the nonutility businesses.

Because Consumers Energy is operationally separate and sufficient insulating measures are in place, we rate the utility one notch above the GCP. Some of the key insulating measures in place include the following:

- Consumers Energy is a separate and stand-alone legal entity that functions independently (both financially and operationally), files its own rate cases, and is independently regulated by MPSC.
- Consumers Energy has its own records and books, including stand-alone audited financial statements.
- The utility has its own funding arrangements, including issuing its own long-term debt, and it has a separate committed credit facility to cover its short-term funding needs.
- Consumers Energy does not comingle funds, assets, or cash flow with parent CMS Energy or its other subsidiaries,

and it does not participate in a money pool.

- We believe there is a strong economic basis for CMS Energy to preserve Consumers Energy's credit strength, reflecting Consumers Energy's low-risk, profitable, and regulated utility business model. Consumers Energy is also a significant portion of CMS Energy, accounting for about 95% of the consolidated company.
- There are no cross-default provisions between parent CMS Energy and Consumers Energy that could directly lead to a default at the utility.

Issue Ratings – Subordination Risk Analysis

Capital structure

As of Sept. 30, 2020, Consumers Energy's capital structure consisted of about $8.4 billion of long-term debt, including about $8 billion in first mortgage bonds (FMBs).

Analytical conclusions

We base our 'A-2' short-term rating on Consumers Energy on our issuer credit rating.

Issue Ratings - Recovery Analysis

- We assign recovery ratings to FMBs issued by U.S. utilities, which can result in issue ratings being notched above an issuer credit rating on a utility, depending on the rating category and the extent of the collateral coverage. The FMBs issued by U.S. utilities are a form of secured utility bonds (SUBs) that qualify for a recovery rating as defined in our criteria.
- The recovery methodology is supported by our expectation of 100% recovery for secured bondholders in utility bankruptcies in the U.S. and our view that the factors that enhance recoveries (limited size of the creditor class and the durable value of utility rate-based assets during and after a reorganization, given the essential service provided and the high replacement cost) will persist.
- Under our SUB criteria, we calculate a ratio of our estimate of the value of the collateral pledged to bondholders relative to the amount of FMBs outstanding. FMB ratings can exceed an issuer credit rating on a utility by up to one notch in the 'A' category, two notches in the 'BBB' category, and three notches in speculative-grade categories, depending on the calculated ratio.
- Consumers Energy's FMBs benefit from a first-priority lien on substantially all of the utility's real property owned or subsequently acquired. Collateral coverage of more than 1.5x supports a recovery rating of '1+' and an issue rating one notch above the issuer credit rating.

Ratings Score Snapshot

Issuer Credit Rating

A-/Stable/A-2

Business risk: Excellent

- **Country risk:** Very low

- **Industry risk:** Very low
- **Competitive position:** Excellent

Financial risk: Significant

- **Cash flow/leverage:** Significant

Anchor: a-

Modifiers

- **Diversification/portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Satisfactory (no impact)
- **Comparable rating analysis:** Neutral (no impact)

Stand-alone credit profile : a-

- **Group credit profile:** bbb+
- **Entity status within group:** Insulated (no impact)

Related Criteria

- General Criteria: Hybrid Capital: Methodology And Assumptions, July 1, 2019
- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Criteria | Corporates | General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- Criteria | Corporates | Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- Criteria | Corporates | General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Criteria | Corporates | Utilities: Collateral Coverage And Issue Notching Rules For '1+' And '1' Recovery Ratings On Senior Bonds Secured By Utility Real Property, Feb. 14, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

Business And Financial Risk Matrix

Business Risk Profile	Financial Risk Profile					
	Minimal	Modest	Intermediate	**Significant**	Aggressive	Highly leveraged
Excellent	aaa/aa+	aa	a+/a	**a-**	bbb	bbb-/bb+
Strong	aa/aa-	a+/a	a-/bbb+	bbb	bb+	bb
Satisfactory	a/a-	bbb+	bbb/bbb-	bbb-/bb+	bb	b+
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b
Weak	bb+	bb+	bb	bb-	b+	b/b-
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-

Ratings Detail (As Of January 27, 2021)*

Consumers Energy Co.	
Issuer Credit Rating	A-/Stable/A-2
Commercial Paper	
Local Currency	A-2
Senior Secured	A
Issuer Credit Ratings History	
30-Oct-2019	A-/Stable/A-2
03-Dec-2014	BBB+/Stable/A-2
11-Sep-2014	BBB/Positive/A-2
Related Entities	
CMS Energy Corp.	
Issuer Credit Rating	BBB+/Stable/A-2
Junior Subordinated	BBB-
Senior Unsecured	BBB

*Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings' credit ratings on the global scale are comparable across countries. S&P Global Ratings' credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

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S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	))))))	Case No. U-21389

EXHIBITS

OF

RICHARD T. BLUMENSTOCK

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Generating Unit Periodic Outages
March 1, 2024 Through February 28, 2025

MAJOR OUTAGES: FOSSIL GENERATION AND LUDINGTON

Line No.	(a) Unit	(b) Planned Days in test year	(c) Start	(d) Stop
1	Karn 3	43	3/1/2024	4/13/2024
2	Karn 4	38	3/31/2024	5/8/2024
3	Campbell 2	30	4/1/2024	5/1/2024
4	Campbell 3	30	4/16/2024	5/16/2024
5	Karn 3	55	9/20/2024	11/14/2024
6	Ludington 4	121	2/10/2025	6/10/2025
7	Ludington 3	120	2/10/2025	6/10/2025

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Generating Unit Availability Projections
March 1, 2024 Through February 28, 2025

Case No.: U-21389
Exhibit No.: A-40 (RTB-2)
Page: 1 of 1
Witness: RTBlumenstock
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
Line No.	**Plant**	**Actual ROR 2018-2022**	**Projected ROR**	**Periodic Factor**	**Projected Availability**	**Actual NEV 2018-2022**
1	Campbell 1	15.56%	16.00%	6.87%	78.23%	$96,757,676
2	Campbell 2	17.33%	14.50%	17.99%	70.12%	$89,647,979
3	Campbell 3	11.70%	8.00%	8.22%	84.44%	$365,343,759
4	Karn 3	36.05%	16.50%	26.92%	61.02%	-$8,099,064
5	Karn 4	29.51%	17.50%	10.43%	73.90%	-$11,127,465
6	Ludington 1	3.52%	4.00%	9.55%	86.83%	$11,804,455
7	Ludington 2	9.30%	4.00%	8.92%	87.44%	$75,442
8	Ludington 3	1.70%	4.00%	15.45%	81.17%	-$2,847,807
9	Ludington 4	7.82%	4.00%	17.17%	79.52%	$2,532,288
10	Ludington 5	7.94%	4.00%	12.28%	84.21%	$2,338,692
11	Ludington 6	3.93%	4.00%	11.09%	85.35%	$18,927,307
12	Hydros	8.92%	5.60%	16.14%	79.16%	$49,735,442
13	Zeeland CC	4.77%	4.00%	16.14%	80.51%	$165,533,232
14	Zeeland 1A	3.11%	4.00%	16.14%	80.51%	$14,565,093
15	Zeeland 1B	3.95%	4.00%	16.14%	80.51%	$17,263,982
16	Jackson	6.38%	4.50%	4.45%	91.25%	$152,007,851
17	Covert 1		1.14%	5.28%	93.64%	
18	Covert 2		1.74%	5.28%	93.07%	
19	Covert 3		0.96%	5.28%	93.81%	
20	Cross Winds EP(1)					$105,083,258
21	Lake Winds EP(1)					$36,022,420
22	Gratiot Farms Wind(3)					$24,658,099
23	Crescent Wind(3)					$23,355,382
24	Solar Gardens (2)					$914,786

(1) Reflects NEV for 2019-2022 only.
(2) Reflects NEV for 2020-2022 only.
(3) Reflects NEV for 2022 only.

Schedule: B-5.1

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Summary of Actual and Projected Electric Capital Expenditures
For the years 2022 through 2025
($000's)

Case No.: U-21389
Exhibit No.: A-12 (RTB-3)
Schedule: B-5.1
Page: 1 of 10
Witness: RTBlumenstock
Date: May 2023

Generation Capital Expenditures
($000)

Line No.	(a) Description	(b) Historical Year 12 Months Ended 12/31/2022	(c) Projected Bridge Period 12 Mos Ended 12/31/2023	(d) Projected Bridge Period 2 Mos Ending 2/29/2024	(e) Projected Bridge Period 14 Mos Ending 2/29/2024	(f) Projected Test Year 12 Mos Ending 2/28/2025
1	Steam Power Generation					
2	Environmental	$ 1,108	$ 3,024	$ 6	$ 3,031	$ 48
3	Routine and Small CapEx	$ 8,901	$ 15,016	$ 1,260	$ 16,276	$ 7,173
4	Total Steam Production	$ 10,009	$ 18,041	$ 1,266	$ 19,307	$ 7,221
5	Hydraulic Power Generation					
6	Routine and Small CapEx	$ 26,545	$ 28,372	$ 8,289	$ 36,662	$ 49,897
7	Total hydraulic production	$ 26,545	$ 28,372	$ 8,289	$ 36,662	$ 49,897
8	Pumped Storage Generation					
9	Ludington Overhaul	$ 8,796	$ -	$ -	$ -	$ -
10	Routine and Small CapEx	$ 2,962	$ 11,558	$ 2,065	$ 13,623	$ 14,137
11	Total Pumped Storage Generation	$ 11,757	$ 11,558	$ 2,065	$ 13,623	$ 14,137
12	Other Production Plant					
13	Routine and Small CapEx	$ 93,060	$ 1,231,991	$ 69,392	$ 1,301,383	$ 317,717
14	Total Other Production Plant	$ 93,060	$ 1,231,991	$ 69,392	$ 1,301,383	$ 317,717
15	SubTotal	$ 141,372	$ 1,289,962	$ 81,012	$ 1,370,974	$ 388,972
16	Less Contingency	$ -	$ 590	$ 217	$ 807	$ 1,083
17	Grand Total	$ 141,372	$ 1,289,372	$ 80,795	$ 1,370,168	$ 387,888

	(a)	(b) Projected 2 Mos Ending 2/28/2023	(c) Projected 12 Mos Ending 2/29/2024	(d) Projected 12 Mos Ending 2/28/2025	(e) Projected 26 Mos Ending 2/28/2025
1	Steam Power Generation				
2	Environmental	$ -	$ 3,031	$ 48	$ 3,079
3	Routine and Small CapEx	$ 4,677	$ 428,780	$ 276,630	$ 710,087
4	Total Steam Production	$ 4,677	$ 431,811	$ 276,679	$ 713,166
5	Hydraulic Power Generation				
6	Routine and Small CapEx	$ 2,005	$ 34,657	$ 49,897	$ 86,558
7	Total hydraulic production	$ 2,005	$ 34,657	$ 49,897	$ 86,558
8	Pumped Storage Generation				
9	Ludington Overhaul				$ -
10	Routine and Small CapEx	$ 1,151	$ 12,472	$ 14,137	$ 27,759
11	Total Pumped Storage Generation	$ 1,151	$ 12,472	$ 14,137	$ 27,759
12	Other Production Plant				
13	Routine and Small CapEx	$ 6,499	$ 877,703	$ 48,260	$ 932,462
14	Total Other Production Plant	$ 6,499	$ 877,703	$ 48,260	$ 932,462
15	SubTotal	$ 14,332	$ 1,356,642	$ 388,972	$ 1,759,946
16	Less Contingency	$ 77	$ 730	$ 1,083	$ 1,890
17	Grand Total	$ 14,256	$ 1,355,912	$ 387,888	$ 1,758,056

Schedule: B-5.1

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Summary of Actual and Projected Electric Capital Expenditures
For the years 2022 through 2025
($000's)

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Generation Capital Expenditures

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Projected Bridge Year		**Projected Bridge Period**						**Projected Test Year**	
Line No.	**Description**	**12 Months Ended 12/31/2022**		**12 Months Ending 12/31/2023**		**2 Months Ending 2/29/2024**		**14 Months Ending 2/29/2024**		**12 Months Ending 2/28/2025**	
1	**JHCampbell 1&2**	**$ 4,067**		**$ 1,379**		**$ 14**		**$ 1,393**		**$ 272**	
2	Contractor		$ 1,825		$ 902		$ 11		$ 913		$ 211
3	Labor		$ 642		$ -		$ -		$ -		$ -
4	Materials		$ 546		$ 311		$ -		$ 311		$ -
5	Business Expenses		$ 2		$ 165		$ 3		$ 168		$ 61
6	Contingency		$ -				$ -		$ -		$ -
7	Other (Loadings, Chargebacks)		$ 1,052				$ -		$ -		$ -
8	**JHCampbell 3**	**$ 7,935**		**$ 2,418**		**$ 19**		**$ 2,437**		**$ 360**	
9	Contractor		$ 3,568		$ 1,655		$ 15		$ 1,671		$ 279
10	Labor		$ 1,301		$ 60		$ -		$ 60		$ -
11	Materials		$ 1,538		$ 523		$ -		$ 523		$ -
12	Business Expenses		$ 7		$ 180		$ 4		$ 184		$ 81
13	Contingency				$ -		$ -		$ -		$ -
14	Other (Loadings, Chargebacks)		$ 1,521		$ -		$ -		$ -		$ -
15	**DEKarn 1&2**	**$ (3,312)**		**$ -**		**$ -**		**$ -**		**$ -**	
16	Contractor		$ (1,680)		$ -		$ -		$ -		$ -
17	Labor		$ (460)		$ -		$ -		$ -		$ -
18	Materials		$ (291)		$ -		$ -		$ -		$ -
19	Business Expenses		$ (2)		$ -		$ -		$ -		$ -
20	Contingency				$ -		$ -		$ -		$ -
21	Other (Loadings, Chargebacks)		$ (880)		$ -		$ -		$ -		$ -
22	**DEKarn 3&4**	**$ 331**		**$ 11,220**		**$ 1,227**		**$ 12,446**		**$ 6,542**	
23	Contractor		$ 292		$ 8,245		$ 1,105		$ 9,350		$ 5,882
24	Labor		$ (115)		$ 157		$ 8		$ 165		$ 41
25	Materials		$ 69		$ 826		$ -		$ 826		$ -
26	Business Expenses		$ 0		$ 1,992		$ 88		$ 2,080		$ 494
27	Contingency				$ -		$ 25		$ 25		$ 125
28	Other (Loadings, Chargebacks)		$ 85		$ -		$ -		$ -		$ -
29	**Zeeland**	**$ 21,590**		**$ 35,256**		**$ 2,622**		**$ 37,879**		**$ 15,286**	
30	Contractor		$ 15,391		$ 31,551		$ 2,298		$ 33,848		$ 13,561
31	Labor		$ 864		$ 344		$ 10		$ 353		$ 48
32	Materials		$ 1,343		$ 175		$ 52		$ 227		$ 258
33	Business Expenses		$ 15		$ 3,152		$ 214		$ 3,365		$ 1,169
34	Contingency				$ 35		$ 50		$ 85		$ 250
35	Other (Loadings, Chargebacks)		$ 3,977				$ -		$ -		$ -
36	**Jackson Generating Station**	**$ 32,540**		**$ 14,062**		**$ 1,915**		**$ 15,977**		**$ 11,720**	
37	Contractor		$ 22,830		$ 12,477		$ 1,750		$ 14,226		$ 10,721
38	Labor		$ 1,122		$ 46		$ 5		$ 51		$ 25
39	Materials		$ 1,686		$ 75		$ 49		$ 124		$ 263
40	Business Expenses		$ 42		$ 1,404		$ 111		$ 1,515		$ 711
41	Contingency				$ 60		$ -		$ 60		$ -
42	Other (Loadings, Chargebacks)		$ 6,860		$ -		$ -		$ -		$ -
43	**Covert**	**$ -**		**$ 825,714**		**$ 3,381**		**$ 829,095**		**$ 20,274**	
44	Contractor		$ -		$ 9,765		$ 3,381		$ 13,146		$ 20,274
45	Labor		$ -		$ -		$ -		$ -		$ -
46	Materials		$ -		$ -		$ -		$ -		$ -
47	Business Expenses		$ -		$ 815,949		$ -		$ 815,949		$ -
48	Contingency		$ -		$ -		$ -		$ -		$ -
49	Other (Loadings, Chargebacks)		$ -		$ -		$ -		$ -		$ -
50	**Solar**	**$ 30,487**		**$ 355,715**		**$ 61,465**		**$ 417,180**		**$ 269,457**	
51	Contractor		$ 24,534		$ 40,899		$ 15,801		$ 56,701		$ 75,238
52	Labor		$ 1,225		$ -		$ -		$ -		$ -
53	Materials		$ 3,172		$ -		$ -		$ -		$ -
54	Business Expenses		$ 63		$ 41,403		$ 7,969		$ 49,372		$ 18,849
55	Contingency				$ -		$ -		$ -		$ -
56	Other (Loadings, Chargebacks)		$ 1,493		$ 273,413		$ 37,694		$ 311,107		$ 175,371

MICHIGAN PUBLIC SERVICE COMMISSION

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Consumers Energy Company
Summary of Actual and Projected Electric Capital Expenditures
For the years 2022 through 2025
($000's)

Generation Capital Expenditures

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Projected Bridge Year		**Projected Bridge Period**						**Projected Test Year**	
Line No.	**Description**	**12 Months Ended 12/31/2022**		**12 Months Ending 12/31/2023**		**2 Months Ending 2/29/2024**		**14 Months Ending 2/29/2024**		**12 Mos Ending 2/28/2025**	
57	**Classic 7**	**(120)**		**-**		**-**					
58	Contractor		(68)		-		-		-		-
59	Labor		(17)		-		-		-		-
60	Materials				-		-		-		-
61	Business Expenses				-		-		-		-
62	Contingency				-		-		-		-
63	Other (Loadings, Chargebacks)		(34)		-		-		-		-
64	**Hydros**	**26,545**		**28,372**		**8,289**		**36,662**		**49,897**	
65	Contractor		16,457		22,594		6,569		29,163		39,612
66	Labor		3,043		37		15		52		92
67	Materials		1,972		-		-		-		-
68	Business Expenses		168		5,360		1,563		6,923		9,484
69	Contingency				382		142		524		708
70	Other (Loadings, Chargebacks)		4,905		-		-		-		-
71	**Ludington**	**11,757**		**11,558**		**2,065**		**13,623**		**14,137**	
72	Contractor		14,073		13,998		2,872		16,870		18,546
73	Labor		1,865		254		137		391		1,008
74	Materials		2,449		-		20		20		(5,628)
75	Business Expenses		48		(2,836)		(970)		(3,806)		176
76	Contingency				113		-		113		-
77	Other (Loadings, Chargebacks)		(6,677)		28		6		34		35
78	**Admin and Other**	**8,443**		**1,243**		**9**		**1,252**		**979**	
79	Contractor		2,345		740		-		740		645
80	Labor		599				-		-		-
81	Materials		953				-		-		-
82	Business Expenses		126		75		-		75		-
83	Contingency						-		-		-
84	Other (Loadings, Chargebacks)		4,420		428		9		437		334
85	**Air Quality**	**1,695**		**-**		**-**		**-**		**-**	
86	Contractor		315				-		-		-
87	Labor		129				-		-		-
88	Materials		867				-		-		-
89	Business Expenses		0				-		-		-
90	Contingency						-		-		-
91	Other (Loadings, Chargebacks)		383				-		-		-
92	**RCRA**	**2,878**		**-**		**-**		**-**		**-**	
93	Contractor		1,595				-		-		-
94	Labor		362				-		-		-
95	Materials		10				-		-		-
96	Business Expenses		5				-		-		-
97	Contingency						-		-		-
98	Other (Loadings, Chargebacks)		907				-		-		-
99	**316b**	**(1,348)**		**-**		**-**		**-**		**-**	
100	Contractor		(730)				-				
101	Labor		(202)				-				
102	Materials		(2)				-				
103	Business Expenses		(9)				-				
104	Contingency						-				
105	Other (Loadings, Chargebacks)		(405)				-				
106	**SEEG**	**(2,865)**		**-**		**-**		**-**		**-**	
107	Contractor		(1,595)				-				
108	Labor		(352)				-				
109	Materials		(10)				-				
110	Business Expenses		(5)				-				
111	Contingency						-				
112	Other (Loadings, Chargebacks)		(903)				-				
113	**All Other Environmental**	**747**		**3,024**		**6**		**3,031**		**48**	
114	Contractor		316		2,487		5		2,492		42
115	Labor		232		192		-		192		-
116	Materials		9		192		-		192		-
117	Business Expenses		2		155		1		156		6
118	Contingency		-				-				
119	Other (Loadings, Chargebacks)		189				-				
120	**Total Capital**	141,372	141,372	1,289,962	1,289,962	81,012	81,012	1,370,974	1,370,974	388,972	388,972

Schedule: B-5.1

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Summary of Actual and Projected Electric Capital Expenditures
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Generation Capital Expenditures

	(a)	(b)	(c)	(d)	(e)
		Projected			
Line No.	Description	2 Mos Ending 2/28/2023	12 Mos Ending 2/29/2024	12 Mos Ending 2/28/2025	26 Mos Ending 2/28/2025
1	**JHCampbell 1&2**	**$ 356**	**$ 1,037**	**$ 272**	**$ 1,665**
2	Contractor	$ 516	$ 397	$ 211	$ 1,124
3	Labor	$ 3	$ (3)	$ -	$ -
4	Materials	$ (4)	$ 315	$ -	$ 311
5	Business Expenses	$ (160)	$ 328	$ 61	$ 229
6	Contingency	$ -	$ -	$ -	$ -
7	Other (Loadings, Chargebacks)	$ 1	$ (1)	$ -	$ -
8	**JHCampbell 3**	**$ 1,169**	**$ 1,268**	**$ 360**	**$ 2,797**
9	Contractor	$ 1,694	$ (23)	$ 279	$ 1,950
10	Labor	$ 8	$ 52	$ -	$ 60
11	Materials	$ (12)	$ 535	$ -	$ 523
12	Business Expenses	$ (523)	$ 707	$ 81	$ 264
13	Contingency	$ -	$ -	$ -	$ -
14	Other (Loadings, Chargebacks)	$ 2	$ (2)	$ -	$ -
15	**DEKarn 1&2**	**$ -**	**$ -**	**$ -**	**$ -**
16	Contractor	$ -	$ -	$ -	$ -
17	Labor	$ -	$ -	$ -	$ -
18	Materials	$ -	$ -	$ -	$ -
19	Business Expenses	$ -	$ -	$ -	$ -
20	Contingency	$ -	$ -	$ -	$ -
21	Other (Loadings, Chargebacks)	$ -	$ -	$ -	$ -
22	**DEKarn 3&4**	**$ 1,420**	**$ 11,027**	**$ 6,542**	**$ 18,988**
23	Contractor	$ 1,131	$ 8,219	$ 5,882	$ 15,232
24	Labor	$ 23	$ 142	$ 41	$ 206
25	Materials	$ -	$ 826	$ -	$ 826
26	Business Expenses	$ -	$ 2,080	$ 494	$ 2,574
27	Contingency	$ 3	$ 22	$ 125	$ 150
28	Other (Loadings, Chargebacks)	$ 262	$ (262)	$ -	$ -
29	**Zeeland**	**$ 4,986**	**$ 32,892**	**$ 15,286**	**$ 53,164**
30	Contractor	$ 4,320	$ 29,528	$ 13,561	$ 47,409
31	Labor	$ 47	$ 307	$ 48	$ 401
32	Materials	$ 32	$ 195	$ 258	$ 485
33	Business Expenses	$ 577	$ 2,789	$ 1,169	$ 4,535
34	Contingency	$ 11	$ 74	$ 250	$ 335
35	Other (Loadings, Chargebacks)	$ -	$ -	$ -	$ -
36	**Jackson Generating Station**	**$ 1,475**	**$ 14,502**	**$ 11,720**	**$ 27,697**
37	Contractor	$ 1,309	$ 12,918	$ 10,721	$ 24,948
38	Labor	$ 5	$ 46	$ 25	$ 76
39	Materials	$ 14	$ 111	$ 263	$ 388
40	Business Expenses	$ 142	$ 1,373	$ 711	$ 2,226
41	Contingency	$ 5	$ 55	$ -	$ 60
42	Other (Loadings, Chargebacks)	$ -	$ -	$ -	$ -
43	**Covert**	**$ -**	**$ 829,095**	**$ 20,274**	**$ 849,369**
44	Contractor	$ -	$ 13,146	$ 20,274	$ 33,420
45	Labor	$ -	$ -	$ -	$ -
46	Materials	$ -	$ -	$ -	$ -
47	Business Expenses	$ -	$ 815,949	$ -	$ 815,949
48	Contingency	$ -	$ -	$ -	$ -
49	Other (Loadings, Chargebacks)	$ -	$ -	$ -	$ -
50	**Solar**	**$ 1,732**	**$ 415,448**	**$ 269,457**	**$ 686,638**
51	Contractor	$ 281	$ 56,420	$ 75,238	$ 131,939
52	Labor	$ -	$ -	$ -	$ -
53	Materials	$ -	$ -	$ -	$ -
54	Business Expenses	$ 140	$ 49,232	$ 18,849	$ 68,221
55	Contingency	$ -	$ -	$ -	$ -
56	Other (Loadings, Chargebacks)	$ 1,312	$ 309,796	$ 175,371	$ 486,478

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Consumers Energy Company
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($000's)

Generation Capital Expenditures

	(a)	(b)	(c)	(d)	(e)
			Projected		
Line No.	Description	2 Mos Ending 2/28/2023	12 Mos Ending 2/29/2024	12 Mos Ending 2/28/2025	26 Mos Ending 2/28/2025
57	**Classic 7**	**$ -**	**$ -**	**$ -**	**$ -**
58	Contractor	$ -	$ -	$ -	$ -
59	Labor	$ -	$ -	$ -	$ -
60	Materials	$ -	$ -	$ -	$ -
61	Business Expenses	$ -	$ -	$ -	$ -
62	Contingency	$ -	$ -	$ -	$ -
63	Other (Loadings, Chargebacks)	$ -	$ -	$ -	$ -
64	**Hydros**	**$ 2,005**	**$ 34,657**	**$ 49,897**	**$ 86,558**
65	Contractor	$ 1,718	$ 27,445	$ 39,612	$ 68,776
66	Labor	$ 6	$ 46	$ 92	$ 144
67	Materials	$ -	$ -	$ -	$ -
68	Business Expenses	$ 224	$ 6,699	$ 9,484	$ 16,407
69	Contingency	$ 57	$ 466	$ 708	$ 1,232
70	Other (Loadings, Chargebacks)	$ -	$ -	$ -	$ -
71	**Ludington**	**$ 1,151**	**$ 12,472**	**$ 14,137**	**$ 27,759**
72	Contractor	$ 1,668	$ 15,202	$ 18,546	$ 35,416
73	Labor	$ 8	$ 383	$ 1,008	$ 1,399
74	Materials	$ (12)	$ 33	$ (5,628)	$ (5,608)
75	Business Expenses	$ (515)	$ (3,291)	$ 176	$ (3,630)
76	Contingency	$ -	$ 113	$ -	$ 113
77	Other (Loadings, Chargebacks)	$ 2	$ 32	$ 35	$ 69
78	**Admin and Other**	**$ 38**	**$ 1,214**	**$ 979**	**$ 2,231**
79	Contractor	$ 36	$ 704	$ 645	$ 1,385
80	Labor	$ -	$ -	$ -	$ -
81	Materials	$ -	$ -	$ -	$ -
82	Business Expenses	$ 2	$ 73	$ -	$ 75
83	Contingency	$ -	$ -	$ -	$ -
84	Other (Loadings, Chargebacks)	$ -	$ 437	$ 334	$ 771
85	**Air Quality**	**$ -**	**$ -**	**$ -**	**$ -**
86	Contractor	$ -	$ -	$ -	$ -
87	Labor	$ -	$ -	$ -	$ -
88	Materials	$ -	$ -	$ -	$ -
89	Business Expenses		$ -	$ -	$ -
90	Contingency		$ -	$ -	$ -
91	Other (Loadings, Chargebacks)		$ -	$ -	$ -
92	**RCRA**	**$ -**	**$ -**	**$ -**	**$ -**
93	Contractor		$ -	$ -	$ -
94	Labor		$ -	$ -	$ -
95	Materials		$ -	$ -	$ -
96	Business Expenses		$ -	$ -	$ -
97	Contingency		$ -	$ -	$ -
98	Other (Loadings, Chargebacks)		$ -	$ -	$ -
99	**316b**	**$ -**	**$ -**	**$ -**	**$ -**
100	Contractor		$ -	$ -	$ -
101	Labor		$ -	$ -	$ -
102	Materials		$ -	$ -	$ -
103	Business Expenses		$ -	$ -	$ -
104	Contingency		$ -	$ -	$ -
105	Other (Loadings, Chargebacks)		$ -	$ -	$ -
106	**SEEG**	**$ -**	**$ -**	**$ -**	**$ -**
107	Contractor		$ -	$ -	$ -
108	Labor		$ -	$ -	$ -
109	Materials		$ -	$ -	$ -
110	Business Expenses		$ -	$ -	$ -
111	Contingency		$ -	$ -	$ -
112	Other (Loadings, Chargebacks)		$ -	$ -	$ -
113	**All Other Environmental**	**$ -**	**$ 3,031**	**$ 48**	**$ 3,079**
114	Contractor		$ 2,492	$ 42	$ 2,534
115	Labor		$ 192	$ -	$ 192
116	Materials		$ 192	$ -	$ 192
117	Business Expenses		$ 156	$ 6	$ 162
118	Contingency		$ -	$ -	$ -
119	Other (Loadings, Chargebacks)		$ -	$ -	$ -
120	**SubTotal**	$ 14,332	$ 1,356,642	$ 388,972	$ 1,759,946
121	**Less Contingency**	$ 77	$ 730	$ 1,083	$ 1,890
122	**Grand Total**	$ 14,256	$ 1,355,912	$ 387,888	$ 1,758,056

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Consumers Energy Company
Summary of Actual and Projected Electric Capital Expenditures
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Generation Capital Expenditures

	(a)	(b)	(c)	(d)	(e)	(f)
		Historical Year	Projected Bridge Period			Projected Test Year
Line No.	Description	12 Months Ended 12/31/2022	12 Months Ending 12/31/2023	2 Months Ending 2/29/2024	14 Months Ending 2/29/2024	12 Months Ending 2/28/2025
1	Contractor	$ 99,467	$ 145,313	$ 33,808	$ 179,120	$ 185,012
2	Labor	$ 10,236	$ 1,090	$ 174	$ 1,264	$ 1,213
3	Materials	$ 14,311	$ 2,102	$ 121	$ 2,223	$ (5,107)
4	Business Expenses	$ 464	$ 866,998	$ 8,983	$ 875,981	$ 31,030
5	Contingency	$ -	$ 590	$ 217	$ 807	$ 1,083
6	Other (Loadings, Chargebacks)	$ 16,894	$ 273,869	$ 37,709	$ 311,579	$ 175,740
	Total	$ 141,372	$ 1,289,962	$ 81,012	$ 1,370,974	$ 388,972

	(a)	(b)	(c)	(d)	(e)	(f)
				Projected		
Line No.	Description	12 Months Ending 12/31/2023	2 Months Ending 2/29/2024	14 Months Ending 2/29/2024	12 Months Ending 2/28/2025	26 Months Ending 2/28/2005
1	Contractor	$ 145,313	$ 33,808	$ 179,120	$ 185,012	$ 364,133
2	Labor	$ 1,090	$ 174	$ 1,264	$ 1,213	$ 2,477
3	Materials	$ 2,102	$ 121	$ 2,223	$ (5,107)	$ (2,883)
4	Business Expenses	$ 866,998	$ 8,983	$ 875,981	$ 31,030	$ 907,011
5	Contingency	$ 590	$ 217	$ 807	$ 1,083	$ 1,890
6	Other (Loadings, Chargebacks)	$ 273,869	$ 37,709	$ 311,579	$ 175,740	$ 487,318
	Total	$ 1,289,962	$ 81,012	$ 1,370,974	$ 388,972	$ 1,759,946

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Consumers Energy Company
Summary of Projected Electric Capital Expenditures
For the projected test year ending February 28, 2025
($000's)

Generation Capital Expenditures

	(a)	(b)	(c)	(d)	(e)	(f)
Line No.	**Description**	**Projected Bridge Period 14 Months Ending 2/29/2024**		**Projected Test Year 12 Months Ending 2/28/2025**		**Reference**
1	Campbell 1&2 Non-Environmental	$ 1,393		$ 272		A-12 (RTB-3) Page 2 line 1 Columns (d) and (f)
2	Campbell 1&2 "All Other Environmental"		$ 330		$ 14	
3	Campbell 3 Non-Environmental	$ 2,437		$ 360		A-12 (RTB-3) Page 2 line 8 Columns (d) and (f)
4	Campbell 3 "All Other Environmental"		$ 2,700		$ 18	
5	Karn 1&2 Non-Environmental	$ -		$ -		A-12 (RTB-3) Page 2 line 15 Columns (d) and (f)
6	Karn 1&2 "All Other Environmental"		$ -		$ -	
7	**Total Other Environmental**		$ 3,031		$ 31	

MICHIGAN PUBLIC SERVICE COMMISSION

Schedule: B-5.1

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Consumers Energy Company
Summary of Actual and Projected Electric Capital Expenditures
For the years 2022 through 2025
Generation Capital Projects greater than $1M
($000's)

Generation Capital Expenditures

Line No.	(a) Calendar Year	(b) Tier 1 Portfolio	(c) Tier 2 Portfolio	(d) Project Type	(e) Project Classification	(f) Work Item Description	(g) Projected [1] Contingency	(h) Projected [1] Amount	(i) Actual Amount
1	2022	Coal Generation	Campbell 1	Non-Routine	Environmental	Air Preheater Baskets and Seals	$ -	$ 1,470	$ 1,819
2	2022	Coal Generation	Campbell 1	Routine	Environmental	Pulse Jet Fabric Filter Bag	$ 200	$ 1,019	$ 1,040
3	2022	Coal Generation	Campbell 3	Non-Routine	Condition-based	House Service Air Compressor Replacement	$ 267	$ 1,053	$ 1,207
4	2022	Coal Generation	Campbell 3	Routine	Environmental	Selective Catalytic Reduction Catalyst Management	$ 500	$ 1,960	$ 1,196
5	2022	Coal Generation	Campbell 3	Non-Routine	Condition-based	Campbell Unit 3 Diesel Generatior Controls	$ 19	$ 187	$ 1,172
6	2023	Coal Generation	Campbell Site Commons	Non-Routine	Condition-based	North and South Piegon Lake Jetties	$ -	$ 740	$ 1,003
7	2022	Gas/Oil Generation	Karn 3&4 Commons	Non-Routine	Asset Separation	Unit Separation	$ 500	$ 7,207	$ 1,605
8	2022	Gas Generation	Jackson Site Commons	Routine	Condition-based	GE Long Term Service Agreement FFH	$ -	$ 8,200	$ 7,734
9	2022	Gas Generation	Jackson Site Commons	Non-Routine	Condition-based	Reverse Osmosis Pretreatment System	$ 100	$ 8,700	$ 16,237
10	2022	Gas Generation	Jackson Site Commons	Routine	Condition-based	GE Long Term Service Agreement Historical Extra Work	$ -	$ 950	$ 3,920
11	2022	Gas Generation	Zeeland Site Commons	Routine	Condition-based	Long Term Service Agreement - Running Capital Contract	$ -	$ 8,160	$ 7,599
12	2022	Gas Generation	Zeeland Site Commons	Routine	Condition-based	Zeeland Unit 1A Generator Step Up Transformer Rewind	$ -	$ 5,500	$ 8,878
13	2022	Hydro Generation	Croton	Routine	Condition-based	Croton 1 Wicket Gate	$ 100	$ 2,150	$ 4,072
14	2022	Hydro Generation	Croton	Routine	Condition-based	Croton 2 Wicket Gate	$ 100	$ 2,150	
15	2022	Hydro Generation	Hardy	Routine	Safety	Replace powerhouse roof	$ 100	$ 1,575	$ 1,711
16	2022	Hydro Generation	Hardy	Routine	Infrastructure	New Headquarters Building (previously was Croton HQ)	$ 300	$ 1,985	$ 2,740
17	2022	Hydro Generation	Hardy	Non-Routine	Regulatory	Auxiliary Spillway Remediation	$ 192	$ 4,700	$ 3,096
18	2022	Hydro Generation	Hodenpyl	Non-Routine	Condition-based	Spillway Hoist Replacement	$ 100	$ 1,900	$ 1,712
19	2022	Hydro Generation	Hodenpyl	Non-Routine	Condition-based	Transformer Foundation	$ 250	$ 2,487	$ 1,746
20	2022	Hydro Generation	Hodenpyl	Non-Routine	Safety	Electrical Safety Project	$ -	$ 2,220	$ 3,170
21	2022	Hydro Generation	Mio	Non-Routine	Regulatory	Left Retaining Wall Replacement	$ -	$ 3,650	$ 4,300
22	2022	Hydro Generation	Mio	Non-Routine	Safety	Electrical Safety Project	$ 190	$ 2,450	$ 1,677
23	2022	Hydro Generation	Mio	Non-Routine	Regulatory	Mio Downstream reverse filter	$ -	$ 570	$ 1,058
24	2022	Hydro Generation	Ludington Site Commons	Non-Routine	Safety	Powerhouse Roof Wearing Surface and Weather Proofing Replacement	$ 220	$ 3,090	$ 2,325
25	2022	Hydro Generation	Ludington Site Commons	Non-Routine	Safety	Replace Lower Penstock Expansion Joint Chamber Waterstop	$ 200	$ 3,878	$ 4,223
26	2022	Hydro Generation	Ludington Site Commons	Non-routine	Economic	Upgrade and Overhaul	$ -	$ 5,370	$ 8,796
27	2022	Hydro Generation	Ludington Site Commons	Non-Routine	Condition-based	480V Motor Control Center for DLC	$ -	$ 845	$ 1,538
28	2022	Renewables	Solar Commons	Non-Routine	New Generation	Solar - 2021 Bid Event (250 MW)	$ -	$ 20,333	$ 22,789
29	**Total 2022 Projects**						**$ 3,337**	**$ 104,498**	**$ 118,365**

Note:
(1) Projected amounts were taken from Case No. U-21224

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Consumers Energy Company
Summary of Actual and Projected Electric Capital Expenditures
For the years 2022 through 2025
Generation Capital Projects greater than $1M
($000's)

Generation Capital Expenditures

Line No.	(a) Calendar Year	(b) Tier 1 Portfolio	(c) Tier 2 Portfolio	(d) Project Type	(e) Project Classification	(f) Class of Cost Estimate	(g) Engineering Internal or External	(h) Project Bid Issued	(i) Full Internal Budget Approval	(j) Work Item Description	(k) Planned Amount	(l) Project Reduction	(m) Contingency Amount	(n) Projected Amount
1	Bridge Period	Coal Generation	Campbell 3	Routine	Environmental	Class 3	Internal	In Progress	Approved	SCR Catalyst Management	$ 2,403	$ 100	$ -	$ 2,303
2	Bridge Period	Gas Generation	Covert Commons	Routine	Condition-based	Class 1	NA	Yes	Approved	Long Term Service Agreement - Running capital contract	$ 9,761		$ -	$ 9,761
3	Bridge Period	Gas Generation	Covert Commons	Routine	Condition-based	Class 3	NA	No	Approved	Non LTSA Capital - Extras not included in contract	$ 3,943		$ -	$ 3,943
4	Bridge Period	Gas Generation	Covert Commons	Non-Routine	Acquisition	Class 1	NA	Yes	Approved	Covert Generating Facility Acquisition	$ 815,000		$ -	$ 815,000
5	Bridge Period	Gas/Oil Generation	Karn 3	Non-Routine	Condition-based	Class 3	Internal	No	Approved	Cooling Tower Rebuild	$ 4,250	$ 279	$ -	$ 3,971
6	Bridge Period	Gas/Oil Generation	Karn 3&4	Non-Routine	Condition-based	Class 3	External	No	Approved	Tank Farm Storage Tank Heating Line Replacement	$ 1,350	$ 96		$ 1,254
7	Bridge Period	Gas/Oil Generation	Karn 3&4	Non-Routine	Condition-based	Class 3	External	No	Approved	Sync Wire Replacement	$ 1,450			$ 1,450
8	Bridge Period	Gas/Oil Generation	Karn 3&4 Commons	Non-Routine	Asset Separation	Class 3	External	No	Approved	Unit Separation	$ 1,790		$ -	$ 1,790
9	Bridge Period	Gas Generation	Jackson Site Commons	Routine	Condition-based	Class 1	NA	Yes	Approved	GE Long Term Service Agreement FFH	$ 9,571		$ -	$ 9,571
10	Bridge Period	Gas Generation	Jackson Site Commons	Non-Routine	Condition-based	Class 3	Internal	No	Approved	7EA Casing replacement & Hot section overhaul	$ 2,288	$ 200	$ -	$ 2,088
11	Bridge Period	Gas Generation	Jackson Site Commons	Non-Routine	Condition-based	Class 3	External	No	Approved	HRSG Burner Element Isolation Valves Addition	$ 2,021		$ -	$ 2,021
12	Bridge Period	Gas Generation	Zeeland Site Commons	Routine	Condition-based	Class 1	NA	Yes	Approved	Long Term Service Agreement - Running Capital Contract	$ 9,520		$ -	$ 9,520
13	Bridge Period	Gas Generation	Zeeland Site Commons	Routine	Condition-based	Class 1	NA	Yes	Approved	Milestone Outage Capital to GE - Part of LTSA Contract	$ 7,870		$ -	$ 7,870
14	Bridge Period	Gas Generation	Zeeland Site Commons	Non-Routine	Condition-based	Class 1	Internal	Yes	Approved	Phase 2 599 699 345kV Breaker Replacement	$ 1,302	$ 79	$ -	$ 1,223
15	Bridge Period	Gas Generation	Zeeland Site Commons	Non-Routine	Condition-based	Class 3	External	No	Approved	HRSG Casing Replacement	$ 2,900	$ 97	$ -	$ 2,803
16	Bridge Period	Gas Generation	Zeeland Site Commons	Routine	Condition-based	Class 2	Internal	No	Approved	LTSA - Extras not included in contract (cranes, mobile equipment)	$ 3,200	$ 300	$ -	$ 2,900
17	Bridge Period	Gas Generation	Zeeland Site Commons	Non-Routine	Condition-based	Class 2	External	Yes	Approved	Zeeland Unit 4 Field Rewind of Generator Rotor	$ 1,250	$ 45		$ 1,205
18	Bridge Period	Gas Generation	Zeeland Site Commons	Non-Routine	Condition-based	Class 2	External	Yes	Approved	Zeeland Unit 3 Field Rewind	$ 1,250	$ 45		$ 1,205
19	Bridge Period	Gas Generation	Zeeland Site Commons	Non-Routine	Condition-based	Class 3	Internal	Yes	Approved	Generator Step Up Transformer Replacement (Spare	$ 2,883		$ -	$ 2,883
20	Bridge Period	Gas Generation	Zeeland Site Commons	Non-Routine	Condition-based	Class 1	Internal	Yes	Approved	Zeeland Unit 1 Generator Step Up Transformer Rewin	$ 4,700	$ 96	$ -	$ 4,604
21	Bridge Period	Hydro Generation	Alcona	Non-Routine	Infrastructure	Class 3	External	No	Approved	Core Wall Remediation Project	$ 3,600	$ 1,790	$ -	$ 1,810
22	Bridge Period	Hydro Generation	Cooke	Non-Routine	Safety	Class 3	Internal	No	Approved	Spillway Hoist Replacement	$ 2,100		$ -	$ 2,100
23	Bridge Period	Hydro Generation	Five Channels	Non-Routine	Regulatory	Class 3	External	No	Approved	Dead Bay and Log Chute Remediation	$ 2,972	$ 990	$ -	$ 1,982
24	Bridge Period	Hydro Generation	Five Channels	Non-Routine	Regulatory	Class 3	External	No	Approved	Headgate Project	$ 3,062	$ 1,080	$ -	$ 1,982
25	Bridge Period	Hydro Generation	Hardy	Non-Routine	Regulatory	Class 3	External	No	Approved	Auxiliary Spillway Remediation	$ 3,459	$ -	$ -	$ 3,459
26	Bridge Period	Hydro Generation	Hodenpyl	Non-Routine	Condition-based	Class 3	Internal	No	Approved	Hodenpyl 1 Generator Rewind	$ 3,310	$ 210	$ -	$ 3,101
27	Bridge Period	Hydro Generation	Hodenpyl	Non-Routine	Condition-based	Class 3	External	No	Approved	Spillway Hoist Replacement	$ 2,958	$ 94	$ -	$ 2,864
28	Bridge Period	Hydro Generation	Webber	Non-Routine	Condition-based	Class 1	External	Yes	Approved	Unit 1 Generator Rewind	$ 1,020		$ -	$ 1,020
29	Bridge Period	Hydro Generation	Rogers	Non-Routine	Regulatory	Class 4	External	No	Approved	Probable Maximum Flood Project	$ 2,386	$ 487		$ 1,899
30	Bridge Period	Hydro Generation	Rogers	Non-Routine	Condition-based	Class 3	Internal	Yes	Approved	Unit 4 Generator Rewind	$ 2,600			$ 2,600
31	Bridge Period	Hydro Generation	Mio	Non-Routine	Safety	Class 2	External	Yes	Approved	Electrical Safety Project	$ 1,225	$ 138		$ 1,086
32	Bridge Period	Hydro Generation	Webber	Non-Routine	Infrastructure	Class 2	External	Yes	Approved	Webber Left Downstream Spillway Abutment Wall	$ 3,200	$ 225		$ 2,975
33	Bridge Period	Hydro Generation	Ludington Site Commons	Non-Routine	Condition-based	Class 4	External	No	Approved	Oil Water Separator Replacement	$ 1,263	$ 100		$ 1,163
34	Bridge Period	Hydro Generation	Ludington Site Commons	Non-Routine	Condition-based	Class 3	External	No	Approved	Unit 1-6 DCS Control Relay Replacement	$ 1,348			$ 1,348
35	Bridge Period	Hydro Generation	Ludington Site Commons	Non-Routine	Safety	Class 3	External	No	Approved	Replace Lower Penstock Expansion Joint Chamber Waterstop	$ 2,433	$ 7	$ -	$ 2,425
36	Bridge Period	Hydro Generation	Ludington Site Commons	Non-Routine	Safety	Class 1	External	Yes	Approved	Powerhouse Roof Wearing Surface and Weather Proofing Replacement	$ 2,864	$ 140	$ -	$ 2,724
37	Bridge Period	Hydro Generation	Ludington Site Commons	Non-Routine	Regulatory	Class 1	Internal	Yes	Approved	Replace Barrier Net Panels	$ 1,089	-	$ -	$ 1,089
38	Bridge Period	Renewables	Solar Commons	Non-Routine	New Generation	Class 1/BTA Executed 2021	CE Tech Specs/External Design	Yes	Approved	Solar - 2019 Bid Event (150 MW)	$ 233,064		$ -	$ 233,064
39	Bridge Period	Renewables	Solar Commons	Non-Routine	New Generation	Class 1/BTA Executed 2021	CE Tech Specs/External Design	Yes	Approved	Solar - 2020 Bid Event (150 MW)	$ 122,186		$ -	$ 122,186
40	Bridge Period	Renewables	Solar Commons	Non-Routine	New Generation	Class 1/Awarded Self-Build 2022	CE Tech Specs/External Design	Yes	Approved	Solar - 2021 Bid Event (Muskegon Solar) (250 MW)	$ 61,930			$ 61,930
41	**Total Bridge Period Projects**										**$ 1,346,768**	**$ 6,597**	**$ -**	**$ 1,340,171**

Note:
(1) Planned amounts were reduced by project reductions and contingency to arrive at the projected amounts

MICHIGAN PUBLIC SERVICE COMMISSION **Schedule: B-5.1**

Case No.: U-21389
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Consumers Energy Company
Summary of Actual and Projected Electric Capital Expenditures
For the years 2022 through 2025
Generation Capital Projects greater than $1M
($000's)

Generation Capital Expenditures

Line No.	(a) Calendar Year	(b) Tier 1 Portfolio	(c) Tier 2 Portfolio	(d) Project Type	(e) Project Classification	(f) Class of Cost Estimate	(g) Engineering Internal or External	(h) Project Bid Issued	(i) Full Internal Budget Approval	(j) Work Item Description	(k) Planned Amount	(l) Project Reduction	(m) Contingency Amount	(n) Projected Amount
1	Test Year	Gas Generation	Covert Commons	Routine	Condition-based	Class 1	NA	Yes	Approved	Long Term Service Agreement - Running capital contra	$ 13,848	-	$ -	$ 13,848
2	Test Year	Gas Generation	Covert Commons	Routine	Condition-based	Class 3	NA	No	Approved	Non Long Term Service Agreemen Capital - Extras not included in contra	$ 5,510	-	$ -	$ 5,510
3	Test Year	Gas Generation	Jackson Site Commons	Non-Routine	Condition-based	Class 2	External	No	Approved	LM 1 - 6 SAC Extended Life Combusto	$ 1,338	-	$ -	$ 1,338
4	Test Year	Gas Generation	Jackson Site Commons	Routine	Condition-based	Class 1	NA	Yes	Approved	GE Long Term Service Agreement FF	$ 8,245	-	$ -	$ 8,245
5	Test Year	Gas Generation	Zeeland Site Commons	Non-Routine	Condition-based	Class 2	Internal	Yes	Approved	Purchase of Site Spare GSU	$ 3,917	-	$ -	$ 3,917
6	Test Year	Gas Generation	Zeeland Site Commons	Routine	Condition-based	Class 1	NA	Yes	Approved	Long Term Service Agreement - Running Capital Contra	$ 8,160	-	$ -	$ 8,160
7	Test Year	Gas/Oil Generation	Karn 3	Non-Routine	Condition-based	Class 3	Internal	No	Approved	Karn 3 Cooling Tower Internal Structure Replaceme	$ 5,000	-	$ -	$ 5,000
8	Test Year	Hydro Generation	Alcona	Non-Routine	Regulatory	Class 4	Internal	No	Approved	Risk Informed Decision Making Resolutio	$ 2,500	-	$ -	$ 2,500
9	Test Year	Hydro Generation	Alcona	Non-Routine	Infrastructure	Class 3	External	No	Approved	Core Wall Remediation Projec	$ 9,057	$ -	$ -	$ 9,057
10	Test Year	Hydro Generation	Foote	Non-Routine	Condition-based	Class 3	External	No	Approved	Unit 2 Wicket Gates Replacement Projec	$ 1,253	-	$ -	$ 1,253
11	Test Year	Hydro Generation	Hardy	Routine	Safety	Class 3	External	No	Approved	Electrical Safety Projec	$ 1,500	-	$ -	$ 1,500
12	Test Year	Hydro Generation	Allegan	Non-Routine	Condition-based	Class 3	External	No	Approved	Unit 1 Wicket Gate Replacemen	$ 1,333	-	$ -	$ 1,333
13	Test Year	Hydro Generation	Five Channels	Non-Routine	Safety	Class 2	External	Yes	Approved	Trash Rack Ergonomics Projec	$ 1,728	-	$ -	$ 1,728
14	Test Year	Hydro Generation	Hardy	Non-Routine	Regulatory	Class 2	External	Yes	Approved	Hardy Splash Wall Replacemen	$ 3,134	-	$ -	$ 3,134
15	Test Year	Hydro Generation	Webber	Non-Routine	Condition-based	Class 1	External	Yes	Approved	Unit 1 Generator Rewin	$ 4,750	-	$ -	$ 4,750
16	Test Year	Hydro Generation	Foote	Non-Routine	Safety	Class 3	External	No	Approved	ADA Ramp Investigation and replacemer	$ 1,463	-	$ -	$ 1,463
17	Test Year	Hydro Generation	Hodenpyl	Non-Routine	Condition-based	Class 3	External	No	Approved	Downstream Wall	$ 3,450	-	$ -	$ 3,450
18	Test Year	Hydro Generation	Rogers	Non-Routine	Regulatory	Class 4	External	No	Approved	Powerhouse Left Embankment Retaining Wa	$ 1,083	-	$ -	$ 1,083
19	Test Year	Hydro Generation	Rogers	Non-Routine	Regulatory	Class 4	External	No	Approved	Probable Maximum Flood Projec	$ 3,272	-	$ -	$ 3,272
20	Test Year	Hydro Generation	Cooke	Non-Routine	Condition-based	Class 3	External	No	Approved	Head Gate Replacement Projec	$ 2,080	-	$ -	$ 2,080
21	Test Year	Hydro Generation	Ludington Site Commons	Non-routine	Condition-based	Class 3	External	No	Approved	Unit 1-6 DCS Control Relay Replacemer	$ 2,501	-	$ -	$ 2,501
22	Test Year	Hydro Generation	Ludington Site Commons	Routine	Infrastructure	Class 3	External	No	Approved	Administrative Building Additio	$ 2,714	-	$ -	$ 2,714
23	Test Year	Hydro Generation	Ludington Site Commons	Non-Routine	Regulatory	Class 1	Internal	Yes	Approved	Replace Barrier Net Panel	$ 1,753	-	$ -	$ 1,753
24	Test Year	Hydro Generation	Ludington Site Commons	Non-Routine	Infrastructure	Class 4	External	No	Approved	Intake Gate and Gate House Mechanical Replaceme	$ 1,118	-	$ -	$ 1,118
25	Test Year	Renewables	Solar Commons	Non-Routine	New Generation	Class 1/BTA Executed 2021	CE Tech Specs/External Design	Yes	Approved	Solar - 2019 Bid Event (Mustang Mile 150 MW	$ 49,337	-	$ -	$ 49,337
26	Test Year	Renewables	Solar Commons	Non-Routine	New Generation	Class 1/BTA Executed 2021	CE Tech Specs/External Design	Yes	Approved	Solar - 2020 Bid Event (Washtenaw Solar) (150 MW	$ 104,980	-	$ -	$ 104,980
27	Test Year	Renewables	Solar Commons	Non-Routine	New Generation	Class 1/Awarded Self-Build 2022	CE Tech Specs/External Design	Yes	Approved	Solar - 2021 Bid Event (Muskegon Solar) (250 MW	$ 115,140	-	$ -	$ 115,140
28	**Total Test Year Projects**										**$ 360,164**	**$ -**	**$ -**	**$ 360,164**

Note:
(1) Planned amounts were reduced by project reductions and contingency to arrive at the projected amounts

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Summary of the Generation O&M Expense
For the Years 2022 through 2025
($000's)

Case No.: U-21389
Exhibit No.: A-41 (RTB-4)
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GENERATION OPERATION AND MAINTENANCE EXPENSES

Line No.	(a) Description	(b) Historical 12 Months Ended 12/31/2022	(c) Projected Bridge Period 14 Months Ending 02/29/2024	(d) Projected Test Year 12 Months Ending 02/28/2025
1	**BASE O&M**	$ 106,819	$ 136,474	$ 126,416
2	**ADJUSTED O&M**			
3	Environmental Operations	$ 10,802	$ 8,714	$ 5,860
4	Major Maintenance	$ 32,411	$ 27,278	$ 31,976
5	Retention & Separation	$ 2,339	$ 14,917	$ 18,220
6	**TOTAL O&M**	**$ 150,030.653**	**$ 172,465.3**	**$ 164,251.9**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of O&M Expenses Projected Using Inflation
For the Years 2022 through 2025
($000's)

Case No.: U-21389
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Witness: RTBlumenstock
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	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No.	**Description**	**2022 Actual**	**Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2022**	**Merit & Inflation 12 Mos Ending Dec 31, 2023**	**Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2023**	**Merit & Inflation 12 Mos Ending Dec 31, 2024**	**Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2024**	**Merit & Inflation 2 Mos Ending 2/28/2025**	**Other Adjustments**	**Projected O&M 12 Mos Ending 2/28/2025**
				(c) * Inflation Rate		(e) * Inflation Rate		(g) * Inflation Rate		(b) + (d) + (f) + (h) + (i)
1	**Line Item 1**	**150,031**	**150,031**	**5,851**	**155,882**	**3,429**	**159,311**	**558**	**4,383**	**164,252**
	Labor	91,790	91,790	3,580	95,370	2,098	97,468	341	2,699	100,509
	Material	6,931	6,931	270	7,201	158	7,359	26	188	7,573
	Contractor	16,999	16,999	663	17,662	389	18,051	63	474	18,588
	Non-Labor Overheads		0	0	0	0	0	0	0	0
	Non-Labor Other	34,311	34,311	1,338	35,649	784	36,433	128	1,022	37,582

Notes

		2023	**2024**	**2025**
4	Annual merit increase			
	Annual merit increase	3.9%	2.2%	2.1%
	Number of months in the period	12	12	2
	Pro-rated merit increase	3.9%	2.2%	0.4%
	Annual inflation rates per WP-JCA-xx			
	Annual inflation rates	3.9%	2.2%	2.1%
	Number of months in the period	12	12	2
	Pro-rated inflation rate	3.9%	2.2%	0.4%

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Summary of the Generation Major Maintenance O&M Expense
For the Years 2022 through 2025
($000's)

Case No.: U-21389
Exhibit No.: A-41 (RTB-4)
Page: 3 of 3
Witness: RTBlumenstock
Date: May 2023

GENERATION MAJOR MAINTENANCE EXPENSES

Line No.	(a) Description	(b) Historical 12 Months Ended 12/31/2022	(c) Projected Bridge Period 14 Months Ending 02/29/2024	(d) Projected Test Year 12 Months Ending 02/28/2025
1	**Major Maintenance**			
2	Campbell 1&2	$ 3,307	$ 1,875	$ 1,782
3	Campbell 3	$ 3,196	$ 2,623	$ 2,229
4	Karn 1&2	$ 6,291	$ 528	$ 223
5	Karn 3&4	$ 607	$ 1,579	$ 2,017
6	Classic 7	$ (636)	$ 326	$ 334
7	Zeeland Generating Station	$ 2,761	$ 5,171	$ 4,658
8	Jackson Generating Station	$ 7,546	$ 3,237	$ 3,061
9	Covert Generating Stations	$ -	$ 3,925	$ 6,025
10	Ludington	$ 4,921	$ 3,571	$ 4,422
11	Hydros	$ 4,418	$ 4,174	$ 6,298
12	Solar	$ -	$ 144	$ 778
13	Admin & Other	$ -	$ 125	$ 150
14	**TOTAL Major Maintenance**	**$ 32,411**	**$ 27,278**	**$ 31,976**

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	))))))	Case No. U-21389

EXHIBITS

OF

PAMELA L. BOLDEN

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Line Clearing O&M Expense
2017-2022 Historical and 2023-2028 Projected

Case No.: U-21389
Exhibit No.: A-42 (PLB-1)
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Witness: PLBolden
Date: May 2023

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
1	**Electric System**	**Expense Type**	**Year**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**Test Period**
										Calendar Year	**Calendar Year**	**Calendar Year**	**Calendar Year**	**Calendar Year**	**Calendar Year**	**3/1/24-2/28/25**
				Actual	Actual	Actual	Actual	Actual	Actual	Projected	Projected	Projected	Projected	Projected	Projected	Projected
2	**Electric HVD**			**$11,393,937**	**$12,035,797**	**$12,211,819**	**$9,169,948**	**$10,739,347**	**$10,987,343**	**$12,064,000**	**$12,279,000**	**$12,294,000**	**$11,972,000**	**$11,645,540**	**$11,300,000**	**$12,281,500**
3		Contractor	Maintenance Clearing	$7,658,022	$8,438,081	$7,571,492	$4,511,969	$4,488,246	$5,157,938	$5,108,885	$5,315,945	$5,313,370	$5,286,488	$5,179,735	$4,811,782	$5,315,516
4		Contractor	Brushing - Cut	$2,388,351	$2,682,986	$3,823,127	$2,365,927	$2,797,068	$3,063,144	$3,244,000	$3,324,000	$3,324,000	$3,000,000	$2,752,100	$2,750,000	$3,324,000
5		Contractor	Brushing - Spray	N/A	N/A	N/A	$1,395,683	$2,407,477	$1,565,658	$2,575,000	$2,490,000	$2,490,000	$2,500,000	$2,500,000	$2,500,000	$2,490,000
6		Contractor	Demand Clearing	$375,620	$152,548	$87,281	$110,249	$98,417	$89,478	$75,000	$65,000	$60,000	$55,000	$60,000	$60,000	$64,167
7		Contractor	Noxious Weed Control	$20,546	$70,093	$52,416	$91,873	$95,891	$152,737	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000	$95,000
8		Contractor	HVD Contract Planning	Note[1]	Note[1]	Note[1]	Note[1]	Note[1]	$175,749	$180,000	$185,000	$190,000	$196,000	$200,000	$205,000	$185,833
9		Labor	HVD Salaries	$709,395	$666,847	$650,467	$672,387	$751,684	$653,623	$679,115	$694,055	$708,630	$723,512	$738,705	$754,218	$696,484
10		Other	HVD Expenses	$242,003	$25,242	$27,036	$21,859	$100,564	$129,016	$107,000	$110,000	$113,000	$116,000	$120,000	$124,000	$110,500
11			**Miles**	**1,019**	**1,081**	**1,102**	**1,116**	**1,178**	**1,106**	**1,164**	**1,166**	**1,168**	**1,171**	**1,173**	**1,173**	**1,166**
12	**Electric LVD**			**$38,359,929**	**$39,912,561**	**$41,078,112**	**$46,104,489**	**$75,827,808**	**$91,016,131**	**$87,966,000**	**$105,371,000**	**$112,792,000**	**$113,122,000**	**$113,428,000**	**$113,752,000**	**$106,607,833**
13		Contractor	Maintenance Clearing	$29,372,207	$31,038,484	$32,173,215	$36,613,687	$62,121,855	$76,623,355	$72,639,394	$87,887,025	$94,966,260	$95,141,216	$95,413,285	$95,664,366	$89,066,897
14		Contractor	Repetitive Outage Zone	$934,465	$2,054,288	$995,575	$1,397,354	$1,711,666	$2,086,904	$1,700,000	$1,500,000	$1,350,000	$1,215,000	$1,090,000	$1,000,000	$1,475,000
15		Contractor	CEMI Clearing	N/A	N/A	N/A	$695,322	$491,257	$506,985	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000
16		Contractor	First Zone Clearing	$399,793	$102,600	$1,523,542	$974,275	$405,771	$466,566	$1,175,000	$1,375,000	$1,525,000	$1,660,000	$1,660,000	$1,660,000	$1,400,000
17		Contractor	LCP Zonal Clearing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000
18		Contractor	Demand Clearing	$2,642,665	$1,444,228	$1,695,571	$1,281,844	$3,329,375	$2,737,654	$2,614,000	$2,558,000	$2,505,000	$2,505,000	$2,505,000	$2,505,000	$2,549,167
19		Contractor	Brushing - Spray	$1,807,622	$1,679,301	$989,772	$1,538,898	$3,072,427	$3,302,319	$3,400,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000
20		Contractor	Distribution Contract Planning	Note[2]	Note[2]	Note[2]	Note[2]	Note[2]	$1,300,689	$1,530,221	$2,029,266	$2,340,961	$2,411,190	$2,483,526	$2,558,032	$2,081,215
21		Labor	Distribution Salaries	$2,388,399	$2,532,425	$2,683,107	$2,509,359	$3,994,189	$3,120,678	$3,242,385	$3,955,709	$4,038,779	$4,123,593	$4,210,189	$4,298,603	$3,969,554
22		Other	Distribution Expenses	$814,778	$1,061,235	$1,017,330	$1,093,749	$701,269	$870,981	$915,000	$1,066,000	$1,066,000	$1,066,000	$1,066,000	$1,066,000	$1,066,000
23			**Miles**	**3,503**	**3,218**	**3,518**	**4,211**	**5,279**	**6,388**	**5,875**	**6,760**	**7,232**	**7,449**	**7,672**	**7,932**	**6,839**
24	**Electric Total**		**O&M Expense**	**$49,753,866**	**$51,948,358**	**$53,289,931**	**$55,274,437**	**$86,567,155**	**$102,003,474**	**$100,030,000**	**$117,650,000**	**$125,086,000**	**$125,094,000**	**$125,073,540**	**$125,052,000**	**$118,889,334**
25		Contractor	Clearing	$45,599,291	$47,662,609	$48,911,991	$50,977,083	$81,019,448	$95,752,737	$93,376,279	$109,609,970	$116,628,630	$116,457,704	$116,255,120	$116,046,148	$110,779,746
26		Contractor	Contract Planning	Note[1], Note[2]	Note[1], Note[2]	Note[1], Note[2]	Note[1], Note[2]	Note[1], Note[2]	$1,476,438	$1,710,221	$2,214,266	$2,530,961	$2,607,190	$2,683,526	$2,763,032	$2,267,049
27		Labor	Salaries	$3,097,794	$3,199,272	$3,333,574	$3,181,745	$4,745,873	$3,774,301	$3,921,499	$4,649,764	$4,747,409	$4,847,105	$4,948,894	$5,052,821	$4,666,038
28		Other	Expenses	$1,056,781	$1,086,477	$1,044,366	$1,115,609	$801,833	$999,997	$1,022,000	$1,176,000	$1,179,000	$1,182,000	$1,186,000	$1,190,000	$1,176,500
29			**O&M Miles**	**4,522**	**4,299**	**4,620**	**5,326**	**6,457**	**7,494**	**7,039**	**7,926**	**8,400**	**8,620**	**8,845**	**9,105**	**8,005**
30			HVD Cost/Mile	$11,181	$11,134	$11,082	$8,219	$9,117	$9,932	$10,367	$10,531	$10,523	$10,227	$9,928	$9,633	$10,530
31			LVD Cost/Mile	$10,951	$12,403	$11,677	$10,949	$14,364	$14,248	$14,973	$15,587	$15,596	$15,186	$14,785	$14,341	$15,589
32			LVD Target Cycle Miles	8,362	8,362	8,362	8,362	8,362	8,632	8,699	8,699	8,699	8,699	8,699	8,699	8,699
33			LVD O&M Program Miles	3,503	3,218	3,518	4,211	5,279	6,388	5,875	6,760	7,232	7,449	7,672	7,932	6,839
34			Capital Clearing Miles	442	489	301	258	252	221	250	325	325	325	325	326	327
35			Percent of 7 Year Cycle	47%	44%	46%	53%	66%	77%	70%	81%	87%	89%	92%	95%	82%
36			Effective Cycle Years	14.8	15.8	15.3	13.1	10.6	9.1	9.9	8.6	8.1	7.8	7.6	7.4	8.5

Note[1]: HVD Contract Planners were not recorded separately in 2017 - 2021
Note[2]: LVD Contract Planners were not recorded separately in 2017 - 2021

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Line Clearing Ramp-up Plan Estimated Potential Service Restoration Cost Avoidance

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
1	**Year**	**2019**	**2020**	**2021**	**2022**	**2019-22**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
		Actual	Actual	Actual	Actual	Average	Projected	Projected	Projected	Projected	Projected	Projected
2	Line Clearing Program Funding Level ($M)	$53.3	$54.8	$86.6	$102.0	$74.2	$100.0	$117.6	$125.1	$125.1	$125.1	$125.1
3	Actual Tree-Related Primary Outage Incidents with MED	11,247	9,337	12,665	8,256	10,376						
4	Projected Tree-Related Primary Outage Incidents with MED						10,080	9,885	9,690	9,494	9,299	9,103
5	Primary Voltage Outage Incidents Reduced with MED						296	491	687	882	1,078	1,273
6	Outage Incident Reduction Percent from 4-Year Average						2.85%	4.73%	6.62%	8.50%	10.38%	12.27%
7	Potential Service Restoration Cost Avoidance ($M)						$0.330	$0.563	$0.812	$1.073	$1.351	$1.645

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
2023 HVD Line Clearing Work Plan

Case No.: U-21389
Exhibit No.: A-44 (PLB-3)
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Witness: PLBolden
Date: May 2023

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Line Name	**Miles**	**Voltage**	**Year Last Cleared**	**Line Name**	**Miles**	**Voltage**	**Year Last Cleared**
1	ADRIAN #2	0.66	138	2019	KALAMAZOO TREATMENT	1.25	46	2019
2	AGNEW	11.78	46	2020	KARN-GARFIELD	0.02	46	2007
3	ALABASTER	27.99	46	2019	KAWKAWLIN	31.19	46	2019
4	ALLENDALE	25.98	46	2018	KELLOGGSVILLE	10.48	46	2006
5	AMASTEEL	0.05	138	2019	KENDRICK	6.57	138	2020
6	AMBER-WHITE LAKE	0.02	138	2004	LAKE SHORE	12.42	46	2015
7	AMPERSEE	5.26	46	2019	LAMOREAUX	14.00	46	2019
8	ARGENTA-VERONA	0.96	46	2000	LARKIN	11.12	46	2019
9	ATHENS	0.01	46	2015	LAWNDALE-MALLEABLE	0.03	138	2007
10	AUBURN	12.43	46	2019	LESLIE	28.50	46	2010
11	BARAGA-FOUR MILE	0.20	138	2019	LINCOLN	28.21	46	2019
12	BARAGA-RACE STREET	0.19	138	2019	LINDEN	0.01	46	2020
13	BARRY	2.01	46	2019	LIVINGSTON-GAYLORD	0.11	46	2020
14	BASS CREEK-STERNBERG	0.01	138	2020	LOOKING GLASS	5.33	138	2019
15	BATTLE CREEK-ISLAND RD	0.05	138	2019	MARKEY	20.58	46	2018
16	BEALS RD-HAZELWOOD	2.83	138	2020	MARQUETTE-BINGHAM	2.61	138	2019
17	BEARLS RD-HAZELWOOD	0.05	138	2020	MASON	0.06	46	2022
18	BIG RAPIDS	22.09	46	2014	MECOSTA	4.82	46	2019
19	BINGHAM-CORNELL	0.06	138	2019	MEDUSA-STOVER	14.74	138	2020
20	BINGHAM-AVERY SOLAR	0.60	46	2020	MENASHA	4.09	46	2018
21	BOYNE CITY	15.13	46	2019	METRO	16.40	46	2019
22	BRICKYARD-HOLTON	0.75	46	2019	MIDDLEVILLE	34.18	46	2019
23	BRONSON	23.15	46	2019	MILHAM-UPJOHN	0.59	138	2019
24	BRYE RD	0.02	46	2019	MILLERS PT-LINDBERGH	1.09	138	2021
25	BURNIPS-WAYLAND	0.02	69	2019	MORRICE	40.53	46	2019
26	BURR OAK	6.88	46	2019	MORROW-SIMPSON	3.36	138	2019
27	CAMPBELL-BLACK RIVER	2.19	138	2019	NASHVILLE	37.21	46	2010
28	CAMPBELL-BLENDON	0.06	138	2019	NEWAYGO	0.02	46	2019
29	CAMPBELL-BUCK CREEK	1.58	138	2019	NORTH ADAMS	23.01	46	2019
30	CAMPBELL-RANSOM	3.56	138	2004	NORTH KENT	11.68	46	2019
31	CAMPBELL-WEALTHY	0.02	138	2019	OAK ST	0.08	46	2013
32	CAMPBELL-BEALS RD	3.38	138	2019	OAKWOOD	6.39	46	2018
33	CEMENT CITY	15.09	46	2019	OKEMOS	12.13	46	2019
34	CHARLEVOIX	17.22	46	2005	ORIOLE	5.80	46	2019
35	CHARLOTTE	8.73	46	2015	OSCODA	12.09	46	2019
36	COLDWATER-MOORE RD	0.09	138	2017	OVID	34.26	46	2019
37	COOKE	13.73	46	2015	PARAMOUNT	2.40	46	2019
38	COOLEY	2.26	46	2019	PARKWAY	3.04	46	2014
39	CORK ST-UPJOHN	1.70	138	2019	PARMA	30.32	46	2019
40	CORNELL-DELHI	0.01	138	2020	PETOSKEY	5.56	46	2019
41	CORNELL-TIHART	0.08	138	2019	PLASTER CREEK-GAINES	4.50	138	2019
42	DAVID	2.59	46	2019	PORTLAND-LOWELL	0.87	69	2019
43	DAVISON	13.05	46	2020	RACE STREET-SPAULDING	0.05	138	2019
44	DELHI-OAKLAND	2.36	138	2019	RAMONA	7.99	46	2019
45	DEXTER TRAIL	0.09	46	2022	RANSOM-BUCK CREEK	10.13	138	2019
46	DIETZ RD-GAYLORD	17.63	46	2019	RED CEDAR	7.77	46	2019
47	DUPONT-COBB	0.20	138	2019	SCOTTVILLE	24.69	46	2019
48	EDMORE	24.67	46	2013	SHELBY	25.53	46	2013
49	EDWARDS #1	1.33	138	2021	SILICON	0.02	46	1999
50	EDWARDS #2	1.21	138	2021	SILVER LAKE	8.63	46	2020
51	FENTON	5.59	46	2022	SOLVAY	3.85	138	2019
52	FILER CITY	0.30	138	2018	SOUTH BOARDMAN-RICHLAND	2.06	69	2019
53	FINE LAKE	21.57	46	2015	SPAULDING-BROADMOOR	0.03	138	2018
54	FOUR MILE-WEALTHY	0.05	138	2019	SPAULDING-BEALS RD	0.08	138	2018
55	FREMONT	9.04	46	2019	SPAULDING-VERGENNES	0.01	138	2018
56	GERRISH	17.63	46	2000	SPRING LAKE	3.04	46	2020
57	GOLDEN	19.71	46	2019	STAMPING PLANT-GAINES	0.12	138	2019
58	GOODALE	15.83	46	2019	THOMPSON-GAINES	1.62	138	2019
59	GRAND BLANC	27.28	46	2015	THOMPSON RD	0.76	138	2019
60	GRAYLING	5.58	46	2014	TITTABAWASSEE-WEADOCK	2.39	138	2019
61	HALSEY-OAKLAND	3.33	138	2019	UNION ST	23.06	46	2020
62	HAMMOND RD	1.80	46	2014	VAN WERT	12.34	138	2019
63	HANSEN	5.71	46	2019	VENICE	0.15	46	2020
64	HASTINGS	2.96	46	2019	W-23	0.07	138	2020
65	HERSEY-WEIDMAN	0.04	69	2019	WALDO	7.47	46	2014
66	HESPERIA SPUR	0.63	69	2019	WAYLAND	21.91	46	2019
67	HOLTON	28.02	46	2019	WENTWORTH	13.86	46	2020
68	IONIA #1	6.93	46	2019	WHITE LAKE-COBB	0.04	138	2018
69	IONIA #2	19.98	46	2015	WHITESTONE POINT	18.07	46	2019
70	ISLAND RD-DELHI	0.17	138	2019				
71	Total 2023 Work Plan Miles	1161.55						

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Line Clearing Reliability Results
Reliability Pre and Post Clearing for 2018, 2019, 2020, 2021, and 2022 Cleared L/O Circuits
(minimum 50% of circuit miles cleared for year listed, primary voltage outage incidents)

Case No.: U-21389
Exhibit No.: A-45 (PLB-4)
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Witness: PLBolden
Date: May 2023

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
1	Excluding MEDs									
2	Circuits Cleared in 2022								Tree Related Outage Incidents	
3	FEEDER_ID	MWS	Substation	Circuit	% Cleared	Circuit Miles	Comp Miles	Voltage (kV)	2021	2022
4	49203	GRW	GABELLE	MAIN STREET	100.0%	6.33	6.33	7.2 W	0	0
5	12804	MUS	EVANSTON	COMAC	100.0%	0.35	0.35	7.2 W	0	0
6	127452	MBR	DUQUETE	JOHNSFIELD	100.0%	51.32	51.32	14.4 W	9	5
7	79302	LUD	FOX FARM	LAKE	100.0%	41.27	41.27	7.2 W	4	3
8	77603	MUS	KEATING	KEATING	100.0%	1.86	1.86	7.2 W	0	0
9	122902	ALL	PLAINWELL	HEIGHTS	100.0%	30.59	30.59	4.8 W	0	0
10	76602	GRE	FULTON	RIPPLING	100.0%	23.93	23.93	7.2 W	2	1
11	56802	GRW	RAMONA	BUDDGETT	100.0%	6.49	6.49	7.2 W	0	1
12	20103	MUP	EDMORE	CEDAR LAKE	100.0%	29.34	29.34	11.0 D	3	4
13	31802	MUS	EAST MUSKEGON	SHERIDAN	100.0%	21	21	7.2 W	4	1
14	101203	BCK	BANNUM CREEK	VILLAGE	100.0%	5.74	5.74	4.8 W	0	0
15	137703	GAL	TWILIGHT	RICHLAND FARMS	100.0%	12.41	12.41	4.8 W	0	1
16	40801	MBR	OSCODA	OSCODA	100.0%	12.58	12.58	11.0 D	3	0
17	22405	FLI	CALKINS	FIFE ROAD	100.0%	15.56	15.56	8.9 W	0	0
18	128403	KAL	MILLERS POINT	CONCORD	100.0%	20.84	20.84	4.8 W	0	0
19	135001	LAN	RIPP ROAD	MEGERS	100.0%	8.69	8.69	14.4 W	0	0
20	133504	LAN	TALLMAN	EAGLE	100.0%	51.39	51.39	14.4 W	8	2
21	58801	GRW	CHICAGO	CHICAGO	100.0%	28.5	28.5	7.2 W	0	0
22	161202	BRZ	HIGH BRIDGE	SALEVIA	100.0%	16.22	16.22	7.2 W	0	0
23	125603	BCK	SPRINGFIELD	UPTON	100.0%	9.17	9.17	4.8 W	2	0
24	106202	GRW	DAWSON	HANSEN	100.0%	7.92	7.92	7.2 W	0	0
25	31901	JAC	BRIDGE STREET	CLIFF AVENUE	100.0%	6.16	6.16	4.8 W	0	0
26	73103	LUD	SCOTTVILLE	SCOTTVILLE	100.0%	48.68	48.68	14.4 W	9	2
27	14102	MUS	SPRING LAKE	COUNTRY CLUB	100.0%	15.23	15.23	7.2 W	2	3
28	38001	ASB	FAIRFIELD	JASPER	100.0%	46.04	46.04	7.2 W	2	1
29	17005	GRW	HARVEY STREET	SUNSHINE	100.0%	9.39	9.39	7.2 W	0	0
30	36302	OWS	CORUNNA	VITRIFIED TILE	100.0%	5.37	5.37	4.8 W	0	1
31	163602	FLI	FIELD ROAD	AMBARGO	100.0%	29	29	4.8	0	1
32	33102	GRW	VAN BUREN	MOSS LAKE	100.0%	9.62	9.62	7.2 W	0	1
33	156601	MBR	TURNER	GATES	100.0%	69.25	69.25	14.4 W	12	8
34	113402	CAD	HARING	FAIRGROUND	100.0%	9.54	9.54	4.8 W	0	0
35	65702	BRC	EAST JORDAN	RONTON	100.0%	38.18	38.18	7.2 W	10	10
36	23902	SAG	BURROWS	BURROWS	100.0%	7.62	7.62	4.8 W	0	0
37	6203	FLI	GRAND BLANC	WHIGVILLE	100.0%	2.52	2.52	4.8 W	0	0
38	35001	MUS	FRUITPORT	FRUITPORT	100.0%	24.68	24.68	7.2 W	3	2
39	30402	ELB	WISSMAN	WISSMAN	100.0%	51.34	51.34	4.8 W	1	1
40	41101	GRW	KELLOGGSVILLE	HOME ACRES	100.0%	11.6	11.6	7.2 W	0	0
41	18003	FLI	GENESEVILLE	PINEWOOD	100.0%	18.95	18.95	4.8 W	0	1
42	35801	ASB	FRONTIER	RANSOM	100.0%	72.6	72.6	4.8 W	3	1
43	2902	SAG	E WASHINGTON	HOYT STREET	100.0%	6.42	6.42	4.8 W	1	0
44	17002	GRW	HARVEY STREET	DIAMOND	100.0%	10.24	10.24	7.2 W	0	0
45	70002	FLI	DEAN ROAD	SHANNON LAKE	100.0%	60	60	14.4 W	17	3
46	5702	FLI	CLIO	MILL STREET	100.0%	20.05	20.05	4.8 W	1	4
47	62002	ASB	DEERFIELD	BUCHOLTZ	100.0%	30	30	7.2 W	0	1
48	135602	GRN	CANNON/SBURG	GRASS LAKE	100.0%	22	22	4.8 W	5	5
49	58303	LUD	BASS LAKE	CARTER	100.0%	15.89	15.89	4.8 W	1	0
50	17004	GRW	HARVEY STREET	CORRECTION	100.0%	6.91	6.91	7.2 W	0	0
51	49004	GRW	STANDALE	INDUSTRIAL	100.0%	7.07	7.07	7.2 W	0	0
52	162202	BRC	FLETCHER	BAY VIEW	100.0%	21.35	21.35	13.2 D	1	2
53	74601	GRE	FULTON	ALTA DALE	100.0%	18.79	18.79	7.2 W	0	3
54	49802	HAL	FENNVILLE	COMMERCIAL	100.0%	68.36	68.36	4.8 W	14	3
55	102602	SAG	TIFFT RD	GRAHAM	100.0%	15.07	15.07	4.8 W	4	4
56	51502	GRW	DUTTON	GLENWOOD	100.0%	28.07	28.07	7.2 W	0	0
57	87702	SMN	STIBNS ROAD	POINT PLACE	100.0%	46.05	46.05	7.2 W	2	1
58	39402	JAC	GRASS LAKE	MT. HOPE	100.0%	16.68	16.68	4.8 W	0	3
59	60702	MUS	GETTY	ALLEN	100.0%	9.82	9.82	7.2 W	0	1
60	23506	GRW	BEALS ROAD	ALGER	100.0%	12.23	12.23	7.2 W	1	3
61	58604	FLI	12TH STREET	WESTERN ROAD	100.0%	17.58	17.58	4.8 W	1	1
62	108202	BCK	GOODALE	IRVING PARK	100.0%	2.51	2.51	4.8 W	0	0
63	17502	SAG	E GENESEE	GENESEE	100.0%	15.53	15.53	4.8 W	0	0
64	14902	LLD	BURR OAK	INDUSTRIAL	100.0%	77.8	77.8	14.4 W	39	6
65	133903	BCK	WATKINS	KNAPP	100.0%	22.61	22.61	4.8 W	4	3
66	102502	ASB	ROUND LAKE	ROUND LAKE	100.0%	8.37	8.37	4.8 W	1	1
67	124204	GRW	BIRKTON	PLYMOUTH	100.0%	14.99	14.99	7.2 W	2	1
68	100602	LAN	RED CEDAR	NORTHWIND	100.0%	6.65	6.65	4.8 W	0	0
69	76402	BCK	BEDFORD	HAUBERT	100.0%	18.3	18.3	4.8 W	0	6
70	17501	SAG	E GENESEE AVE	OUTER DR	100.0%	14.72	14.72	4.8 W	1	0
71	53101	BCK	PENNFIELD	CLEAR LAKE	100.0%	9.48	9.48	4.8 W	0	0
72	2601	LAN	ST JOHNS	CITY	100.0%	15.02	15.02	4.8 W	2	0
73	85602	BCK	FORT CUSTER	MARANGNIA	100.0%	15.21	15.21	14.4 W	2	1
74	14303	MUS	SPRING LAKE	SPRING LAKE	100.0%	18.22	18.22	7.2 W	0	0
75	31304	GRW	RIVERTOWN	POTOMAC	100.0%	17.77	17.77	7.2 W	0	0
76	133902	BCK	WATKINS	HAMILTON	100.0%	18.37	18.37	4.8 W	7	4
77	53102	BCK	PENNFIELD	PENNFIELD	100.0%	46.48	46.48	4.8 W	12	11
78	11812	BNC	INDIAN RIVER	TOPINABEE	100.0%	35.54	35.54	13.2 D	4	7
79	602	ALM	SHEPHERD	FOREST HILL	100.0%	73.42	73.42	4.8 W	4	3
80	9007	LAN	CHARLOTTE	WATER WORKS	100.0%	10.76	10.76	4.8 W	0	0
81	17003	GRW	HARVEY STREET	HEIGHTS	100.0%	5.87	5.87	7.2 W	0	0
82	38101	MDL	STARKS	HOMER	100.0%	33.08	33.08	4.8 W	12	3
83	66801	JAC	CARROLL	MCKAY	100.0%	2.97	2.97	4.8 W	0	0
84	106602	FLI	ALDRICH	MUNICIPAL	100.0%	1.6	1.6	4.8 W	0	0
85	15801	GRW	BERRANSTEL	BERMAN	100.0%	0.04	0.04		0	0
86	23504	GRW	BEALS ROAD	CLYDE PARK	100.0%	20.3	20.3	7.2 W	0	0
87	23504	GRW	BEALS ROAD	EXPRESSWAY	100.0%	8.64	8.64	7.2 W	1	0
88	24104	GRW	SIDNEUR JARVIS	COTTAGE GROVE	100.0%	2.17	2.17	7.2 W	1	0
89	35203	SAG	CARROLLTON	MAPLE RIDGE	100.0%	9.52	9.52	4.8 W	1	0
90	35203	SAG	CARROLLTON	TRUMBULL	100.0%	2.25	2.25	4.8 W	1	1
91	51402	MDL	MIDLAND	COMMERCIAL	100.0%	1.42	1.42	4.8 W	0	0
92	54802	GRW	LEONARD	TAYLOR	100.0%	10.14	10.14	7.2 W	1	0
93	54804	GRW	LEONARD	BEWABERRY	100.0%	3.73	3.73	7.2 W	0	0
94	64701	FLI	MAYFAIR	HAMADY	100.0%	1.26	1.26	4.8 W	0	0
95	69101	LAN	UNIVERSITY	UNIVERSITY	100.0%	0.03	0.03	4.8 W	0	0
96	70603	GRW	BOWEN	MERCHANT	100.0%	8.57	8.57	7.2 W	0	1
97	70603	GRW	BOWEN	BLODGOM	100.0%	8.68	8.68	7.2 W	0	0
98	71801	MBR	BLAIR	BLAIR	100.0%	0.05	0.05		0	0
99	82401	CLR	DALE ROAD	M-18	100.0%	27.9	27.9	4.8 W	7	9
100	85003	GRW	HANRECT	HAMBLE	100.0%	22.19	22.19	7.2 W	0	1
101	86004	GRE	KENTWOOD	TRAUFFER	100.0%	20.9	20.9	7.2 W	0	0
102	90403	BCY	RIEGEL	MILDER	100.0%	6.89	6.89	4.8 W	1	0
103	92601	GRW	ANN STREET	STAR BODY	100.0%	0.02	0.02		0	0
104	101202	BCK	BANNUM CREEK	6 MILE	100.0%	4.33	4.33	4.8 W	0	0
105	101812	KAL	COLONY FARM	CEMETERY	100.0%	5.87	5.87	14.4 W	2	1
106	103102	TRA	SCHUSS MT	CHALET	100.0%	31.14	31.14	7.2 W	0	0
107	111802	SAG	BAY ROAD	BELL	100.0%	10.85	10.85	14.4 W	0	0
108	123702	MAL	WILMOTT	PARKER	100.0%	0.23	0.23	4.8 W	0	0
109	149003	LAN	PACKARD	INDUSTRIAL	100.0%	2.39	2.39	14.4 W	0	0
110	32102	GRW	BOSTON SQUARE	KALAMAZOO	100.0%	7.1	7.1	7.2 W	0	0
111	41103	GRW	KELLOGGSVILLE	CHEMICAL	100.0%	3.48	3.48	7.2 W	1	0
112	87701	BRC	BAGLEY	ALPINE	100.0%	1.45	1.45	14.4 W	0	0
113	127602	BCY	COTTAGE GROVE	HURON	100.0%	52.3	52.3	14.4 W	2	7
114	147301	GRW	MEDICAL PARK	HEALTHCARE VILLAGE	100.0%	24.02	24.02	7.2 W	0	4
115	77401	GRW	DEWEY	HODECOMB	100.0%	5.3	5.3	7.2 W	0	0
116	90403	GRE	CALVIN	FOREST HILLS	100.0%	16.74	16.74	7.2 W	2	0
117	153001	GAL	HUBBARDSTON ROAD	HUBBARDSTON	100.0%	37.88	37.88	14.4 W	7	3
118	115903	FLI	BALLINGER	TICKEN	99.9%	14.79	14.78	4.8 W	0	0
119	21802	JAC	WILDWOOD	MACKLIN	99.9%	8.79	8.78	4.8 W	1	4
120	122703	FLI	STEEL DRIVE	EMERY ROAD	99.9%	15.23	15.22	4.8 W	0	0
121	145102	MBR	NOBLE	WHITNEY	99.9%	42.68	42.63	14.4 W	12	9
122	95302	GRW	STONEGATE	CHRISTIAN	99.8%	12.75	12.69	7.2 W	0	0
123	50303	LAN	NORTH PARK	HILLTOP	99.8%	6.26	6.25	7.2 W	3	0
124	152306	GRW	SINCLAIR	HERITAGE HILL	99.6%	5.57	5.55	7.2 W	0	0
125	36202	LUD	WASHINGTON	MADISON	99.6%	8.23	8.19	14.4 W	0	0
126	81804	GRN	ALPINE	ALPINE	99.5%	30.15	30.2	7.2 W	4	2
127	137002	MBR	RANGER LAKE	GOODAR	99.4%	59.31	58.94	14.4 W	10	9
128	60402	LAN	DREMOS	FERGUSON PARK	99.3%	12.88	12.8	4.8 W	2	1
129	33402	MUS	NORGE MACHINE	EDGEWATER	99.1%	9.1	9.02	7.2 W	2	1
130	149803	FLI	WEST FENTON	FAIRWAY	98.6%	11.32	11.16	4.8 W	0	1
131	4503	MDL	LARKIN	EASTMAN	98.2%	19.31	18.95	4.8 W	2	5
132	33002	BCK	DUCK LAKE	DUCK LAKE	98.0%	44.27	43.39	4.8 W	2	9
133	39104	LAN	ROCKFORD	SUMMIT	97.7%	55.39	54.09	14.4 W	15	5
134	109801	HML	PIGEON LAKE	PIGEON	97.4%	50.97	49.67	4.8 W	12	10
135	137804	GAL	SANDERSON	M-57	97.0%	82.15	79.65	14.4 W	20	10
136	43302	GRN	FOUR MILE	CORDES	96.8%	19.52	18.9	7.2 W	1	0
137	84203	BCK	TEKONSHA	TEKONSHA	96.6%	81.69	78.95	4.8 W	18	5
138	32402	BIG	HOWARD CITY	MORLEY	96.5%	54.98	53.07	14.4 W	11	7
139	69803	FLI	HOGAN ROAD	MCCASLIN LAKE	95.2%	17	35.15	4.8 W	5	4
140	54402	LUD	DRUSE	LAKEVIEW	94.7%	6.12	5.79	14.4 W	1	0
141	112802	JAC	GREGORY	UNADILLA	94.2%	53.09	50	4.8 W	15	10
142	21802	JAC	HAMLOWER	WANDHER	93.6%	41.44	38.78	4.8 W	10	8
143	41302	MUS	TERRACE	SPRING	93.4%	8.7	8.12	7.2 W	0	0
144	35201	SAG	CARROLLTON	CARROLLTON	92.1%	7.68	7.07	4.8 W	3	0
145	89203	JAC	CARY ROAD	MOSCOW	91.5%	59.24	54.18	14.4 W	44	4
146	25803	LAN	DEWITT	GENEVA LAKE	88.5%	40.22	35.6	4.8 W	4	3
147	72401	SAG	THAYER	RIVER	87.0%	15.12	13.29	4.8 W	0	1
148	33903	SAG	BURROWS	GRATIOT	87.7%	16.62	14.58	4.8 W	3	3
149	18102	MDL	STARKS	LEE	86.9%	74.55	64.77	4.8 W	26	11
150	102502	ASB	ROUND LAKE	ASPHALT	86.1%	15.73	13.58	4.8 W	4	3
151	61901	MUS	BROADWAY	PHILLIPS	85.9%	17.49	15.02	7.2 W	1	0
152	60402	LAN	DREMOS	WEAR	85.8%	17.6	15.09	4.8 W	0	0
153	24801	GAL	GASTON	FARMETER	84.9%	49.63	42.12	14.4 W	7	5
154	27401	BIG	CONKLIN PARK	HOLLY	84.8%	52.97	44.93	4.8 W	9	7
155	53303	TRA	GLEN LAKE	BURDICKVILLE	83.3%	43.83	36.53	7.2 W	10	9
156	38301	ALM	GROVER	TRIANGLE	83.1%	45.15	37.52	4.8 W	9	2
157	48502	BIG	MT MORRIS	RODNEY	83.0%	98.74	81.97	14.4 W	13	22
158	141201	MBR	BACKUS	SPRINGBROOK	82.6%	116.15	95.97	14.4 W	14	16
159	39003	FLI	SIDAN	LONGFELLOW	82.2%	14.39	11.83	4.8 W	1	7
160	58102	MUS	SHELBY	PINE STREET	82.2%	13.63	11.45	7.2 W	1	2
161	55104	FLI	DAVISON	CLARK STREET	82.2%	27.11	22.28	4.8 W	1	2
162	127603	BCY	COTTAGE GROVE	FREVO	79.6%	128.9	102.58	14.4 W	20	14
163	33401	MUS	NORGE MACHINE	LINCOLN	79.5%	7.46	5.93	7.2 W	1	4
164	73001	CAD	MESICK	SHERMAN	77.7%	133.35	103.58	14.4 D	13	7
165	47303	BRC	DIETZ ROAD	LAKE CHARLEVOIX	76.7%	7.86	6.11	7.2 W	0	1
166	149501	KAL	ELEVENTH ST	BASELINE	75.4%	55.48	41.85	14.4 W	11	10
167	54001	FLI	MT MORRIS	BEFF ROAD	73.6%	25.48	18.84	4.8 W	0	0
168	49102	GAL	CRYSTAL	CRYSTAL ROAD	71.0%	45.35	32.11	4.8 W	10	8
169	160403	SJN	MATIGAN	GREUSTY	72.0%	42.2	30.76	14.4 W	10	12
170	72903	ELB	EIGHT POINT	WHITE BIRCH	72.6%	103.27	73.51	14.4 W	12	11
171	12501	BCK	CHENEY	CHENEY	72.3%	0.01	0.01	4.8 W	0	0
172	25102	MUS	NORTH MUSKEGON	DALTON	68.1%	27.93	19.03	7.2 W	1	7
173	59401	SMN	TEMPERANCE	WOOD ROAD	67.7%	38.76	26.23	7.2 W	5	0
174	49802	HML	FENNVILLE	PEACH BELT	67.0%	18.92	13.4	4.8 W	1	0
175	129903	WBB	ROSCOMMON	SOUTH BRANCH	64.7%	31.3	20.64	14.4 W	3	5
176	122901	KAL	PLAINWELL	COMMERCIAL	64.7%	36.93	23.89	4.8 W	15	4
177	28302	SJN	CEDAR SPRINGS	EDGERTON	64.5%	78.69	50.75	14.4 W	7	13
178	28301	SJN	CEDAR SPRINGS	NELSON	64.0%	88.12	56.39	14.4 W	10	11
179	129902	WBB	ROSCOMMON	PIONEER	62.0%	115.64	72	14.4 W	12	13
180	139402	JAC	BROUGHWELL	ONONDAGA	61.7%	68.29	42.15	14.4 W	8	4
181	167902	BRC	MILLBLER	ASPEN	61.2%	27.98	17.1	7.2 W	1	1
182	30502	GAL	ORLEANS	ORLEANS	61.0%	64.84	39.53	4.8 W	10	6
183	98204	GRW	LEFFING WELL	NOTTINGHAM	60.7%	11.68	7.09	7.2 W	0	2
184	63602	CAD	LAKE CITY	CITYSHALE	60.0%	210.27	126.1	14.4 W	29	19
185	158302	SMN	SCENIC LAKE	BEARD ROAD	59.1%	25.52	15.1	4.8 W	0	1
186	107202	KAL	ALAMO	PINE GROVE	59.0%	124.31	73.38	14.4 W	53	28
187	1302	LLD	CENTREVILLE	INDUSTRIAL	59.0%	62.97	48.93	14.4 W	39	11
188	74304	FLI	RED ARROW	OGEMA	58.2%	10.88	6.33	4.8 W	0	1
189	8001	MBR	ALCONA DAM	GLENNIE	57.9%	104.47	60.38	4.8 D	14	14
190	6703	SMN	ONIDSSO	ONEWOOD	57.3%	4.47	2.67	4.8 W	0	0
191	70003	FLI	DEAN ROAD	HOGAN	57.0%	72.32	41.21	14.4 W	14	11
192	17503	GAL	E GENESEE AVE	BAGLEY	56.8%	8	4.55	4.8 W	0	0
193	126301	WBB	SPRUCE ROAD	EAST BAY	56.4%	69.27	39.05	14.4 W	15	15
194	84102	SMN	LOVEJOY	DEERFIELD	54.1%	94.32	51.07	14.4 W	14	2
195	132201	SGT	BROGAN	BROGAN	53.9%	76.17	42.14	4.8 W	10	8
196	154102	MBR	BLUE STAR	CANGES	53.2%	27.9	14.79	4.8 W	11	3
197	31701	GRW	ABERDEEN	KNAPP	52.6%	16.18	8.52	7.2 W	0	0
198	73202	LUD	DONTZ ROAD	KOTT ROAD	51.7%	20.87	10.8	7.2 W	3	7
199	11201	MDL	CAMELOT LAKE	CLEERMAN	50.1%	64.2	32.14	14.4 W	12	2
200	18502	KML	PULLMAN	PULLMAN	50.0%	38.72	19.37	4.8 W	7	10
201				Totals		5882.18	4942.51		1012	619
202				Percent Improvement						38.8%
203									1 Yr Prior	Yr Trim
204				Totals		Only 100% cleared Circuits			280	157
205				Percent Improvement		Percent Improvement				43.9%
206									1 Yr Prior	Yr Trim

MICHIGAN PUBLIC SERVICE COMMISSION

Case No.: U-21389
Exhibit No.: A-45 (PLB-4)
Page: 2 of 10
Witness: PLBolden
Date: May 2023

Consumers Energy Company
Line Clearing Reliability Results
Reliability Pre and Post Clearing for 2018, 2019, 2020 and 2021 Cleared LVD Circuits
(minimum 50% of circuit miles cleared for year listed, primary voltage outage incidents)

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
1					Including MEDs					
2				Circuits Cleared in 2022					Tree Related Outage Incidents	
3	FEEDER_ID	WHQ	Substation	Circuit	% Cleared	Circuit Miles	Comp Miles	Voltage (kV)	2021	2022
4	49203	GRW	HASELTITE	ANN STREET	100.0%	6.33	6.33	7.2 W	0	0
5	12804	MUS	HANSTON	LOMAC	100.0%	0.35	0.35	7.2 W	0	0
6	127402	WBR	HUQUITT	JOHNSFIELD	100.0%	51.32	51.32	14.4 W	13	8
7	78301	LUD	KEA FARM	LAKE	100.0%	41.27	41.27	7.2 W	4	3
8	77023	MUS	KEATING	KEATING	100.0%	1.86	1.86	7.2 W	0	0
9	123902	KAL	KLARWELL	HEIGHTS	100.0%	30.04	30.59	14.4 W	3	3
10	76402	GRS	FULTON	RIPPLING	100.0%	23.93	23.93	7.2 W	2	1
11	56802	GRW	RAMONA	BUDDGETT	100.0%	6.49	6.49	7.2 W	3	1
12	20103	KLM	SIMMONS	CEDAR LAKE	100.0%	29.39	29.34	11.0 D	5	4
13	31802	MUS	EAST MUSKEGON	SHERIDAN	100.0%	21	21	7.2 W	3	1
14	101202	BCK	BARNUM CREEK	VILLAGE	100.0%	5.74	5.74	4.8 W	2	1
15	137303	KAL	TWILIGHT	RICHLAND FARMS	100.0%	12.41	12.41	4.8 W	4	3
16	40801	WBR	SKODDA	SKODA	100.0%	12.54	12.54	11.0 D	2	0
17	22403	SJ	CALKINS	DIE ROAD	100.0%	15.56	15.56	4.8 W	0	0
18	128903	KAL	MILLERS POINT	CONCORD	100.0%	20.84	20.84	4.8 W	0	1
19	119905	LAN	RIPP ROAD	MIGUERS	100.0%	8.69	8.69	14.4 W	0	0
20	133604	LAN	TALMAN	EAGLE	100.0%	51.39	51.39	14.4 W	10	3
21	58803	GRW	CHICAGO	CHICAGO	100.0%	28.5	28.5	7.2 W	2	0
22	161202	BMZ	HIGH BRIDGE	KALEVA	100.0%	16.22	16.22	7.2 W	1	0
23	125603	BCK	SPRINGFIELD	LIFTON	100.0%	9.57	9.57	4.8 W	0	0
24	106302	GRW	HANSEN	HANSEN	100.0%	7.92	7.92	7.2 W	0	0
25	31901	JAC	BRIDGE STREET	HUFF AVENUE	100.0%	6.16	6.16	4.8 W	0	1
26	73101	LUD	SCOTTVILLE	SCOTTVILLE	100.0%	48.68	48.68	14.4 W	12	2
27	34302	MUS	SPRING LAKE	COUNTRY CLUB	100.0%	15.23	15.23	7.2 W	4	5
28	38001	ADR	FAIRFIELD	JASPER	100.0%	46.04	46.04	7.2 W	3	1
29	37003	GRW	HARVEY STREET	SUNSHINE	100.0%	9.28	9.28	7.2 W	0	0
30	26302	OWS	CORUNNA	VITRIFIED TILE	100.0%	5.37	5.37	4.8 W	0	1
31	163802	SJ	FIELD ROAD	FARRAND	100.0%	29	29	4.8	1	1
32	31103	GRW	VAN BUREN	MEDO LAKE	100.0%	9.62	9.62	7.2 W	3	4
33	156603	WBR	TURNER	GATES	100.0%	69.21	69.25	14.4 W	24	8
34	113402	FAD	HARING	FAIRGROUND	100.0%	9.54	9.54	4.8 W	0	0
35	65702	BMC	EAST CORDAN	FRONTON	100.0%	38.18	38.18	7.2 W	19	11
36	33902	SAG	BURROWS	BURROWS	100.0%	7.62	7.62	4.8 W	1	0
37	6203	SJ	GRAND BLANC	WHIGVILLE	100.0%	2.52	2.52	4.8 W	0	0
38	25001	MUS	BLUFFPORT	BLUFFPORT	100.0%	24.68	24.68	7.2 W	4	2
39	30402	SJ	RIDEMAN	RIDEMAN	100.0%	51.34	51.34	4.8 W	12	3
40	45103	GRW	HOUGHGARVILLE	HOME ACRES	100.0%	11.6	11.6	7.2 W	0	0
41	58003	SJ	GENESEEVILLE	PINEWOOD	100.0%	18.95	18.95	4.8 W	0	1
42	35801	ADR	FRONTIER	BANDINI	100.0%	72.6	72.6	4.8 W	4	2
43	2902	SAG	S WASHINGTON	HOYT STREET	100.0%	6.42	6.42	4.8 W	1	0
44	17002	GRW	HARVEY STREET	DIAMOND	100.0%	10.24	10.24	7.2 W	0	1
45	76002	SJ	BEAN ROAD	SHANNON LAKE	100.0%	60	60	14.4 W	21	5
46	5701	SJ	CLIO	MILL STREET	100.0%	20.05	20.05	4.8 W	7	4
47	61002	ADR	BEERFIELD	BUCHOLTZ	100.0%	30	30	7.2 W	0	2
48	135602	GRN	CANNON SBURG	GRASS LAKE	100.0%	22	22	4.8 W	4	7
49	38302	LUD	BASS LAKE	CARTER	100.0%	15.89	15.89	4.8 W	1	0
50	17004	GRW	HARVEY STREET	CORRECTION	100.0%	6.91	6.91	7.2 W	1	0
51	49604	GRW	STANDALE	INDUSTRIAL	100.0%	7.07	7.07	7.2 W	0	0
52	162202	BMC	FLETCHER	BAY VIEW	100.0%	21.35	21.35	13.2 D	0	3
53	74601	GRS	FULTON	ALTA DALE	100.0%	18.79	18.79	7.2 W	3	3
54	49802	MAS	KENSVILLE	COMMERCIAL	100.0%	68.58	68.38	4.8 W	24	8
55	102602	SAG	TUFT RD	GRAHAM	100.0%	15.07	15.07	4.8 W	9	4
56	51502	GRW	SUTTON	GLENWOOD	100.0%	28.07	28.07	7.2 W	4	0
57	97702	SAN	STERNS ROAD	POINT PLACE	100.0%	46.05	46.05	7.2 W	3	1
58	28402	MC	GRASS LAKE	MT. HOPE	100.0%	16.68	16.68	4.8 W	1	3
59	60702	MUS	GETTY	ALLEN	100.0%	9.82	9.82	7.2 W	1	1
60	23106	GRW	BEALS ROAD	ALGER	100.0%	12.23	12.23	7.2 W	1	3
61	58604	SJ	10TH STREET	WESTERN ROAD	100.0%	17.58	17.58	4.8 W	3	1
62	108202	BCK	GOODALE	IRVING PARK	100.0%	2.51	2.51	4.8 W	0	0
63	17503	SAG	S GENESEE	GENESEE	100.0%	15.53	15.53	4.8 W	0	0
64	14902	GLD	BURR OAK	INDUSTRIAL	100.0%	77.8	77.8	14.4 W	43	8
65	133903	BCK	WATKINS	KNAPP	100.0%	22.61	22.61	4.8 W	8	5
66	102502	ADR	ROUND LAKE	ROUND LAKE	100.0%	8.37	8.37	4.8 W	3	1
67	124204	GRW	BRETON	PLYMOUTH	100.0%	14.99	14.99	7.2 W	1	2
68	100602	LAN	RED CEDAR	NORTHWIND	100.0%	6.45	6.45	4.8 W	1	0
69	76402	BCK	BEDFORD	HAABERT	100.0%	18.3	18.3	4.8 W	1	7
70	17501	SAG	S GENESEE AVE	OUTER DR	100.0%	14.72	14.72	4.8 W	3	0
71	53101	BCK	PENNFIELD	CLEAR LAKE	100.0%	9.48	9.48	4.8 W	2	1
72	2503	LAN	ST JOHNS	CITY	100.0%	15.02	15.02	4.8 W	0	0
73	85002	BCK	FORT CUSTER	HARMONIA	100.0%	15.21	15.21	14.4 W	3	1
74	34301	MUS	SPRING LAKE	SPRING LAKE	100.0%	18.22	18.22	7.2 W	1	0
75	31304	GRW	RIVERTOWN	POTOMAC	100.0%	17.77	17.77	7.2 W	0	0
76	113902	BCK	WATKINS	HAMILTON	100.0%	18.37	18.37	4.8 W	4	8
77	53102	BCK	PENNFIELD	PENNFIELD	100.0%	46.48	46.48	4.8 W	21	15
78	51802	BMC	INDIAN RIVER	TOPPINABEE	100.0%	35.54	35.54	13.2 D	9	7
79	602	SLM	SHEPHERD	FOREST HILL	100.0%	72.42	72.42	4.8 W	12	4
80	9007	LAN	CHARLOTTE	WATER WORKS	100.0%	10.74	10.74	4.8 W	0	0
81	17003	GRW	HARVEY STREET	HEIGHTS	100.0%	5.67	5.67	7.2 W	0	1
82	38101	MEL	STARKS	HOMER	100.0%	33.09	33.09	4.8 W	22	3
83	66803	MC	CARROLL	MAXAY	100.0%	2.07	2.07	4.8 W	2	0
84	106602	SJ	ALDRICH	MUNICIPAL	100.0%	1.6	1.6	4.8 W	0	0
85	31901	GRW	BERRYMINTEL	BERRYMAN	100.0%	0.04	0.04		0	0
86	23103	GRW	BEALS ROAD	CLYDE PARK	100.0%	20.3	20.3	7.2 W	0	0
87	23104	GRW	BEALS ROAD	EXPRESSWAY	100.0%	8.64	8.64	7.2 W	2	0
88	24104	GRW	KOEHLER JARVIS	COTTAGE GROVE	100.0%	2.17	2.17	7.2 W	1	0
89	35202	SAG	CARROLLTON	MAPLE RIDGE	100.0%	9.52	9.52	4.8 W	1	0
90	35203	SAG	CARROLLTON	OHAWLUKEE	100.0%	2.25	2.25	4.8 W	1	1
91	53402	MEL	MIDLAND	COMMERCIAL	100.0%	1.42	1.42	4.8 W	0	0
92	54802	GRW	LEONARD	TAYLOR	100.0%	10.14	10.14	7.2 W	2	0
93	54804	GRW	LEONARD	NEWBERRY	100.0%	3.79	3.79	7.2 W	0	0
94	64703	SJ	MAYFLOWER	OAKADOR	100.0%	1.26	1.26	4.8 W	0	0
95	89101	LAN	UNIVERSITY	UNIVERSITY	100.0%	0.03	0.03	4.8 W	0	0
96	75601	GRW	BOWEN	ARCHART	100.0%	8.57	8.57	7.2 W	0	1
97	75603	GRW	BOWEN	BLOSSOM	100.0%	8.68	8.68	7.2 W	0	0
98	71801	WBR	BLAIR	BLAIR	100.0%	0.05	0.05		0	0
99	82401	SJR	DALE ROAD	M-18	100.0%	27.9	27.9	4.8 W	14	11
100	85901	GRW	KIMBREZ	BAMBLE	100.0%	22.19	22.19	7.2 W	1	1
101	86004	GRS	HEATHWOOD	STALLITER	100.0%	20.6	20.6	7.2 W	0	0
102	98403	BCY	ROBBS	WILSON	100.0%	6.88	6.88	4.8 W	0	0
103	92603	GRW	ANN STREET	FIRH BODY	100.0%	0.02	0.02		0	0
104	101202	BCK	BARNUM CREEK	E MILE	100.0%	4.33	4.33	4.8 W	3	2
105	101802	LAN	COLONY FARM	CEMETERY	100.0%	5.87	5.87	14.4 W	3	3
106	109602	TRA	SCHUSS MT	CHALET	100.0%	31.14	31.14	7.2 W	0	0
107	111802	GAS	BAY ROAD	BELL	100.0%	10.85	10.85	14.4 W	0	0
108	123702	MML	MIAMOTT	PARKER	100.0%	0.23	0.23	4.8 W	0	0
109	140601	LAN	PACKARD	INDUSTRIAL	100.0%	2.39	2.39	14.4 W	0	0
110	32502	GRW	ROSTON SQUARE	KALAMAZOO	100.0%	7.1	7.1	7.2 W	2	0
111	41103	GRW	HOUGHGARVILLE	CHEMICAL	100.0%	1.48	1.48	7.2 W	0	0
112	87701	BMC	BAGLEY	ALPINE	100.0%	1.45	1.45	14.4 W	0	0
113	127602	BCY	COTTAGE GROVE	HURON	100.0%	52.2	52.2	14.4 W	5	8
114	147301	GRW	MEDICAL PARK	HEALTHCARE VILLAGE	100.0%	24.02	24.02	7.2 W	3	4
115	77401	GRW	DEWEY	WOODCOMB	100.0%	5.3	5.3	7.2 W	0	1
116	934501	JAC	CALVIN	FOREST HILLS	100.0%	16.74	16.74	7.2 W	2	1
117	113001	GVL	HUBBARDSTON ROAD	HUBBARDSTON	100.0%	37.88	37.88	14.4 W	8	7
118	115903	SJ	BALLENGER	TACKEN	99.9%	14.79	14.78	4.8 W	1	0
119	21802	JAC	WOLDWOOD	MACKLIN	99.9%	8.79	8.78	4.8 W	1	4
120	122703	SJ	STEEL DRIVE	EMEN ROAD	99.9%	15.23	15.22	4.8 W	2	0
121	141102	WBR	NOBLE	WHITNEY	99.9%	42.68	42.63	14.4 W	12	13
122	95302	GRW	STONEGATE	CHRISTIAN	99.8%	12.71	12.69	7.2 W	0	0
123	92303	GRN	NORTH PARK	HILLTOP	99.8%	6.26	6.25	7.2 W	0	0
124	152209	GRW	SINCLAIR	HERITAGE HILL	99.6%	5.57	5.55	7.2 W	0	0
125	35203	LUD	WASHINGTON	MADISON	99.6%	8.22	8.19	14.4 W	0	0
126	81804	GRN	ALPINE	ALPINE	99.5%	30.11	30	7.2 W	7	2
127	127002	WBR	RANGER LAKE	GOODAR	99.4%	59.31	58.94	14.4 W	25	14
128	60402	LAN	OKEMOS	FERGUSON PARK	99.3%	12.99	12.9	4.8 W	5	1
129	21402	MUS	FORGE MACHINE	EDGEWATER	99.1%	9.1	9.02	7.2 W	2	2
130	148801	SJ	WEST FENTON	PARKWAY	98.8%	11.32	11.18	4.8 W	0	1
131	85103	MEL	ARRIN	EASTMAN	98.2%	19.21	18.86	4.8 W	0	5
132	10303	BCK	STUCK LAKE	STUCK LAKE	98.0%	44.37	43.49	4.8 W	8	13
133	39304	GRN	ROSEWOOD	PARROTT	97.7%	55.28	54.04	14.4 W	22	5
134	109803	MML	PIGEON LAKE	PIGEON	97.4%	50.97	49.67	4.8 W	24	12
135	137804	GVL	SANDERSON	M-57	97.0%	82.15	79.65	14.4 W	38	17
136	41102	GRN	SOUTH MILE	CREEKS	96.8%	19.52	18.9	7.2 W	1	0
137	64201	BCK	TEKONSHA	TEKONSHA	96.6%	81.69	78.95	4.8 W	24	7
138	32402	SAG	KENNARD CITY	MORLEY	96.5%	54.98	53.07	14.4 W	22	7
139	69803	SJ	HOGAN ROAD	MCCASLIN LAKE	95.0%	37	35.15	4.8 W	3	4
140	54402	LUD	GROLE	LAKEVIEW	94.7%	6.12	5.79	14.4 W	0	0
141	112802	JAC	GREGORY	LINADILLA	94.2%	53.09	50	4.8 W	21	15
142	20402	JAC	HANOVER	HANOVER	93.6%	41.44	38.78	4.8 W	22	8
143	41303	MUS	TERRACE	SPRING	93.4%	8.7	8.12	7.2 W	0	0
144	35201	SAG	CARROLLTON	CARROLLTON	92.1%	7.88	7.27	4.8 W	0	0
145	88203	JAC	CARY ROAD	MOSCOW	91.5%	59.28	54.18	14.4 W	19	8
146	25803	LAN	DEWITT	GENEVA LAKE	88.1%	40.22	35.6	4.8 W	7	3
147	72401	SAG	THAYER	BRIER	87.9%	15.12	13.29	4.8 W	1	1
148	33903	SAG	BURROWS	GRATIOT	87.7%	16.62	14.58	4.8 W	3	4
149	38102	MEL	STARKS	LEE	86.9%	74.55	64.77	4.8 W	34	13
150	102501	ADR	ROUND LAKE	ASPHALT	86.5%	15.77	13.59	4.8 W	7	5
151	61901	MUS	BROADWAY	PHILLIPS	85.9%	17.49	15.02	7.2 W	2	0
152	60401	LAN	OKEMOS	NYASI	85.8%	17.6	15.09	4.8 W	1	3
153	24803	GRS	EASTON	HARVESTER	84.9%	49.63	42.12	14.4 W	18	6
154	27401	BIG	CORNLIN PARK	HOLLY	84.8%	52.97	44.93	4.8 W	12	8
155	53201	TRA	GLEN LAKE	BURDICKVILLE	83.3%	43.83	36.53	7.2 W	18	11
156	38301	KLM	GROVER	TRIANGLE	83.1%	45.15	37.53	4.8 W	11	5
157	48502	BIG	RODNEY	RODNEY	83.0%	98.74	81.97	14.4 W	27	31
158	141201	WBR	NICOLS	SPRINGBROOK	82.6%	116.35	95.97	14.4 W	29	20
159	39003	SJ	SLOAN	LONGFELLOW	82.2%	14.39	11.83	4.8 W	4	8
160	58102	MUS	SHELBY	PINE STREET	82.2%	13.93	11.45	7.2 W	4	2
161	55104	SJ	DAVISON	CLARK STREET	82.2%	27.11	22.28	4.8 W	3	2
162	127802	BCY	COTTAGE GROVE	FRENO	79.6%	128.9	102.58	14.4 W	46	37
163	33401	MUS	FORGE MACHINE	CIRCLIN	79.5%	7.46	5.93	7.2 W	1	4
164	75001	SAG	BEDORE	SHERMAN	77.7%	132.35	103.58	14.4 D	23	8
165	47201	BMC	DIETZ ROAD	LAKE CHARLEVOIX	76.7%	7.98	6.11	7.2 W	1	1
166	149501	KAL	ELEVENTH ST	BASELINE	75.4%	55.48	41.83	14.4 W	20	15
167	54001	SJ	MT MORRIS	WEST ROAD	73.8%	25.48	18.8	4.8 W	1	0
168	49103	GVL	CRYSTAL	CRYSTAL ROAD	73.0%	45.31	33.11	4.8 W	24	9
169	160601	GRN	WATSON	GREELEY	72.6%	42.2	30.76	14.4 W	24	15
170	72601	LUD	EIGHT POINT	WHITE BIRCH	72.6%	101.27	73.51	14.4 W	23	14
171	12501	BCK	DENDY	DENDY	72.0%	0.01	0.01	4.8 W	0	0
172	25102	MUS	NORTH MUSKEGON	DALTON	68.5%	27.92	19.03	7.2 W	5	7
173	59401	SAN	TEMPERANCE	WOOD ROAD	67.7%	38.76	26.23	7.2 W	1	0
174	49801	MML	KENNVILLE	PEACH BELT	67.2%	18.92	12.4	4.8 W	1	1
175	129801	WBR	ROSCOMMON	SOUTH BRANCH	64.7%	23.8	20.64	14.4 W	10	8
176	122903	KAL	PLAINWELL	COMMERCIAL	64.7%	36.83	23.84	4.8 W	7	16
177	28302	GRN	CEDAR SPRINGS	EDGERTON	64.5%	78.69	50.75	14.4 W	15	17
178	28303	GRN	CEDAR SPRINGS	NELSON	64.0%	88.12	56.39	14.4 W	27	14
179	129902	WBR	ROSCOMMON	PIONEER	62.3%	115.44	72	14.4 W	16	25
180	129402	JAC	BROUGHWILL	ONONDAGA	61.7%	68.26	42.15	14.4 W	14	5
181	167902	BMC	MEURER	ASPEN	61.2%	27.56	17.1		1	1
182	30502	GVL	ORLEANS	ORLEANS	61.0%	64.84	39.53	4.8 W	18	22
183	98204	GRW	LITTENGWELL	NOTTINGHAM	60.7%	11.68	7.09	7.2 W	0	3
184	69603	ADR	LAKE CITY	STITTSVILLE	60.0%	210.27	126.1	14.4 W	6	29
185	116402	OWS	SCENIC LAKE	BEARD ROAD	59.1%	25.53	15.1	4.8 W	0	2
186	107202	KAL	ALAMO	PINE GROVE	59.0%	124.31	73.38	14.4 W	74	40
187	13202	LD	CENTERVILLE	INDUSTRIAL	58.0%	82.47	48.93	14.4 W	41	14
188	76304	SJ	RED ARROW	OSEMA	58.2%	10.88	6.33	4.8 W	0	3
189	8001	WBR	ALCONA DAM	GLENNIE	57.8%	104.47	60.38	4.8 D	43	24
190	6703	OWS	OWOSSO	OAKWOOD	57.3%	4.67	2.67	4.8 W	0	0
191	76001	SJ	BEAN ROAD	HOGAN	57.0%	72.32	41.21	14.4 W	18	13
192	17503	SAG	S GENESEE AVE	BAGLEY	56.8%	8	4.55	4.8 W	1	0
193	125203	WBR	SPRUCE ROAD	EAST BAY	56.4%	69.27	39.05	14.4 W	29	17
194	38102	OWS	CHESDY	DEERFIELD	54.1%	94.32	51.07	14.4 W	19	2
195	132201	MET	BROGAN	BROGAN	53.9%	78.17	42.14	4.8 W	23	13
196	154102	MML	BLUE STAR	CANGES	53.2%	27.8	14.78	4.8 W	13	3
197	31701	GRW	ABERDEEN	KNAPP	52.6%	16.18	8.52	7.2 W	3	0
198	72202	LUD	SCHUTZ ROAD	SCHUTZ ROAD	51.7%	20.87	10.8	7.2 W	1	8
199	11201	MEL	CAMELOT LAKE	COLEMAN	50.1%	64.2	32.14	14.4 W	25	2
200	18502	MML	FULLMAN	FULLMAN	50.0%	38.72	19.37	4.8 W	13	13
201				Totals		5882.18	4942.51		1639	854
202				Percent Improvement						47.9%
203									1 Yr Prior	Yr Trend
204				Totals		Only 100% cleared Circuits			455	221
205				Percent Improvement		Percent Improvement				51.4%
206									1 Yr Prior	Yr Trend

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Line Clearing Reliability Results
Reliability Pre and Post Clearing for 2018, 2019, 2020 and 2021 Cleared LVD Circuits
(minimum 50% of circuit miles cleared for year listed, primary voltage outage incidents)

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	
1					Excluding MEDs						
2					Circuits Cleared in 2021				Tree Related Outage Incidents		
3		FEEDER_ID	WHQ	Substation	Circuit	% Cleared[1]	Circuit Mil	Comp Mile	Voltage (kV	2020	2021	2022
4		69902	GRW	WALKER	ROSALIE	100.0%	28.23	28.23	7.2 W	7	1	0
5		56903	TRA	NORTHPORT	OMENA	100.0%	9.59	9.59	7.2 W	3	8	9
6		21204	KAL	PHILLIPS	INKSTER	100.0%	7.74	7.74	4.8 W	0	0	0
7		21201	KAL	PHILLIPS	ALCOTT	100.0%	10.63	10.63	4.8 W	0	3	2
8		144202	SAG	GEDDES	GEDDES	100.0%	12.45	12.45	4.8 W	1	0	0
9		36002	BCK	LIBERTY	HAMBLIN	100.0%	9.07	9.07	4.8 W	0	0	1
10		107603	ALM	ISABELLA	MISSION	100.0%	10.14	10.14	4.8 W	0	0	0
11		107604	ALM	ISABELLA	REMUS	100.0%	12.99	12.99	4.8 W	1	0	0
12		74401	ALM	PINE RIVER	GRATIOT	100.0%	5.42	5.42	4.8 W	1	1	0
13		91602	KAL	AMPERSEE	BORGESS	100.0%	4.98	4.98	4.8 W	1	0	2
14		57702	SAG	JANES	WALNUT	100.0%	6.74	6.74	4.8 W	0	0	0
15		23702	ALM	CASINO	LEATON	100.0%	71.42	71.45	4.8 W	13	5	4
16		127001	TWS	RANGER LAKE	KOKOSING	100.0%	41.32	41.32	14.4 W	17	13	7
17		129603	JAC	BLACKMAN	MEIJERS	100.0%	13.55	13.55	14.4 W	1	0	0
18		48401	BNC	BAY HARBOR	DUNDEE	100.0%	19.83	19.83	7.2 W	0	0	0
19		48402	BNC	BAY HARBOR	PRESERVE	100.0%	27.80	27.80	7.2 W	0	0	0
20		121003	GRN	NORTH KENT	NORTHVILLE	100.0%	11.17	11.17	7.2 W	0	0	2
21		17006	GRW	HARVEY STREET	FULLER	100.0%	8.84	8.84	7.2 W	2	0	0
22		56803	GRW	RAMONA	REEDS LAKE	100.0%	8.41	8.41	7.2 W	0	0	0
23		119202	LUD	CHAUVEZ	PUMP STORAGE	100.0%	1.77	1.77	7.2 W	0	0	0
24		31801	MUS	EAST MUSKEGON	MILL IRON	100.0%	17.36	17.36	7.2 W	1	2	1
25		12001	TRA	LEELANAU	OMENA BAY	100.0%	18.77	18.77	7.2 W	6	6	8
26		113403	CAD	HARING	INDUSTRIAL	100.0%	5.21	5.21	4.8 W	0	0	0
27		37901	FRE	HESPERIA	HESPERIA	100.0%	58.86	58.86	4.8 W	11	8	5
28		11001	HST	HASTINGS	BROADWAY	100.0%	30.98	30.98	4.8 W	4	6	2
29		127901	JAC	CAMBRIDGE	SPEEDWAY	100.0%	9.01	9.01	4.8 W	0	0	0
30		127903	JAC	CAMBRIDGE	INFIELD #1	100.0%	0.67	0.67	4.8 W	0	0	0
31		69102	LAN	UNIVERSITY	HARRISON	100.0%	6.53	6.53	4.8 W	0	0	0
32		114203	LAN	MASON	SOUTH STREET	100.0%	15.06	15.06	4.8 W	1	1	0
33		68303	BNC	MACKINAW CITY	BAYWIND GENERATION	100.0%	1.25	1.25	14.4 W	0	0	0
34		45302	GVL	BRICKER	ELLIS	100.0%	8.14	8.14	14.4 W	5	2	1
35		129604	JAC	BLACKMAN	INDUSTRIAL	100.0%	0.65	0.65	14.4 W	0	0	0
36		20104	ALM	EDMORE	BLANCHARD	100.0%	1.48	1.48	11.0 D	3	0	0
37		84201	FLI	STACEY	PIONEER	99.9%	51.22	51.18	14.4 W	1	1	1
38		48501	BIG	RODNEY	HORSE HEAD LK	99.9%	47.91	47.85	14.4 W	4	3	7
39		88502	JAC	BURTCH ROAD	WELCH LAKE	99.8%	35.70	35.64	14.4 W	2	6	2
40		55801	TRA	BELLAIRE	DOWNTOWN	99.8%	21.82	21.77	7.2 W	12	5	6
41		56801	GRW	RAMONA	ROBINSON	99.7%	15.58	15.54	7.2 W	2	4	1
42		31803	MUS	EAST MUSKEGON	QUARTERLINE ROAD	99.7%	8.93	8.90	7.2 W	1	1	1
43		21701	SAG	STATE STREET	MACKINAW	99.6%	9.14	9.10	4.8 W	1	2	0
44		160201	BIG	BARRYTON	BARRYTON	99.5%	48.84	48.61	14.4 W	14	9	6
45		301	GRN	WEST RIVER	GRAND RIVER	99.4%	15.59	15.50	7.2 W	1	6	2
46		54404	LUD	ORIOLE	BRYANT ROAD	99.3%	45.72	45.42	14.4 W	9	13	2
47		72701	GRW	BURLINGAME	BURLINGAME	99.3%	15.55	15.44	7.2 W	2	0	1
48		302	GRN	WEST RIVER	CHAMBERLIN	99.2%	9.21	9.14	7.2 W	1	0	0
49		72703	GRW	BURLINGAME	NEWHALL	99.2%	11.19	11.10	7.2 W	0	0	0
50		39301	SAG	NIAGARA	ADAMS	99.2%	4.74	4.70	4.8 W	0	0	0
51		77101	GVL	STANTON	DICKERSON LAKE	99.0%	33.44	33.11	4.8 W	11	9	4
52		67602	BCY	MCGRAW	CASS	99.0%	10.64	10.53	4.8 W	8	0	2
53		127501	TWS	EAST TAWAS	ALABASTER	98.9%	45.18	44.70	14.4 W	7	5	6
54		58903	GRE	THORNAPPLE	RIX STREET	98.7%	10.12	9.99	4.8 W	1	6	2
55		58902	GRE	THORNAPPLE	BUTTRICK	98.6%	31.15	30.71	4.8 W	4	9	6
56		8505	BCK	ELM STREET	PORTER	98.3%	15.51	15.25	4.8 W	1	0	0
57		40902	HML	MERSON	DUCK LAKE	98.2%	51.93	50.99	4.8 W	13	13	8
58		119201	LUD	CHAUVEZ	PARK	97.8%	12.21	11.94	7.2 W	2	1	4
59		141202	WBR	BACKUS	MAPLE VALLEY	97.3%	60.35	58.75	14.4 W	16	10	7
60		36004	BCK	LIBERTY	LIBERTY	97.1%	4.47	4.34	4.8 W	0	0	0
61		110803	HML	WILLIAMS	LINCOLN	96.4%	23.34	22.51	4.8 W	3	7	3
62		42302	WBR	GERRISH	GOLF CLUB	96.4%	36.30	35.00	14.4 D	6	4	5
63		57703	SAG	JANES	JANES	94.7%	7.35	6.96	4.8 W	0	0	0
64		11202	ALM	CAMELOT LAKE	LOOMIS	94.5%	52.46	49.60	14.4 W	16	11	12
65		122501	ALM	CRANFORD	DEERFIELD	94.0%	18.75	17.63	4.8 W	2	1	0
66		63501	BCK	LEVEL PARK	COLLIER	93.9%	47.18	44.30	4.8 W	7	9	6
67		29406	FLI	KEARSLEY	COVERT ROAD	93.5%	8.31	7.77	4.8 W	3	0	0
68		58601	FLI	LEITH STREET	FRANKLIN	92.8%	9.27	8.60	4.8 W	1	0	0
69		148501	GRW	CRAHEN	GREENBRIER	92.2%	16.43	15.15	7.2 W	1	1	0
70		14801	ADR	MORENCI	CITY	91.8%	15.03	13.80	7.2 W	0	1	1
71		83502	SMN	JACKMAN	INDUSTRIAL	91.8%	8.89	8.16	7.2 W	0	0	0
72		8502	BCK	ELM STREET	VERONA	91.6%	15.30	14.02	4.8 W	0	0	1
73		107703	TRA	CASS ROAD	CASS ROAD	90.8%	12.77	11.60	7.2 W	0	0	0
74		21903	BCK	GOGUAC	RIVERSIDE	90.6%	10.97	9.94	4.8 W	1	0	2
75		17603	MUS	WESTERN AVENUE	WEST BUSINESS	90.5%	7.42	6.72	7.2 W	0	0	0
76		81501	LAN	HARPER ROAD	ARENS	90.4%	35.92	32.46	14.4 W	4	8	2
77		29401	FLI	KEARSLEY	CROSBY ROAD	90.0%	15.22	13.70	4.8 W	1	2	0
78		59502	BCK	ATHENS	ATHENS	90.0%	40.89	36.79	4.8 W	16	10	5
79		104202	GRN	ROGUE RIVER	ROGUE RIVER	89.6%	15.52	13.90	14.4 W	1	1	0
80		24802	GVL	EASTON	HAYNOR	88.3%	43.90	38.76	14.4 W	8	6	4
81		140402	WBR	ALGER	FOREST LAKE	87.8%	117.20	102.88	14.4 W	17	18	12
82		28303	GRN	CEDAR SPRINGS	WHITE CREEK	87.4%	67.93	59.39	14.4 W	9	5	5
83		28002	FLI	OTISVILLE	STATE ROAD	86.9%	58.56	50.90	4.8 W	20	19	10
84		13402	ADR	TECUMSEH	EVANS STREET	83.7%	13.84	11.59	7.2 W	1	0	1
85		47502	MUS	BECKER	GILES	81.6%	58.98	48.15	7.2 W	4	7	7
86		54601	TRA	ALDEN	TORCH	80.5%	41.58	33.49	7.2 W	8	2	4
87		201	ALM	MT PLEASANT	COLLEGE	80.5%	15.43	12.42	4.8 W	0	5	0
88		48204	BNC	CHEBOYGAN	ALVERNO	79.8%	46.74	37.30	7.2 W	7	10	3
89		42101	JAC	LAKE LEANN	BUNDY HILL	79.7%	62.96	50.16	14.4 W	10	27	4
90		109802	HML	PIGEON LAKE	OLIVE	79.1%	62.31	49.29	4.8 W	4	4	1
91		135201	GRE	FOREMAN	VERGENNES	79.0%	72.53	57.32	4.8 W	12	22	7
92		14802	ADR	MORENCI	MOREY	77.9%	38.42	29.92	7.2 W	1	0	1
93		70001	FLI	DEAN ROAD	KELSEY-HAYES	77.7%	41.72	32.43	14.4 W	2	8	6
94		27402	BIG	CONKLIN PARK	CROTON	77.6%	30.58	23.73	4.8 W	9	9	6
95		4102	TWS	TAWAS	TAWAS	76.8%	44.70	34.35	4.8 W	30	15	6
96		63902	JAC	PARNALL	PARNALL ROAD	76.8%	36.60	28.10	4.8 W	7	4	6
97		4603	MDL	BULLOCK	PRAIRIE	76.4%	14.85	11.34	4.8 W	8	6	1
98		95202	GVL	PECK ROAD	M-91	75.5%	29.68	22.42	14.4 W	7	3	10
99		63401	KAL	KILGORE	MILHAM	74.6%	11.67	8.70	4.8 W	0	0	1
100		21203	KAL	PHILLIPS	MILWOOD	71.6%	7.54	5.40	4.8 W	1	0	0
101		82002	ALM	FORDYCE	LINCOLN	71.2%	23.54	16.76	4.8 W	2	0	0
102		77001	CLR	CURTIS	MAGRUDDER	71.0%	49.28	34.98	4.8 W	9	13	1
103		23104	CLD	MENDON	PINHOOK	70.8%	55.50	39.30	14.4 W	13	14	7
104		51201	MUS	NESTROM	SCENIC DRIVE	69.5%	52.57	36.52	7.2 W	6	9	18
105		139502	KAL	WARNER	BURCHETT	68.7%	72.76	49.98	14.4 W	21	16	14
106		24902	HML	BITTERSWEET	RIVER ROAD	68.4%	53.24	36.40	4.8 W	13	3	3
107		102101	ADR	LOCH ERIN	PENTECOST	67.0%	43.10	28.88	4.8 W	5	1	4
108		61702	BNZ	FRANKFORT	CRYSTALLIA	66.7%	51.14	34.09	7.2 W	22	8	15
109		60903	JAC	NAPOLEON	NORVELL	66.6%	49.78	33.17	4.8 W	11	5	2
110		155802	SMN	SCHOOL ROAD	ST ANTHONY	66.0%	25.60	16.89	7.2 W	3	4	1
111		135904	LAN	KIPP ROAD	COLLEGE ROAD	65.3%	44.44	29.00	14.4 W	4	6	2
112		15501	ALM	JEROME ROAD	STATE STREET	64.6%	11.71	7.56	4.8 W	1	1	0
113		11201	MDL	CAMELOT LAKE	COLEMAN	63.0%	60.04	37.83	14.4 W	10	11	2
114		26401	LAN	NORTH LANSING	VALLEY FARMS	63.0%	34.15	21.50	4.8 W	2	0	3
115		121701	CLR	FROST	LONG LAKE	58.2%	45.55	26.50	4.8 W	16	9	9
116		56901	TRA	NORTHPORT	LIGHTHOUSE	55.7%	35.88	20.00	7.2 W	6	5	7
117		48002	BNC	PELLSTON	DISTRIBUTION	55.5%	44.49	24.70	13.2 D	4	2	0
118		154301	GVL	HARVARD LAKE	HARVARD LAKE	55.3%	101.89	56.30	14.4 W	33	21	22
119		154602	MDL	PRICE ROAD	MERIDIAN	53.9%	40.11	21.61	14.4 W	9	14	6
120		75101	KAL	YORKVILLE	HIGHLAND PARK	53.8%	17.46	9.39	4.8 W	14	7	5
121		44201	MUS	MONTAGUE	DOWLING	53.6%	24.25	13.00	7.2 W	2	0	0
122		67302	HML	MACATAWA	BEE LINE	52.9%	13.09	6.92	4.8 W	1	1	0
123		63601	CAD	LAKE CITY	JENNINGS	52.4%	90.15	47.24	14.4 W	3	8	5
124		139501	KAL	WARNER	MILO	50.7%	119.14	60.38	14.4 W	27	17	10
125					Totals		3586.10	2931.83		655	559	380
126					Percent Improvement						14.7%	42.0%
127										1 Yr Prior	Yr Trim	1 Yr Post
128					Totals		Only 100% cleared Circuits			78	56	44
129					Percent Improvement		Percent Improvement				28.2%	43.6%
130										1 Yr Prior	Yr Trim	1 Yr Post

131 Note 1 - The percent cleared is the percent of miles cleared for the year listed versus the circuit configuration miles in 2020. Circuits cleared less than 50% not shown.

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Line Clearing Reliability Resuts
Reliability Pre and Post Clearing for 2018, 2019, 2020 and 2021 Cleared LVD Circuits
(minimum 50% of circuit miles cleared for year listed, primary voltage outage incidents)

Case No.: U-21389
Exhibit No.: A-45 (PLB-4)
Page: 4 of 10
Witness: PLBolden
Date: May 2023

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	
1					Including MEDs						
2					Circuits Cleared in 2021				Tree Related Outage Incidents		
3		FEEDER_ID	WHQ	Substation	Circuit	% Cleared[1]	Circuit Mil	Comp Mile	Voltage (kV	2020	2021	2022
4		69902	GRW	WALKER	ROSALIE	100.0%	28.23	28.23	7.2 W	8	3	0
5		56903	TRA	NORTHPORT	OMENA	100.0%	9.59	9.59	7.2 W	4	11	9
6		21204	KAL	PHILLIPS	INKSTER	100.0%	7.74	7.74	4.8 W	0	0	0
7		21201	KAL	PHILLIPS	ALCOTT	100.0%	10.63	10.63	4.8 W	1	7	2
8		144202	SAG	GEDDES	GEDDES	100.0%	12.45	12.45	4.8 W	3	1	0
9		36002	BCK	LIBERTY	HAMBLIN	100.0%	9.07	9.07	4.8 W	2	0	1
10		107603	ALM	ISABELLA	MISSION	100.0%	10.14	10.14	4.8 W	0	0	0
11		107604	ALM	ISABELLA	REMUS	100.0%	12.99	12.99	4.8 W	1	0	0
12		74401	ALM	PINE RIVER	GRATIOT	100.0%	5.42	5.42	4.8 W	1	2	0
13		91602	KAL	AMPERSEE	BORGESS	100.0%	4.98	4.98	4.8 W	1	2	2
14		57702	SAG	JANES	WALNUT	100.0%	6.74	6.74	4.8 W	1	0	0
15		23702	ALM	CASINO	LEATON	100.0%	71.42	71.45	4.8 W	16	12	4
16		127001	TWS	RANGER LAKE	KOKOSING	100.0%	41.32	41.32	14.4 W	29	19	7
17		129603	JAC	BLACKMAN	MEIJERS	100.0%	13.55	13.55	14.4 W	2	0	0
18		48401	BNC	BAY HARBOR	DUNDEE	100.0%	19.83	19.83	7.2 W	0	0	0
19		48402	BNC	BAY HARBOR	PRESERVE	100.0%	27.80	27.80	7.2 W	0	0	0
20		121003	GRN	NORTH KENT	NORTHVILLE	100.0%	11.17	11.17	7.2 W	0	1	2
21		17006	GRW	HARVEY STREET	FULLER	100.0%	8.84	8.84	7.2 W	3	0	0
22		56803	GRW	RAMONA	REEDS LAKE	100.0%	8.41	8.41	7.2 W	0	0	0
23		119202	LUD	CHAUVEZ	PUMP STORAGE	100.0%	1.77	1.77	7.2 W	0	0	0
24		31801	MUS	EAST MUSKEGON	MILL IRON	100.0%	17.36	17.36	7.2 W	2	3	1
25		12001	TRA	LEELANAU	OMENA BAY	100.0%	18.77	18.77	7.2 W	9	12	8
26		113403	CAD	HARING	INDUSTRIAL	100.0%	5.21	5.21	4.8 W	0	0	0
27		37901	FRE	HESPERIA	HESPERIA	100.0%	58.86	58.86	4.8 W	13	17	5
28		11001	HST	HASTINGS	BROADWAY	100.0%	30.98	30.98	4.8 W	5	12	2
29		127901	JAC	CAMBRIDGE	SPEEDWAY	100.0%	9.01	9.01	4.8 W	0	0	0
30		127903	JAC	CAMBRIDGE	INFIELD #1	100.0%	0.67	0.67	4.8 W	0	0	0
31		69102	LAN	UNIVERSITY	HARRISON	100.0%	6.53	6.53	4.8 W	0	0	0
32		114203	LAN	MASON	SOUTH STREET	100.0%	15.06	15.06	4.8 W	1	1	0
33		68303	BNC	MACKINAW CITY	BAYWIND GENERATION	100.0%	1.25	1.25	14.4 W	0	0	0
34		45302	GVL	BRICKER	ELLIS	100.0%	8.14	8.14	14.4 W	10	2	1
35		129604	JAC	BLACKMAN	INDUSTRIAL	100.0%	0.65	0.65	14.4 W	0	0	0
36		20104	ALM	EDMORE	BLANCHARD	100.0%	1.48	1.48	11.0 D	3	0	0
37		84201	FLI	STACEY	PIONEER	99.9%	51.22	51.18	14.4 W	2	1	1
38		48501	BIG	RODNEY	HORSE HEAD LK	99.9%	47.91	47.85	14.4 W	7	10	7
39		88502	JAC	BURTCH ROAD	WELCH LAKE	99.8%	35.70	35.64	14.4 W	4	9	2
40		55801	TRA	BELLAIRE	DOWNTOWN	99.8%	21.82	21.77	7.2 W	16	7	6
41		56801	GRW	RAMONA	ROBINSON	99.7%	15.58	15.54	7.2 W	2	6	1
42		31803	MUS	EAST MUSKEGON	QUARTERLINE ROAD	99.7%	8.93	8.90	7.2 W	2	3	1
43		21701	SAG	STATE STREET	MACKINAW	99.6%	9.14	9.10	4.8 W	1	2	0
44		160201	BIG	BARRYTON	BARRYTON	99.5%	48.84	48.61	14.4 W	17	22	6
45		301	GRN	WEST RIVER	GRAND RIVER	99.4%	15.59	15.50	7.2 W	3	6	2
46		54404	LUD	ORIOLE	BRYANT ROAD	99.3%	45.72	45.42	14.4 W	13	16	2
47		72701	GRW	BURLINGAME	BURLINGAME	99.3%	15.55	15.44	7.2 W	3	0	1
48		302	GRN	WEST RIVER	CHAMBERLIN	99.2%	9.21	9.14	7.2 W	1	0	0
49		72703	GRW	BURLINGAME	NEWHALL	99.2%	11.19	11.10	7.2 W	0	0	0
50		39301	SAG	NIAGARA	ADAMS	99.2%	4.74	4.70	4.8 W	1	0	0
51		77101	GVL	STANTON	DICKERSON LAKE	99.0%	33.44	33.11	4.8 W	14	12	4
52		67602	BCY	MCGRAW	CASS	99.0%	10.64	10.53	4.8 W	8	0	2
53		127501	TWS	EAST TAWAS	ALABASTER	98.9%	45.18	44.70	14.4 W	13	5	6
54		58903	GRE	THORNAPPLE	RIX STREET	98.7%	10.12	9.99	4.8 W	2	6	2
55		58902	GRE	THORNAPPLE	BUTTRICK	98.6%	31.15	30.71	4.8 W	4	10	6
56		8505	BCK	ELM STREET	PORTER	98.3%	15.51	15.25	4.8 W	3	0	0
57		40902	HML	MERSON	DUCK LAKE	98.2%	51.93	50.99	4.8 W	18	17	8
58		119201	LUD	CHAUVEZ	PARK	97.8%	12.21	11.94	7.2 W	2	3	4
59		141202	WBR	BACKUS	MAPLE VALLEY	97.3%	60.35	58.75	14.4 W	22	14	7
60		36004	BCK	LIBERTY	LIBERTY	97.1%	4.47	4.34	4.8 W	2	0	0
61		110803	HML	WILLIAMS	LINCOLN	96.4%	23.34	22.51	4.8 W	4	8	3
62		42302	WBR	GERRISH	GOLF CLUB	96.4%	36.30	35.00	14.4 D	7	4	5
63		57703	SAG	JANES	JANES	94.7%	7.35	6.96	4.8 W	1	0	0
64		11202	ALM	CAMELOT LAKE	LOOMIS	94.5%	52.46	49.60	14.4 W	23	19	12
65		122501	ALM	CRANFORD	DEERFIELD	94.0%	18.75	17.63	4.8 W	5	3	0
66		63501	BCK	LEVEL PARK	COLLIER	93.9%	47.18	44.30	4.8 W	16	13	6
67		29406	FLI	KEARSLEY	COVERT ROAD	93.5%	8.31	7.77	4.8 W	3	0	0
68		58601	FLI	LEITH STREET	FRANKLIN	92.8%	9.27	8.60	4.8 W	1	1	0
69		148501	GRW	CRAHEN	GREENBRIER	92.2%	16.43	15.15	7.2 W	1	1	0
70		14801	ADR	MORENCI	CITY	91.8%	15.03	13.80	7.2 W	0	2	1
71		83502	SMN	JACKMAN	INDUSTRIAL	91.8%	8.89	8.16	7.2 W	0	0	0
72		8502	BCK	ELM STREET	VERONA	91.6%	15.30	14.02	4.8 W	0	0	1
73		107703	TRA	CASS ROAD	CASS ROAD	90.8%	12.77	11.60	7.2 W	0	0	0
74		21903	BCK	GOGUAC	RIVERSIDE	90.6%	10.97	9.94	4.8 W	2	0	2
75		17603	MUS	WESTERN AVENUE	WEST BUSINESS	90.5%	7.42	6.72	7.2 W	0	0	0
76		81501	LAN	HARPER ROAD	ARENS	90.4%	35.92	32.46	14.4 W	4	9	2
77		29401	FLI	KEARSLEY	CROSBY ROAD	90.0%	15.22	13.70	4.8 W	1	2	0
78		59502	BCK	ATHENS	ATHENS	90.0%	40.89	36.79	4.8 W	18	17	5
79		104202	GRN	ROGUE RIVER	ROGUE RIVER	89.6%	15.52	13.90	14.4 W	2	2	0
80		24802	GVL	EASTON	HAYNOR	88.3%	43.90	38.76	14.4 W	12	7	4
81		140402	WBR	ALGER	FOREST LAKE	87.8%	117.20	102.88	14.4 W	31	34	12
82		28303	GRN	CEDAR SPRINGS	WHITE CREEK	87.4%	67.93	59.39	14.4 W	27	11	5
83		28002	FLI	OTISVILLE	STATE ROAD	86.9%	58.56	50.90	4.8 W	31	20	10
84		13402	ADR	TECUMSEH	EVANS STREET	83.7%	13.84	11.59	7.2 W	2	0	1
85		47502	MUS	BECKER	GILES	81.6%	58.98	48.15	7.2 W	6	9	7
86		54601	TRA	ALDEN	TORCH	80.5%	41.58	33.49	7.2 W	17	10	4
87		201	ALM	MT PLEASANT	COLLEGE	80.5%	15.43	12.42	4.8 W	1	7	0
88		48204	BNC	CHEBOYGAN	ALVERNO	79.8%	46.74	37.30	7.2 W	8	16	3
89		42101	JAC	LAKE LEANN	BUNDY HILL	79.7%	62.96	50.16	14.4 W	11	33	4
90		109802	HML	PIGEON LAKE	OLIVE	79.1%	62.31	49.29	4.8 W	12	7	1
91		135201	GRE	FOREMAN	VERGENNES	79.0%	72.53	57.32	4.8 W	13	28	7
92		14802	ADR	MORENCI	MOREY	77.9%	38.42	29.92	7.2 W	1	2	1
93		70001	FLI	DEAN ROAD	KELSEY-HAYES	77.7%	41.72	32.43	14.4 W	5	19	6
94		27402	BIG	CONKLIN PARK	CROTON	77.6%	30.58	23.73	4.8 W	12	15	6
95		4102	TWS	TAWAS	TAWAS	76.8%	44.70	34.35	4.8 W	41	24	6
96		63902	JAC	PARNALL	PARNALL ROAD	76.8%	36.60	28.10	4.8 W	10	6	6
97		4603	MDL	BULLOCK	PRAIRIE	76.4%	14.85	11.34	4.8 W	11	10	1
98		95202	GVL	PECK ROAD	M-91	75.5%	29.68	22.42	14.4 W	11	4	10
99		63401	KAL	KILGORE	MILHAM	74.6%	11.67	8.70	4.8 W	0	0	1
100		21203	KAL	PHILLIPS	MILWOOD	71.6%	7.54	5.40	4.8 W	1	0	0
101		82002	ALM	FORDYCE	LINCOLN	71.2%	23.54	16.76	4.8 W	3	1	0
102		77001	CLR	CURTIS	MAGRUDDER	71.0%	49.28	34.98	4.8 W	13	21	1
103		23104	CLD	MENDON	PINHOOK	70.8%	55.50	39.30	14.4 W	21	16	7
104		51201	MUS	NESTROM	SCENIC DRIVE	69.5%	52.57	36.52	7.2 W	10	11	18
105		139502	KAL	WARNER	BURCHETT	68.7%	72.76	49.98	14.4 W	22	24	14
106		24902	HML	BITTERSWEET	RIVER ROAD	68.4%	53.24	36.40	4.8 W	19	8	3
107		102101	ADR	LOCH ERIN	PENTECOST	67.0%	43.10	28.88	4.8 W	5	6	4
108		61702	BNZ	FRANKFORT	CRYSTALLIA	66.7%	51.14	34.09	7.2 W	36	16	15
109		60903	JAC	NAPOLEON	NORVELL	66.6%	49.78	33.17	4.8 W	14	8	2
110		155802	SMN	SCHOOL ROAD	ST ANTHONY	66.0%	25.60	16.89	7.2 W	6	6	1
111		135904	LAN	KIPP ROAD	COLLEGE ROAD	65.3%	44.44	29.00	14.4 W	7	6	2
112		15501	ALM	JEROME ROAD	STATE STREET	64.6%	11.71	7.56	4.8 W	1	2	0
113		11201	MDL	CAMELOT LAKE	COLEMAN	63.0%	60.04	37.83	14.4 W	11	25	2
114		26401	LAN	NORTH LANSING	VALLEY FARMS	63.0%	34.15	21.50	4.8 W	3	3	3
115		121701	CLR	FROST	LONG LAKE	58.2%	45.55	26.50	4.8 W	28	22	9
116		56901	TRA	NORTHPORT	LIGHTHOUSE	55.7%	35.88	20.00	7.2 W	12	6	7
117		48002	BNC	PELLSTON	DISTRIBUTION	55.5%	44.49	24.70	13.2 D	8	4	0
118		154301	GVL	HARVARD LAKE	HARVARD LAKE	55.3%	101.89	56.30	14.4 W	54	35	22
119		154602	MDL	PRICE ROAD	MERIDIAN	53.9%	40.11	21.61	14.4 W	12	29	6
120		75101	KAL	YORKVILLE	HIGHLAND PARK	53.8%	17.46	9.39	4.8 W	15	9	5
121		44201	MUS	MONTAGUE	DOWLING	53.6%	24.25	13.00	7.2 W	2	1	0
122		67302	HML	MACATAWA	BEE LINE	52.9%	13.09	6.92	4.8 W	1	2	0
123		63601	CAD	LAKE CITY	JENNINGS	52.4%	90.15	47.24	14.4 W	13	17	5
124		139501	KAL	WARNER	MILO	50.7%	119.14	60.38	14.4 W	40	32	10
125					Totals		3586.10	2931.83		982	907	380
126					Percent Improvement						7.6%	61.3%
127										1 Yr Prior	Yr Trim	1 Yr Post
128					Totals		Only 100% cleared Circuits			115	105	44
129					Percent Improvement		Percent Improvement				8.7%	61.7%
130										1 Yr Prior	Yr Trim	1 Yr Post

131 Note 1 - The percent cleared is the percent of miles cleared for the year listed versus the circuit configuration miles in 2020. Circuits cleared less than 50% not shown.

MICHIGAN PUBLIC SERVICE COMMISSION

Case No.: U-21389
Exhibit No.: A-45 (PLB-4)
Page: 5 of 10
Witness: PLBolden
Date: May 2023

Consumers Energy Company
Line Clearing Reliability Results
Reliability Pre and Post Clearing for 2018, 2019, 2020 and 2021 Cleared LVD Circuits
(minimum 50% of circuit miles cleared for year listed, primary voltage outage incidents)

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	Excluding MEDs										
2	Circuits Cleared in 2020								Tree Related Outage Incidents		
3	FEEDER_ID	WHQ	Substation	Circuit	% Cleared[1]	Circuit Mile	Comp Mile	Voltage (kV	2019	2020	2021	2022
4	147601	LAN	VAN ATTA	POWELL	100.00%	33.64	33.64	4.8 W	1	1	3	1
5	39701	KAL	GULL LAKE	TURNER	100.00%	45.02	45.02	4.8 W	18	9	12	8
6	60804	KAL	PALMER	WATER LIFT	100.00%	4.87	4.87	4.8 W	0	0	0	0
7	21203	KAL	PHILLIPS	MILWOOD	100.00%	7.54	7.54	4.8 W	0	1	0	0
8	36902	KAL	COOLEY	NORTH STREET	100.00%	7.58	7.58	4.8 W	1	1	1	0
9	45103	OWS	WEST MAIN	SOUTH STREET	100.00%	8.88	8.88	4.8 W	0	0	0	0
10	28802	JAC	MICHIGAN CENTER	BALLARD	100.00%	35.92	35.92	4.8 W	5	1	1	0
11	21204	KAL	PHILLIPS	INKSTER	100.00%	7.74	7.74	4.8 W	3	0	0	0
12	125604	BCK	SPRINGFIELD	BISCUIT	100.00%	15.03	15.03	4.8 W	2	1	1	2
13	144202	SAG	GEDDES	GEDDES	100.00%	12.45	12.45	4.8 W	1	1	0	0
14	33502	HML	NORTH ALLEGAN	HUBBARD	100.00%	14.24	14.24	4.8 W	4	0	1	0
15	21402	BCY	PATTERSON	PATTERSON	100.00%	19.95	19.95	4.8 W	2	3	1	1
16	26401	LAN	NORTH LANSING	VALLEY FARMS	100.00%	34.15	34.15	4.8 W	0	2	0	3
17	135904	LAN	KIPP ROAD	COLLEGE ROAD	100.00%	44.44	44.44	14.4 W	4	4	6	2
18	21201	KAL	PHILLIPS	ALCOTT	100.00%	10.63	10.63	4.8 W	2	0	3	2
19	77601	MUS	KEATING	WOOD STREET	100.00%	9.52	9.52	7.2 W	0	1	3	1
20	17701	BCY	PINCONNING	PINCONNING	100.00%	28.54	28.54	4.8 W	14	4	2	3
21	40503	SMN	LASALLE	TELEGRAPH	100.00%	19.2	19.2	7.2 W	1	0	1	0
22	40903	HML	MERSON	PIKE LAKE	100.00%	29.88	29.88	4.8 W	2	0	4	3
23	144302	CLR	CLARE	CLARE	100.00%	34.15	34.15	14.4 W	1	4	1	0
24	46901	BNC	CENTRAL LAKE	ELLSWORTH	100.00%	24.13	24.13	7.2 W	6	4	1	2
25	54401	LDG	ORIOLE	WHITTIER	100.00%	12.59	12.59	14.4 W	2	0	2	0
26	49206	GRA	HASKELTE	BISSELL	100.00%	12.05	12.05	7.2 W	1	2	0	0
27	112504	ADR	HUNT ROAD	HUNT ROAD	100.00%	45.57	45.57	7.2 W	5	0	1	1
28	137003	BCY	HOTCHKISS	OLD BRIDGE	100.00%	5.62	5.62	14.4 W	0	0	0	0
29	68301	BNC	MACKINAW CITY	STATE PARK	100.00%	9.29	9.29	14.4 W	0	0	0	0
30	20901	WBR	ST HELEN	KENO	100.00%	31.62	31.62	4.8 W	1	6	3	7
31	85603	BCK	FORT CLISTER	GUARD	100.00%	3.84	3.84	14.4 W	0	0	0	0
32	91602	KAL	AMPERSEE	BORGESS	100.00%	4.98	4.98	4.8 W	0	1	0	2
33	78703	JAC	WISNER	WISNER	100.00%	5.68	5.68	4.8 W	0	0	0	1
34	129801	BNC	VANDERBILT	CORWITH	100.00%	17.65	17.65	13.2 D	4	1	1	2
35	151502	SAG	BUSCH ROAD	CANADA	100.00%	30.03	30.03	14.4 W	6	8	7	6
36	104202	GRN	ROGUE RIVER	ROGUE RIVER	100.00%	15.52	15.52	14.4 W	1	1	1	0
37	77602	MUS	KEATING	LAKETON	100.00%	12.04	12.04	7.2 W	5	1	1	3
38	49204	GRA	HASKELTE	3 MILE	100.00%	12.16	12.16	7.2 W	1	1	0	0
39	43303	GRN	FOUR MILE	BAUMHOFF	100.00%	13.71	13.71	7.2 W	1	2	2	1
40	21102	HML	BLACK RIVER	FILLMORE	100.00%	39.61	39.61	7.2 W	6	8	7	2
41	92102	GVL	DERBY	DERBY	100.00%	67.64	67.64	4.8 W	17	10	5	5
42	16204	BIG	REED CITY	HIGH SCHOOL	100.00%	28.82	28.82	4.8 W	3	2	1	0
43	25402	FRE	GRANT	MASON DRIVE	100.00%	30.59	30.59	4.8 W	8	4	3	1
44	10704	GRE	MEADOWBROOKE	MEADOWBROOKE	100.00%	5.32	5.32	7.2 W	0	1	0	0
45	49202	GRA	HASKELTE	RICHMOND	100.00%	4.37	4.37	7.2 W	0	0	0	0
46	75702	MUS	MAPLE GROVE	SUMMIT AVENUE	100.00%	14.5	14.50	7.2 W	6	1	3	1
47	77603	MUS	KEATING	KEATING	100.00%	1.72	1.72	7.2 W	2	0	0	0
48	107703	TRA	CASS ROAD	CASS ROAD	100.00%	12.77	12.77	7.2 W	0	0	0	0
49	17602	MUS	WESTERN AVENUE	LAKESIDE	100.00%	6.89	6.89	7.2 W	0	0	0	1
50	149702	LDG	BRYE ROAD	PROGRESS DRIVE	99.89%	8.91	8.90	14.4 W	0	0	0	0
51	148001	MUS	ARTHUR	ARTHUR	99.80%	30.42	30.36	7.2 W	1	5	3	1
52	51503	GRE	DUTTON	GATEWAY CROSSING	99.78%	8.95	8.93	7.2 W	0	0	0	0
53	112602	GRE	CASCADE	CASCADE	99.76%	24.68	24.62	4.8 W	4	0	2	1
54	39201	JAC	MORRELL	MCCAIN	99.72%	25.27	25.20	4.8 W	1	2	1	6
55	63902	JAC	PARNALL	PARNALL RD	99.56%	36.6	36.44	4.8 W	8	7	4	6
56	72703	GRA	BURLINGAME	NEWHALL	99.46%	11.19	11.13	7.2 W	1	0	0	0
57	3502	CAD	CADILLAC	HOSPITAL	99.31%	20.42	20.28	4.8 W	0	0	1	0
58	67302	HML	MACATAWA	BEE LINE	99.31%	13.09	13.00	4.8 W	4	1	1	0
59	122402	GRN	PETTIS ROAD	PETTIS RD	99.30%	41.17	40.88	14.4 W	19	5	7	7
60	152801	ADR	TRIPP ROAD	TRIPP ROAD	99.26%	49.89	49.52	4.8 W	3	2	0	1
61	60103	CAD	TUSTIN	LEROY	99.14%	47.79	47.38	14.4 W	4	6	2	9
62	10204	LAN	GRAND LEDGE	ACADEMY	99.11%	25.81	25.58	4.8 W	0	0	0	0
63	107602	ALM	ISABELLA	BROOMFIELD	98.95%	4.78	4.73	4.8 W	1	0	0	0
64	113404	CAD	HARING	THIRD AVENUE	98.89%	1.8	1.78	4.8 W	0	0	0	0
65	90003	MUS	DUPONT	OLD CHANNEL	98.87%	15.09	14.92	7.2 W	14	7	3	6
66	149701	LDG	BRYE ROAD	STILES ROAD	98.84%	19.77	19.54	14.4 W	3	0	0	1
67	151501	SAG	BUSCH ROAD	CURTIS	98.58%	47.96	47.28	14.4 W	17	11	13	5
68	129802	BNC	VANDERBILT	WOLVERINE	98.53%	73.48	72.40	13.2 D	17	16	18	13
69	88202	JAC	CARY ROAD	LAKE COLUMBIA	98.42%	33.64	33.11	14.4 W	7	3	5	1
70	72301	SAG	BARNARD	HOSPITAL	98.39%	4.98	4.90	4.8 W	0	0	0	0
71	55701	LDG	EAST LAKE	CHEMICAL	98.27%	21.39	21.02	7.2 W	2	0	1	0
72	129602	JAC	BLACKMAN	HURST	97.84%	42.96	42.03	14.4 W	6	9	3	5
73	91703	GRA	CLAY	WAREHOUSE	96.37%	7.16	6.90	7.2 W	0	0	1	0
74	50802	GVL	BELDING	MALL	96.15%	6.5	6.25	4.8 W	1	0	0	0
75	73201	BEN	DONTZ ROAD	PORTAGE	96.10%	40.48	38.90	7.2 W	13	10	7	7
76	23002	CLD	BRONSON	MILL STREET	95.81%	40.81	39.10	4.8 W	13	6	4	0
77	97701	SMN	STERNS ROAD	LEWIS	95.69%	21.34	20.42	7.2 W	1	1	0	0
78	150801	CLD	GIRARD	GIRARD	94.91%	43.43	41.22	4.8 W	10	10	10	3
79	68302	BNC	MACKINAW CITY	POND STREET	94.52%	23.73	22.43	14.4 W	6	0	0	4
80	24302	KAL	AUSTIN	LONG LAKE	94.30%	25.98	24.50	4.8 W	5	3	4	2
81	68603	KAL	PARKWAY	VINE	94.21%	7.77	7.32	4.8 W	3	0	1	1
82	70004	FLT	DEAN ROAD	PARSHALLVILLE	93.90%	53.46	50.20	14.4 W	23	9	9	3
83	56302	MUS	ROTHBURY	FERRY	93.87%	42.61	40.00	7.2 W	5	11	4	4
84	83504	SMN	JACKMAN	DEAN ROAD	93.60%	16.25	15.21	7.2 W	4	1	1	2
85	122101	WBR	WIRTZ ROAD	BOWMANVILLE	93.21%	33.13	30.88	4.8 W	7	9	4	6
86	84202	FLT	STACEY	STONEGATE	91.82%	10.02	9.20	14.4 W	1	0	1	2
87	22504	ALM	MIDDLETON	MIDDLETON	91.77%	54.92	50.40	4.8 W	1	6	0	0
88	155001	WBR	SMITH CREEK	SKIPARK (WEST)	91.61%	37.55	34.40	14.4 W	7	6	6	9
89	167901	BNC	MURNER	VAN TYLE	90.44%	21.34	19.30	14.4 W	0	1	0	0
90	85802	LAN	BLUE WATER	SCOTT ROAD	90.10%	77.38	69.72	14.4 W	5	7	3	2
91	22201	GRN	COWAN LAKE	GRATTAN	89.39%	55.82	49.90	14.4 W	6	7	8	4
92	137202	JAC	BALZER	COMSTOCK	89.15%	51.79	46.17	14.4 W	8	5	5	1
93	155302	BCK	HALLS LAKE	HALLS LAKE	89.11%	25.62	22.83	4.8 W	5	12	1	4
94	155502	CAD	WOODWARD	PLEASANT LAKE	88.72%	39.9	35.40	14.4 D	6	5	1	1
95	6402	ADR	BEECHER	TOLEDO ROAD	87.92%	19.87	17.47	7.2 W	6	1	1	0
96	102701	MUS	SAVIDGE	BOOM ROAD	87.18%	34.41	30.00	7.2 W	9	10	6	1
97	51504	GRE	DUTTON	DUTTON	86.27%	43.77	37.76	7.2 W	2	1	2	2
98	68602	KAL	PARKWAY	BALCH	85.52%	2.21	1.89	4.8 W	0	0	0	1
99	61602	BCK	PRINCETON	BROWNLEE	84.50%	12	10.14	4.8 W	4	4	2	4
100	24802	GVL	EASTON	HAYNOR	84.28%	43.9	37.00	14.4 W	11	8	6	4
101	121702	CLR	FROST	LEOTA	83.02%	60.71	50.40	4.8 W	12	10	12	6
102	115702	OWS	NORTH CORUNNA	MEIJER	82.94%	43.5	36.08	4.8 W	2	1	1	0
103	42102	JAC	LAKE LEANN	LAKE LEANN	80.04%	65.47	52.40	14.4 W	12	5	8	7
104	152702	GRN	COIT AVENUE	FOREST RIDGE	79.10%	4.45	3.52	7.2 W	2	2	2	0
105	16202	BIG	REED CITY	MEDICAL	78.93%	5.22	4.12	4.8 W	0	0	1	0
106	2501	TRA	SUTTONS BAY	BINGHAM	77.77%	18.13	14.10	7.2 W	4	4	2	0
107	6401	ADR	BEECHER	DISPOSAL	76.96%	11.85	9.12	7.2 W	3	1	0	1
108	75705	MUS	MAPLE GROVE	WESTGATE	76.41%	8.52	6.51	7.2 W	1	0	2	0
109	72202	MDL	WALDO	LABORATORY	71.82%	16.57	11.90	4.8 W	3	3	3	5
110	137101	GVL	CLYDE ROAD	GLENN ROAD	71.78%	56.98	40.90	14.4 W	18	9	12	11
111	100801	CAD	HARRIETTA	CABERFAE	70.89%	10.34	7.33	14.4 D	4	5	1	2
112	48002	BNC	PELLSTON	DISTRIBUTION	70.08%	44.49	31.18	13.2 D	1	4	2	0
113	112003	LAN	HOGSBACK	PINE TREE	70.06%	31.4	22.00	4.8 W	0	1	5	1
114	62002	TRA	INTERLOCHEN	ART CAMP	69.77%	16.34	11.40	7.2 W	8	4	4	2
115	102601	SAG	TEFT ROAD	LAKEFIELD	67.87%	47.03	31.92	4.8 W	5	2	4	5
116	56601	LDG	BALDWIN	IDLEWILD	67.12%	64.36	43.20	4.8 W	20	19	9	11
117	121701	CLR	FROST	LONG LAKE	66.52%	45.55	30.30	4.8 W	12	16	9	9
118	4703	FRE	SPRING DRIVE	BISHOP LAKE	66.08%	84.74	56.00	14.4 W	26	11	8	8
119	6602	GRE	LABARGE	ALASKA	64.94%	33.11	21.50	4.8 W	7	1	6	7
120	95202	GVL	PECK ROAD	M-91	64.02%	29.68	19.00	14.4 W	9	7	3	10
121	30201	MUS	HOLTON	HOLTON	62.72%	129.3	81.10	14.4 W	57	11	16	25
122	56901	TRA	NORTHPORT	LIGHTHOUSE	62.71%	35.88	22.50	7.2 W	3	6	5	7
123	8505	BCK	ELM STREET	PORTER	58.93%	15.51	9.14	4.8 W	0	1	0	0
124	147201	GRA	DORR CORNERS	RED RUN	58.86%	42.81	25.20	4.8 W	7	1	7	3
125	53802	FLT	COURT	KENT	58.27%	9.61	5.60	4.8 W	0	0	0	0
126	64104	GRA	BAYBERRY	POWDERHORN	55.92%	16.04	8.97	7.2 W	0	1	0	1
127	25302	HST	NASHVILLE	NASHVILLE	55.83%	93.5	52.20	4.8 W	14	6	7	7
128	23103	CLD	MENDON	M-60	54.76%	69.39	38.00	14.4 W	9	7	6	4
129	19601	BCK	CONVIS	CONVIS	53.82%	48.87	26.30	14.4 W	13	22	13	8
130	84101	OWS	LOVEJOY	BRADEN	53.40%	111.42	59.50	14.4 W	15	4	12	5
131	102101	ADR	LOCH ERIN	PENTECOST	53.39%	43.1	23.01	4.8 W	2	5	1	4
132	139501	KAL	WARNER	MILO	52.17%	119.14	62.15	14.4 W	33	27	17	10
133	7101	SMN	ERIE	STRASBURG ROAD	52.07%	23.24	12.10	7.2 W	3	0	2	0
134	45301	GVL	BRICKER	BRICKER	51.55%	81.96	42.25	14.4 W	21	24	9	9
135				Totals		3933.48	3281.82		736	513	418	353
136				Percent Improvement						30.3%	43.2%	52.0%
137									1 Yr Prior	Yr Trim	1 Yr Post	2 Yr Post
138				Totals		Only 100% cleared Circuits			136	86	78	61
139				Percent Improvement		Percent Improvement				36.8%	42.6%	55.1%
140									1 Yr Prior	Yr Trim	1 Yr Post	2 Yr Post

141 Note 1 - The percent cleared is the percent of miles cleared for the year listed versus the circuit configuration miles in 2020. Circuits cleared less than 50% not shown.

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Line Clearing Reliability Results
Reliability Pre and Post Clearing for 2018, 2019, 2020 and 2021 Cleared LVD Circuits
(minimum 50% of circuit miles cleared for year listed, primary voltage outage incidents)

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	Including MEDs										
2	Circuits Cleared in 2020								Tree Related Outage Incidents		
3	FEEDER_ID	WHQ	Substation	Circuit	% Cleared[1]	Circuit Mile	Comp Mile	Voltage (kV	2019	2020	2021	2022
4	147601	LAN	VAN ATTA	POWELL	100.00%	33.64	33.64	4.8 W	3	2	4	2
5	39701	KAL	GULL LAKE	TURNER	100.00%	45.02	45.02	4.8 W	22	10	20	15
6	60804	KAL	PALMER	WATER LIFT	100.00%	4.87	4.87	4.8 W	0	0	0	0
7	21203	KAL	PHILLIPS	MILWOOD	100.00%	7.54	7.54	4.8 W	0	1	0	3
8	36902	KAL	COOLEY	NORTH STREET	100.00%	7.58	7.58	4.8 W	1	1	1	0
9	45103	OWS	WEST MAIN	SOUTH STREET	100.00%	8.88	8.88	4.8 W	0	0	0	0
10	28802	JAC	MICHIGAN CENTER	BALLARD	100.00%	35.92	35.92	4.8 W	6	1	3	2
11	21204	KAL	PHILLIPS	INKSTER	100.00%	7.74	7.74	4.8 W	3	0	0	0
12	125604	BCK	SPRINGFIELD	BISCUIT	100.00%	15.03	15.03	4.8 W	2	1	2	2
13	144202	SAG	GEDDES	GEDDES	100.00%	12.45	12.45	4.8 W	1	3	1	0
14	33502	HML	NORTH ALLEGAN	HUBBARD	100.00%	14.24	14.24	4.8 W	5	0	3	0
15	21402	BCY	PATTERSON	PATTERSON	100.00%	19.95	19.95	4.8 W	4	3	2	1
16	26401	LAN	NORTH LANSING	VALLEY FARMS	100.00%	34.15	34.15	4.8 W	2	3	3	3
17	135904	LAN	KIPP ROAD	COLLEGE ROAD	100.00%	44.44	44.44	14.4 W	6	7	6	2
18	21201	KAL	PHILLIPS	ALCOTT	100.00%	10.63	10.63	4.8 W	2	1	7	2
19	77601	MUS	KEATING	WOOD STREET	100.00%	9.52	9.52	7.2 W	2	1	3	1
20	17701	BCY	PINCONNING	PINCONNING	100.00%	28.54	28.54	4.8 W	18	8	6	5
21	40503	SMN	LASALLE	TELEGRAPH	100.00%	19.2	19.2	7.2 W	2	0	1	0
22	40903	HML	MERSON	PIKE LAKE	100.00%	29.88	29.88	4.8 W	6	1	7	5
23	144302	CLR	CLARE	CLARE	100.00%	34.15	34.15	14.4 W	8	6	4	1
24	46901	BNC	CENTRAL LAKE	ELLSWORTH	100.00%	24.13	24.13	7.2 W	6	8	5	2
25	54401	LDG	ORIOLE	WHITTIER	100.00%	12.59	12.59	14.4 W	3	2	3	0
26	49206	GRA	HASKELITE	BISSELL	100.00%	12.05	12.05	7.2 W	3	2	0	0
27	112504	ADR	HUNT ROAD	HUNT ROAD	100.00%	45.57	45.57	7.2 W	5	1	1	1
28	137003	BCY	HOTCHKISS	OLD BRIDGE	100.00%	5.62	5.62	14.4 W	0	0	0	0
29	68301	BNC	MACKINAW CITY	STATE PARK	100.00%	9.29	9.29	14.4 W	0	0	0	1
30	20901	WBR	ST HELEN	KENO	100.00%	31.62	31.62	4.8 W	3	8	7	11
31	85603	BCK	FORT CLISTER	GUARD	100.00%	3.84	3.84	14.4 W	0	0	0	0
32	91602	KAL	AMPERSEE	BORGESS	100.00%	4.98	4.98	4.8 W	0	1	2	2
33	78703	JAC	WISNER	WISNER	100.00%	5.68	5.68	4.8 W	0	0	1	3
34	129801	BNC	VANDERBILT	CORWITH	100.00%	17.65	17.65	13.2 D	5	1	1	4
35	151502	SAG	BUSCH ROAD	CANADA	100.00%	30.03	30.03	14.4 W	13	12	7	6
36	104202	GRN	ROGUE RIVER	ROGUE RIVER	100.00%	15.52	15.52	14.4 W	3	2	2	0
37	77602	MUS	KEATING	LAKETON	100.00%	12.04	12.04	7.2 W	6	2	1	3
38	49204	GRA	HASKELITE	3 MILE	100.00%	12.16	12.16	7.2 W	3	1	0	0
39	43303	GRN	FOUR MILE	BAUMHOFF	100.00%	13.71	13.71	7.2 W	8	2	3	1
40	21102	HML	BLACK RIVER	FILLMORE	100.00%	39.61	39.61	7.2 W	19	13	12	2
41	92102	GVL	DERBY	DERBY	100.00%	67.64	67.64	4.8 W	29	13	13	6
42	16204	BIG	REED CITY	HIGH SCHOOL	100.00%	28.82	28.82	4.8 W	7	3	3	0
43	25402	FRE	GRANT	MASON DRIVE	100.00%	30.59	30.59	4.8 W	9	5	3	2
44	10704	GRE	MEADOWBROOKE	MEADOWBROOKE	100.00%	5.32	5.32	7.2 W	0	1	0	0
45	49202	GRA	HASKELITE	RICHMOND	100.00%	4.37	4.37	7.2 W	0	0	0	0
46	75702	MUS	MAPLE GROVE	SUMMIT AVENUE	100.00%	14.5	14.50	7.2 W	8	2	3	2
47	77603	MUS	KEATING	KEATING	100.00%	1.72	1.72	7.2 W	3	0	0	0
48	107703	TRA	CASS ROAD	CASS ROAD	100.00%	12.77	12.77	7.2 W	0	0	0	0
49	17602	MUS	WESTERN AVENUE	LAKESIDE	100.00%	6.89	6.89	7.2 W	0	0	0	1
50	149702	LDG	BRYE ROAD	PROGRESS DRIVE	99.89%	8.91	8.90	14.4 W	0	0	0	0
51	148001	MUS	ARTHUR	ARTHUR	99.80%	30.42	30.36	7.2 W	3	6	5	1
52	51503	GRE	DUTTON	GATEWAY CROSSING	99.78%	8.95	8.93	7.2 W	0	0	0	0
53	112602	GRE	CASCADE	CASCADE	99.76%	24.68	24.62	4.8 W	8	0	3	2
54	39201	JAC	MORRELL	MCCAIN	99.72%	25.27	25.20	4.8 W	1	3	2	8
55	63902	JAC	PARNALL	PARNALL RD	99.56%	36.6	36.44	4.8 W	10	10	6	8
56	72703	GRA	BURLINGAME	NEWHALL	99.46%	11.19	11.13	7.2 W	3	0	0	0
57	3502	CAD	CADILLAC	HOSPITAL	99.31%	20.42	20.28	4.8 W	0	0	1	0
58	67302	HML	MACATAWA	BEE LINE	99.31%	13.09	13.00	4.8 W	5	1	2	0
59	122402	GRN	PETTIS ROAD	PETTIS RD	99.30%	41.17	40.88	14.4 W	28	10	12	7
60	152801	ADR	TRIPP ROAD	TRIPP ROAD	99.26%	49.89	49.52	4.8 W	3	4	1	2
61	60103	CAD	TUSTIN	LEROY	99.14%	47.79	47.38	14.4 W	8	9	11	9
62	10204	LAN	GRAND LEDGE	ACADEMY	99.11%	25.81	25.58	4.8 W	0	3	0	1
63	107602	ALM	ISABELLA	BROOMFIELD	98.95%	4.78	4.73	4.8 W	1	0	0	0
64	113404	CAD	HARING	THIRD AVENUE	98.89%	1.8	1.78	4.8 W	0	0	0	0
65	90003	MUS	DUPONT	OLD CHANNEL	98.87%	15.09	14.92	7.2 W	19	8	6	7
66	149701	LDG	BRYE ROAD	STILES ROAD	98.84%	19.77	19.54	14.4 W	10	0	1	1
67	151501	SAG	BUSCH ROAD	CURTIS	98.58%	47.96	47.28	14.4 W	29	14	15	5
68	129802	BNC	VANDERBILT	WOLVERINE	98.53%	73.48	72.40	13.2 D	23	18	27	19
69	88202	JAC	CARY ROAD	LAKE COLUMBIA	98.42%	33.64	33.11	14.4 W	7	9	13	3
70	72301	SAG	BARNARD	HOSPITAL	98.39%	4.98	4.90	4.8 W	0	1	1	0
71	55701	LDG	EAST LAKE	CHEMICAL	98.27%	21.39	21.02	7.2 W	8	0	1	0
72	129602	JAC	BLACKMAN	HURST	97.84%	42.96	42.03	14.4 W	11	18	8	7
73	91703	GRA	CLAY	WAREHOUSE	96.37%	7.16	6.90	7.2 W	0	0	1	0
74	50802	GVL	BELDING	MALL	96.15%	6.5	6.25	4.8 W	2	0	0	0
75	73201	BEN	DONTZ ROAD	PORTAGE	96.10%	40.48	38.90	7.2 W	21	10	9	13
76	23002	CLD	BRONSON	MILL STREET	95.81%	40.81	39.10	4.8 W	14	11	4	0
77	97701	SMN	STERNS ROAD	LEWIS	95.69%	21.34	20.42	7.2 W	1	2	0	0
78	150801	CLD	GIRARD	GIRARD	94.91%	43.43	41.22	4.8 W	13	12	16	3
79	68302	BNC	MACKINAW CITY	POND STREET	94.52%	23.73	22.43	14.4 W	9	1	3	4
80	24302	KAL	AUSTIN	LONG LAKE	94.30%	25.98	24.50	4.8 W	5	3	4	4
81	68603	KAL	PARKWAY	VINE	94.21%	7.77	7.32	4.8 W	3	0	1	1
82	70004	FLT	DEAN ROAD	PARSHALLVILLE	93.90%	53.46	50.20	14.4 W	28	10	15	5
83	56302	MUS	ROTHBURY	FERRY	93.87%	42.61	40.00	7.2 W	7	16	7	5
84	83504	SMN	JACKMAN	DEAN ROAD	93.60%	16.25	15.21	7.2 W	5	1	1	2
85	122101	WBR	WIRTZ ROAD	BOWMANVILLE	93.21%	33.13	30.88	4.8 W	10	14	10	10
86	84202	FLT	STACEY	STONEGATE	91.82%	10.02	9.20	14.4 W	2	0	2	2
87	22504	ALM	MIDDLETON	MIDDLETON	91.77%	54.92	50.40	4.8 W	3	9	0	0
88	155001	WBR	SMITH CREEK	SKIPARK (WEST)	91.61%	37.55	34.40	14.4 W	9	7	10	11
89	167901	BNC	MURNER	VAN TILE	90.44%	21.34	19.30	14.4 W	0	2	0	3
90	85802	LAN	BLUE WATER	SCOTT ROAD	90.10%	77.38	69.72	14.4 W	9	14	5	8
91	22201	GRN	COWAN LAKE	GRATTAN	89.39%	55.82	49.90	14.4 W	11	9	15	14
92	137202	JAC	BALZER	COMSTOCK	89.15%	51.79	46.17	14.4 W	12	6	8	3
93	155302	BCK	HALLS LAKE	HALLS LAKE	89.11%	25.62	22.83	4.8 W	5	17	1	4
94	155502	CAD	WOODWARD	PLEASANT LAKE	88.72%	39.9	35.40	14.4 D	8	6	7	2
95	6402	ADR	BEECHER	TOLEDO ROAD	87.92%	19.87	17.47	7.2 W	6	1	1	0
96	102701	MUS	SAVIDGE	BOOM ROAD	87.18%	34.41	30.00	7.2 W	14	14	9	1
97	51504	GRE	DUTTON	DUTTON	86.27%	43.77	37.76	7.2 W	4	1	4	2
98	68602	KAL	PARKWAY	BALCH	85.52%	2.21	1.89	4.8 W	0	0	0	1
99	61602	BCK	PRINCETON	BROWNLEE	84.50%	12	10.14	4.8 W	5	5	3	6
100	24802	GVL	EASTON	HAYNOR	84.28%	43.9	37.00	14.4 W	16	12	7	6
101	121702	CLR	FROST	LEOTA	83.02%	60.71	50.40	4.8 W	14	13	17	9
102	115702	OWS	NORTH CORUNNA	MEIJER	82.94%	43.5	36.08	4.8 W	3	1	1	0
103	42102	JAC	LAKE LEANN	LAKE LEANN	80.04%	65.47	52.40	14.4 W	16	6	12	9
104	152702	GRN	COIT AVENUE	FOREST RIDGE	79.10%	4.45	3.52	7.2 W	3	9	2	0
105	16202	BIG	REED CITY	MEDICAL	78.93%	5.22	4.12	4.8 W	1	0	7	0
106	2501	TRA	SUTTONS BAY	BINGHAM	77.77%	18.13	14.10	7.2 W	4	4	5	0
107	6401	ADR	BEECHER	DISPOSAL	76.96%	11.85	9.12	7.2 W	3	1	0	1
108	75705	MUS	MAPLE GROVE	WESTGATE	76.41%	8.52	6.51	7.2 W	1	0	2	0
109	72202	MDL	WALDO	LABORATORY	71.82%	16.57	11.90	4.8 W	3	5	10	3
110	137101	GVL	CLYDE ROAD	GLENN ROAD	71.78%	56.98	40.90	14.4 W	25	10	18	13
111	100801	CAD	HARRIETTA	CABERFAE	70.89%	10.34	7.33	14.4 D	6	7	1	2
112	48002	BNC	PELLSTON	DISTRIBUTION	70.08%	44.49	31.18	13.2 D	1	8	4	0
113	112003	LAN	HOGSBACK	PINE TREE	70.06%	31.4	22.00	4.8 W	0	1	5	2
114	62002	TRA	INTERLOCHEN	ART CAMP	69.77%	16.34	11.40	7.2 W	9	6	6	4
115	102601	SAG	TEFT ROAD	LAKEFIELD	67.87%	47.03	31.92	4.8 W	7	11	10	5
116	56601	LDG	BALDWIN	IDLEWILD	67.12%	64.36	43.20	4.8 W	34	24	17	12
117	121701	CLR	FROST	LONG LAKE	66.52%	45.55	30.30	4.8 W	15	28	22	17
118	4703	FRE	SPRING DRIVE	BISHOP LAKE	66.08%	84.74	56.00	14.4 W	33	18	24	9
119	6602	GRE	LABARGE	ALASKA	64.94%	33.11	21.50	4.8 W	9	2	10	8
120	95202	GVL	PECK ROAD	M-91	64.02%	29.68	19.00	14.4 W	14	11	4	16
121	30201	MUS	HOLTON	HOLTON	62.72%	129.3	81.10	14.4 W	84	12	37	29
122	56901	TRA	NORTHPORT	LIGHTHOUSE	62.71%	35.88	22.50	7.2 W	6	12	6	9
123	8505	BCK	ELM STREET	PORTER	58.93%	15.51	9.14	4.8 W	2	3	0	0
124	147201	GRA	DORR CORNERS	RED RUN	58.86%	42.81	25.20	4.8 W	12	2	9	3
125	53802	FLT	COURT	KENT	58.27%	9.61	5.60	4.8 W	0	0	0	0
126	64104	GRA	BAYBERRY	POWDERHORN	55.92%	16.04	8.97	7.2 W	0	1	0	2
127	25302	HST	NASHVILLE	NASHVILLE	55.83%	93.5	52.20	4.8 W	24	7	14	10
128	23103	CLD	MENDON	M-60	54.76%	69.39	38.00	14.4 W	11	13	10	4
129	19601	BCK	CONVIS	CONVIS	53.82%	48.87	26.30	14.4 W	22	25	16	15
130	84101	OWS	LOVEJOY	BRADEN	53.40%	111.42	59.50	14.4 W	18	9	19	6
131	102101	ADR	LOCH ERIN	PENTECOST	53.39%	43.1	23.01	4.8 W	2	5	6	6
132	139501	KAL	WARNER	MILO	52.17%	119.14	62.15	14.4 W	50	40	32	26
133	7101	SMN	ERIE	STRASBURG ROAD	52.07%	23.24	12.10	7.2 W	3	0	3	0
134	45301	GVL	BRICKER	BRICKER	51.55%	81.96	42.25	14.4 W	34	29	16	16
135				Totals					1094	748	743	508
136				Percent Improvement						31.6%	32.1%	53.6%
137									1 Yr Prior	Yr Trim	1 Yr Post	2 Yr Post
138				Totals		Only 100% cleared Circuits			226	128	140	91
1139				Percent Improvement		Percent Improvement				43.4%	38.1%	59.7%
140									1 Yr Prior	Yr Trim	1 Yr Post	2 Yr Post

141 Note 1 - The percent cleared is the percent of miles cleared for the year listed versus the circuit configuration miles in 2020. Circuits cleared less than 50% not shown.

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Line Clearing Reliability Resuts
Reliability Pre and Post Clearing for 2018, 2019, 2020 and 2021 Cleared LVD Circuits
(minimum 50% of circuit miles cleared for year listed, primary voltage outage incidents)

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	
1	Excluding MEDs												
2	Circuits Cleared in 2019								Tree Related Outage Incidents				
3	FEEDER_ID	WHQ	Substation	Circuit	% Cleared[1]	Circuit Mile	Comp Mile	Voltage (kV	2018	2019	2020	2021	2022
4	21302	JAC	SUMMIT	FRANCIS STREET	100.0%	10.72	10.72	4.8 W	2	2	2	2	2
5	95201	GVL	PECK ROAD	ORE-IDA	100.0%	11.42	11.42	14.4 W	1	0	0	0	1
6	40502	SMN	LASALLE	OTTER CREEK	100.0%	38.39	38.39	7.2 W	0	1	1	2	2
7	44801	LDG	PENTWATER	PENTWATER WIRE PROD	100.0%	15.45	15.45	7.2 W	11	5	2	4	2
8	1901	JAC	ROBERTS STREET	LEROY STREET	100.0%	16.16	16.16	4.8 W	4	1	0	2	1
9	32504	GRA	BOSTON SQUARE	MULICK PARK	100.0%	5.02	5.02	7.2 W	1	0	0	0	0
10	114502	ADR	CADMUS	BAKER	100.0%	23.39	23.39	7.2 W	0	1	0	1	1
11	50803	GVL	BELDING	COOKS CORNERS	100.0%	81.07	81.07	4.8 W	11	6	9	12	7
12	154202	KAL	SPICEBUSH	LACOTA	100.0%	37.88	37.88	14.4 D	4	7	2	6	2
13	18302	ADR	MANITOU BEACH	ADDISON	100.0%	60.76	60.76	4.8 W	5	2	4	4	1
14	103801	SMN	JEFFS ROAD	U.S. 23	100.0%	11.14	11.14	7.2 W	0	1	0	0	1
15	31702	GRA	ABERDEEN	ABERDEEN	100.0%	14.74	14.74	7.2 W	2	3	0	1	0
16	93602	MUS	HAYES STREET	172ND AVENUE	100.0%	4.85	4.85	4.8 W	0	1	0	0	0
17	127404	WBR	DUQUITE	PINE RIVER	100.0%	65.93	65.93	14.4 W	22	12	4	3	5
18	40401	BCK	ALBER	TERRITORIAL	100.0%	11.30	11.30	4.8 W	2	4	0	0	1
19	163703	JAC	WILLIS ROAD	LIST ROAD	100.0%	49.98	49.98	14.4 W	26	12	12	20	13
20	138301	HML	MILL GROVE	BABYLON	100.0%	25.15	25.15	14.4 W	5	4	2	5	2
21	97201	MDL	EASTLAWN	EASTLAWN	100.0%	8.95	8.95	4.8 W	1	0	0	1	0
22	160202	BIG	BARRYTON	CHIPPEWA LAKE	100.0%	42.48	42.48	14.4 W	3	5	5	3	5
23	50403	OWS	OLIVER	KING STREET	100.0%	6.29	6.29	4.8 W	1	0	0	1	0
24	6707	OWS	OWOSSO	GOULD	100.0%	17.54	17.54	4.8 W	2	0	1	2	0
25	11701	FLT	LINDEN	LOBDELL	100.0%	24.43	24.43	4.8 W	4	2	1	0	0
26	6706	OWS	OWOSSO	STEWART	99.7%	30.25	30.16	4.8 W	0	0	1	0	1
27	130301	LAN	WEST ROAD	WOOD ROAD	99.5%	26.42	26.30	4.8 W	1	1	0	0	0
28	42902	ADR	BLISSFIELD	CITY	99.4%	20.99	20.86	7.2 W	1	0	2	1	0
29	155402	SMN	DUNBAR	HULL	99.4%	14.26	14.17	7.2 W	0	0	0	0	0
30	128403	KAL	MILLERS POINT	CONCORD	99.3%	20.45	20.31	4.8 W	0	0	0	0	0
31	149902	KAL	ZYLMAN	ZYLMAN	99.3%	20.51	20.37	4.8 W	1	1	0	0	1
32	40402	BCK	ALBER	ALBERS	99.3%	5.39	5.35	4.8 W	3	2	2	1	1
33	80902	BCK	FIFTEEN MILE RD	15 MILE ROAD	99.2%	55.48	55.01	14.4 W	5	3	7	8	1
34	87702	BNC	BAGLEY	OTSEGO LAKE	99.1%	42.27	41.88	14.4 W	5	5	2	8	5
35	21902	BCK	GOGUAC	LAKEVIEW	98.9%	8.97	8.87	4.8 W	0	1	0	0	1
36	128402	KAL	MILLERS POINT	HOLIDAY	98.9%	22.98	22.72	4.8 W	0	1	1	0	0
37	127502	TWS	EAST TAWAS	LINCOLN STREET	98.7%	61.43	60.62	14.4 W	6	6	8	3	3
38	149803	FLT	WEST FENTON	OVERPASS	98.6%	13.47	13.28	4.8 W	0	0	0	1	0
39	13401	ADR	TECUMSEH	PATTERSON	98.5%	9.80	9.66	7.2 W	0	0	0	0	1
40	29602	JAC	VANDERCOOK LK	ACKERSON LAKE	98.1%	43.25	42.45	4.8 W	2	4	5	4	3
41	6201	FLT	GRAND BLANC	GRAND BLANC	97.9%	13.64	13.35	4.8 W	0	0	0	0	0
42	19603	BCK	CONVIS	MAR CREEK	97.8%	39.07	38.22	14.4 W	10	6	5	5	4
43	122401	GRN	PETTIS ROAD	HONEY CREEK	97.0%	60.60	58.76	14.4 W	12	10	6	14	9
44	52601	BNC	BOYNE CITY	BOYNE CITY	96.4%	21.99	21.21	7.2 W	1	2	1	1	3
45	37602	JAC	BATTEESE	PLEASANT LAKE	96.2%	63.85	61.42	14.4 W	6	7	7	7	4
46	71701	JAC	SPRING ARBOR	CHAPEL	95.4%	25.35	24.20	4.8 W	2	2	1	6	2
47	81602	LAN	HAGADORN	BEAUMONT	95.4%	12.93	12.33	4.8 W	0	2	0	0	0
48	96201	BNC	BEAUGRAND	HOSPITAL	95.4%	10.38	9.90	7.2 W	1	0	0	0	0
49	79002	SAG	SEIDEL	BROCKWAY	95.3%	18.54	17.67	4.8 W	2	0	0	0	2
50	54403	LDG	ORIOLE	HAMLIN	94.9%	41.65	39.53	14.4 W	6	12	8	11	5
51	21301	JAC	SUMMIT	SOUTH STREET	94.3%	8.15	7.68	4.8 W	2	0	0	0	1
52	42401	CAD	MARION	GASCOM	92.0%	60.83	55.99	14.4 D	7	5	8	7	4
53	78902	GRE	ALTO	MCCORDS	91.6%	55.92	51.20	4.8 W	4	5	7	9	3
54	78202	TWS	GREENBUSH	GREENBUSH	90.9%	39.93	36.30	12.0 D	10	4	3	7	1
55	127902	JAC	CAMBRIDGE	IRISH HILLS	90.9%	31.80	28.91	4.8 W	2	1	2	3	1
56	10402	CLR	GLADWIN	SPRING	89.9%	11.07	9.95	4.8 W	5	0	1	0	0
57	77201	JAC	SCIPIO	MOSHERVILLE	88.9%	48.16	42.79	4.8 W	7	6	1	8	1
58	125202	LAN	UPTON	MARKET PLACE	88.6%	11.03	9.78	4.8 W	3	0	0	0	1
59	57302	BIG	OHMAN ROAD	HERSEY	87.3%	46.54	40.62	14.4 W	12	5	4	10	3
60	138303	HML	MILL GROVE	DUMONT	87.1%	85.71	74.69	14.4 W	19	25	27	23	8
61	93601	MUS	HAYES STREET	HAYES STREET	84.2%	14.22	11.97	4.8 W	4	2	1	3	2
62	49701	BCK	OLIVET	AINGER	83.1%	28.08	23.34	4.8 W	3	2	2	5	0
63	71202	ADR	COLLEGE PARK	MADISON	77.1%	16.08	12.40	7.2 W	0	0	0	1	0
64	134701	SAG	BELL ROAD	RATHBUN	77.0%	28.07	21.60	14.4 W	4	6	1	4	4
65	44202	MUS	MONTAGUE	NORTH SHORE	76.6%	51.00	39.08	7.2 W	4	13	1	4	4
66	78201	TWS	GREENBUSH	HARRISVILLE	76.2%	29.58	22.54	12.0 D	2	0	2	5	1
67	104102	ALM	GILSON	ROCK LAKE	74.1%	18.31	13.57	14.4 W	3	1	0	0	0
68	1101	GRN	BELLA VISTA	BELLA VISTA	73.6%	9.99	7.35	4.8 W	3	0	1	3	0
69	75704	MUS	MAPLE GROVE	SHAW BOX	72.0%	9.63	6.94	7.2 W	0	3	0	0	0
70	30202	FRE	HOLTON	MAPLE ISLAND	71.8%	152.11	109.16	14.4 W	20	14	17	11	20
71	137002	BCY	HOTCHKISS	BAY VALLEY	71.4%	6.95	4.96	14.4 W	0	0	0	0	0
72	100901	CLR	SURREY	SURREY	69.2%	57.81	39.98	14.4 W	10	5	5	8	14
73	60102	CAD	TUSTIN	LUTHER	67.2%	92.48	62.15	14.4 W	7	8	8	9	11
74	42502	CLD	KINDERHOOK	GILEAD	66.4%	112.91	75.02	4.8 W	13	27	8	7	3
75	33302	TWS	AU GRES	AU GRES	65.7%	58.77	38.63	11.0 D	23	5	6	7	3
76	123102	BIG	BIG PRAIRIE	OXBOW	64.7%	33.71	21.80	4.8 W	6	13	5	8	10
77	3506	CAD	CADILLAC	BERRY LAKE	64.3%	21.09	13.56	14.4 D	9	8	0	0	2
78	137301	KAL	TWILIGHT	EAST TOWNE	63.2%	20.24	12.79	4.8 W	1	2	0	0	0
79	127702	MDL	LEVELY	STURGEON	60.9%	110.77	67.47	14.4 W	18	24	15	27	8
80	60101	CAD	TUSTIN	WWTV	57.9%	54.36	31.50	14.4 W	5	9	4	7	6
81	57301	BIG	OHMAN ROAD	EVART	56.2%	39.95	22.46	14.4 W	7	3	4	10	3
82	7101	SMN	ERIE	STRASBURG ROAD	55.7%	23.24	12.94	7.2 W	0	3	0	2	0
83	34401	GRN	HULL STREET	LIME LAKE	55.5%	59.53	33.03	14.4 W	20	20	8	10	8
84	54602	TRA	ALDEN	CLAM	54.8%	38.70	21.19	7.2 W	5	13	6	3	15
85	21202	KAL	PHILLIPS	FACTORY	54.5%	6.95	3.79	4.8 W	2	0	0	0	0
86	63502	BCK	LEVEL PARK	LEVEL PARK	54.3%	19.66	10.67	4.8 W	0	2	1	5	6
87	151101	TRA	LELAND	NARROWS	52.2%	15.00	7.83	7.2 W	2	0	3	4	3
88													
89				Totals		2815.29	2377.26		413	368	252	349	238
90				Percent Improvement						10.9%	39.0%	15.5%	42.4%
91									1 Yr Prior	Yr Trim	1 Yr Post	2 Yr Post	3 Yr Post
92				Totals		Only 100% cleared Circuits			107	69	45	69	46
93				Percent Improvement		Percent Improvement				35.5%	57.9%	35.5%	57.0%
94									1 Yr Prior	Yr Trim	1 Yr Post	2 Yr Post	3 Yr Post

95 Note 1 - The percent cleared is the percent of miles cleared for the year listed versus the circuit configuration miles in 2020. Circuits cleared less than 50% not shown.

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Line Clearing Reliability Resuts
Reliability Pre and Post Clearing for 2018, 2019, 2020 and 2021 Cleared LVD Circuits
(minimum 50% of circuit miles cleared for year listed, primary voltage outage incidents)

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	
1	Including MEDs												
2	Circuits Cleared in 2019								Tree Related Outage Incidents				
3	FEEDER_ID	WHQ	Substation	Circuit	% Cleared[1]	Circuit Mil	Comp Mile	Voltage (kV	2018	2019	2020	2021	2022
4	21302	JAC	SUMMIT	FRANCIS STREET	100.0%	10.72	10.72	4.8 W	2	2	3	2	2
5	95201	GVL	PECK ROAD	ORE-IDA	100.0%	11.42	11.42	14.4 W	4	0	0	0	2
6	40502	SMN	LASALLE	OTTER CREEK	100.0%	38.39	38.39	7.2 W	0	1	1	2	2
7	44801	LDG	PENTWATER	PENTWATER WIRE PROD	100.0%	15.45	15.45	7.2 W	17	7	3	10	3
8	1901	JAC	ROBERTS STREET	LEROY STREET	100.0%	16.16	16.16	4.8 W	4	1	0	2	4
9	32504	GRA	BOSTON SQUARE	MULICK PARK	100.0%	5.02	5.02	7.2 W	1	3	0	0	0
10	114502	ADR	CADMUS	BAKER	100.0%	23.39	23.39	7.2 W	0	1	1	2	1
11	50803	GVL	BELDING	COOKS CORNERS	100.0%	81.07	81.07	4.8 W	18	17	12	20	14
12	154202	KAL	SPICEBUSH	LACOTA	100.0%	37.88	37.88	14.4 D	7	13	5	10	2
13	18302	ADR	MANITOU BEACH	ADDISON	100.0%	60.76	60.76	4.8 W	7	6	5	6	5
14	103801	SMN	JEFFS ROAD	U.S. 23	100.0%	11.14	11.14	7.2 W	0	2	0	0	1
15	31702	GRA	ABERDEEN	ABERDEEN	100.0%	14.74	14.74	7.2 W	3	4	0	2	0
16	93602	MUS	HAYES STREET	172ND AVENUE	100.0%	4.85	4.85	4.8 W	0	1	0	0	0
17	127404	WBR	DUQUITE	PINE RIVER	100.0%	65.93	65.93	14.4 W	33	14	12	10	8
18	40401	BCK	ALBER	TERRITORIAL	100.0%	11.30	11.30	4.8 W	2	4	0	0	1
19	163703	JAC	WILLIS ROAD	LIST ROAD	100.0%	49.98	49.98	14.4 W	30	12	12	35	19
20	138301	HML	MILL GROVE	BABYLON	100.0%	25.15	25.15	14.4 W	5	6	6	7	3
21	97201	MDL	EASTLAWN	EASTLAWN	100.0%	8.95	8.95	4.8 W	1	0	0	1	0
22	160202	BIG	BARRYTON	CHIPPEWA LAKE	100.0%	42.48	42.48	14.4 W	5	6	8	8	7
23	50403	OWS	OLIVER	KING STREET	100.0%	6.29	6.29	4.8 W	1	0	0	1	0
24	6707	OWS	OWOSSO	GOULD	100.0%	17.54	17.54	4.8 W	2	0	1	2	1
25	11701	FLT	LINDEN	LOBDELL	100.0%	24.43	24.43	4.8 W	4	3	1	0	0
26	6706	OWS	OWOSSO	STEWART	99.7%	30.25	30.16	4.8 W	0	0	1	0	1
27	130301	LAN	WEST ROAD	WOOD ROAD	99.5%	26.42	26.30	4.8 W	1	1	0	1	0
28	42902	ADR	BLISSFIELD	CITY	99.4%	20.99	20.86	7.2 W	2	0	2	1	0
29	155402	SMN	DUNBAR	HULL	99.4%	14.26	14.17	7.2 W	0	0	0	0	0
30	128403	KAL	MILLERS POINT	CONCORD	99.3%	20.45	20.31	4.8 W	0	0	0	0	1
31	149902	KAL	ZYLMAN	ZYLMAN	99.3%	20.51	20.37	4.8 W	1	1	2	0	1
32	40402	BCK	ALBER	ALBERS	99.3%	5.39	5.35	4.8 W	3	2	2	2	1
33	80902	BCK	FIFTEEN MILE RD	15 MILE ROAD	99.2%	55.48	55.01	14.4 W	10	6	12	11	4
34	87702	BNC	BAGLEY	OTSEGO LAKE	99.1%	42.27	41.88	14.4 W	9	7	3	13	10
35	21902	BCK	GOGUAC	LAKEVIEW	98.9%	8.97	8.87	4.8 W	0	1	0	0	1
36	128402	KAL	MILLERS POINT	HOLIDAY	98.9%	22.98	22.72	4.8 W	0	1	1	1	0
37	127502	TWS	EAST TAWAS	LINCOLN STREET	98.7%	61.43	60.62	14.4 W	8	7	14	8	7
38	149803	FLT	WEST FENTON	OVERPASS	98.6%	13.47	13.28	4.8 W	0	0	0	1	1
39	13401	ADR	TECUMSEH	PATTERSON	98.5%	9.80	9.66	7.2 W	0	0	0	0	2
40	29602	JAC	VANDERCOOK LK	ACKERSON LAKE	98.1%	43.25	42.45	4.8 W	3	5	8	12	7
41	6201	FLT	GRAND BLANC	GRAND BLANC	97.9%	13.64	13.35	4.8 W	0	0	0	0	0
42	19603	BCK	CONVIS	MAR CREEK	97.8%	39.07	38.22	14.4 W	13	10	9	10	10
43	122401	GRN	PETTIS ROAD	HONEY CREEK	97.0%	60.60	58.76	14.4 W	15	20	6	18	13
44	52601	BNC	BOYNE CITY	BOYNE CITY	96.4%	21.99	21.21	7.2 W	4	4	3	2	4
45	37602	JAC	BATTEESE	PLEASANT LAKE	96.2%	63.85	61.42	14.4 W	8	10	8	16	10
46	71701	JAC	SPRING ARBOR	CHAPEL	95.4%	25.35	24.20	4.8 W	2	6	4	9	8
47	81602	LAN	HAGADORN	BEAUMONT	95.4%	12.93	12.33	4.8 W	1	2	0	0	0
48	96201	BNC	BEAUGRAND	HOSPITAL	95.4%	10.38	9.90	7.2 W	2	0	0	1	0
49	79002	SAG	SEIDEL	BROCKWAY	95.3%	18.54	17.67	4.8 W	3	0	1	0	2
50	54403	LDG	ORIOLE	HAMLIN	94.9%	41.65	39.53	14.4 W	7	20	14	15	6
51	21301	JAC	SUMMIT	SOUTH STREET	94.3%	8.15	7.68	4.8 W	2	0	0	1	1
52	42401	CAD	MARION	GASCOM	92.0%	60.83	55.99	14.4 D	9	9	14	11	9
53	78902	GRE	ALTO	MCCORDS	91.6%	55.92	51.20	4.8 W	4	17	8	15	4
54	78202	TWS	GREENBUSH	GREENBUSH	90.9%	39.93	36.30	12.0 D	12	5	5	13	4
55	127902	JAC	CAMBRIDGE	IRISH HILLS	90.9%	31.80	28.91	4.8 W	2	1	2	9	2
56	10402	CLR	GLADWIN	SPRING	89.9%	11.07	9.95	4.8 W	5	1	2	2	0
57	77201	JAC	SCIPIO	MOSHERVILLE	88.9%	48.16	42.79	4.8 W	8	6	6	15	3
58	125202	LAN	UPTON	MARKET PLACE	88.6%	11.03	9.78	4.8 W	3	0	1	1	1
59	57302	BIG	OHMAN ROAD	HERSEY	87.3%	46.54	40.62	14.4 W	15	12	6	20	3
60	138303	HML	MILL GROVE	DUMONT	87.1%	85.71	74.69	14.4 W	29	40	37	32	13
61	93601	MUS	HAYES STREET	HAYES STREET	84.2%	14.22	11.97	4.8 W	5	5	1	7	2
62	49701	BCK	OLIVET	AINGER	83.1%	28.08	23.34	4.8 W	5	11	7	7	3
63	71202	ADR	COLLEGE PARK	MADISON	77.1%	16.08	12.40	7.2 W	0	0	0	2	0
64	134701	SAG	BELL ROAD	RATHBUN	77.0%	28.07	21.60	14.4 W	8	7	2	5	5
65	44202	MUS	MONTAGUE	NORTH SHORE	76.6%	51.00	39.08	7.2 W	7	21	1	6	4
66	78201	TWS	GREENBUSH	HARRISVILLE	76.2%	29.58	22.54	12.0 D	2	0	3	8	2
67	104102	ALM	GILSON	ROCK LAKE	74.1%	18.31	13.57	14.4 W	3	2	0	2	0
68	1101	GRN	BELLA VISTA	BELLA VISTA	73.6%	9.99	7.35	4.8 W	4	2	1	3	1
69	75704	MUS	MAPLE GROVE	SHAW BOX	72.0%	9.63	6.94	7.2 W	0	4	1	0	0
70	30202	FRE	HOLTON	MAPLE ISLAND	71.8%	152.11	109.16	14.4 W	27	29	22	28	22
71	137002	BCY	HOTCHKISS	BAY VALLEY	71.4%	6.95	4.96	14.4 W	0	0	0	0	2
72	100901	CLR	SURREY	SURREY	69.2%	57.81	39.98	14.4 W	13	9	10	19	23
73	60102	CAD	TUSTIN	LUTHER	67.2%	92.48	62.15	14.4 W	9	10	16	15	11
74	42502	CLD	KINDERHOOK	GILEAD	66.4%	112.91	75.02	4.8 W	14	31	12	16	3
75	33302	TWS	AU GRES	AU GRES	65.7%	58.77	38.63	11.0 D	34	9	15	13	3
76	123102	BIG	BIG PRAIRIE	OXBOW	64.7%	33.71	21.80	4.8 W	12	17	8	15	10
77	3506	CAD	CADILLAC	BERRY LAKE	64.3%	21.09	13.56	14.4 D	13	8	1	0	2
78	137301	KAL	TWILIGHT	EAST TOWNE	63.2%	20.24	12.79	4.8 W	1	2	0	1	2
79	127702	MDL	LEVELY	STURGEON	60.9%	110.77	67.47	14.4 W	29	32	18	52	17
80	60101	CAD	TUSTIN	WWTV	57.9%	54.36	31.50	14.4 W	6	14	5	7	7
81	57301	BIG	OHMAN ROAD	EVART	56.2%	39.95	22.46	14.4 W	10	9	7	20	11
82	7101	SMN	ERIE	STRASBURG ROAD	55.7%	23.24	12.94	7.2 W	0	3	0	3	0
83	34401	GRN	HULL STREET	LIME LAKE	55.5%	59.53	33.03	14.4 W	30	40	15	26	11
84	54602	TRA	ALDEN	CLAM	54.8%	38.70	21.19	7.2 W	24	14	11	10	18
85	21202	KAL	PHILLIPS	FACTORY	54.5%	6.95	3.79	4.8 W	3	0	0	1	0
86	63502	BCK	LEVEL PARK	LEVEL PARK	54.3%	19.66	10.67	4.8 W	1	2	2	6	11
87	151101	TRA	LELAND	NARROWS	52.2%	15.00	7.83	7.2 W	4	1	4	5	4
88													
89				Totals		2815.29	2377.26		591	579	403	637	378
90				Percent Improvement						2.0%	31.8%	-7.8%	36.0%
91									1 Yr Prior	Yr Trim	1 Yr Post	2 Yr Post	
92				Totals		Only 100% cleared Circuits			146	103	70	120	75
93				Percent Improvement		Percent Improvement				29.5%	52.1%	17.8%	48.6%
94									1 Yr Prior	Yr Trim	1 Yr Post	2 Yr Post	

95 Note 1 - The percent cleared is the percent of miles cleared for the year listed versus the circuit configuration miles in 2020. Circuits cleared less than 50% not shown.

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Line Clearing Reliability Resuts
Reliability Pre and Post Clearing for 2018, 2019, 2020 and 2021 Cleared LVD Circuits
(minimum 50% of circuit miles cleared for year listed, primary voltage outage incidents)

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	
1	Excluding MEDs													
2	Circuits Cleared in 2018								Tree Related Outage Incidents					
3	FEEDER_ID	WHQ	Substation	Circuit	% Cleared[1]	Circuit Mil	Comp Mile	Voltage (kV	2017	2018	2019	2020	2021	2022
4	24203	CAD	MCBAIN	LUCAS	100.0%	11.88	11.88	14.4 D	16	6	2	0	0	0
5	39202	JAC	MORRELL	WEST AVENUE	100.0%	11.02	11.02	4.8 W	3	2	0	1	1	3
6	155801	SMN	SCHOOL ROAD	MOROCCO	100.0%	48.56	48.56	7.2 W	5	7	1	3	11	3
7	50302	GRN	NORTH PARK	COIT	100.0%	5.43	5.43	7.2 W	0	0	0	0	0	0
8	702	MUS	MUSKEGON HEIGHTS	LEAHY	100.0%	2.88	2.88	7.2 W	1	0	1	0	0	0
9	101801	KAL	COLONY FARM	BTR PARK	100.0%	3.94	3.94	14.4 W	1	0	0	0	0	0
10	148302	CLR	MANNSIDING	MANNSIDING	100.0%	60.62	60.62	14.4 W	4	1	2	4	4	7
11	19203	ADR	RIGA	BIERMAN	100.0%	39.56	39.56	7.2 W	1	0	0	0	0	0
12	98203	GRA	LEFFINGWELL	RAPIDSTAN	100.0%	5.66	5.66	7.2 W	1	1	1	0	0	2
13	93901	WBR	LYON MANOR	TREASURE	100.0%	17.40	17.40	4.8 W	7	5	0	3	4	6
14	32501	GRA	BOSTON SQUARE	NELAND	100.0%	8.92	8.92	7.2 W	0	1	0	0	0	1
15	704	MUS	MUSKEGON HEIGHTS	HEIGHTS	100.0%	11.07	11.07	7.2 W	3	0	1	0	2	1
16	81503	LAN	HARPER ROAD	ONONDAGA	100.0%	51.21	51.21	14.4 W	9	4	2	3	7	11
17	158201	WBR	RYNO	MORENCI	100.0%	70.77	70.77	14.4 W	30	5	1	13	7	5
18	67504	MUS	MCCRACKEN	SHERMAN	100.0%	7.82	7.82	7.2 W	1	0	1	1	0	1
19	42601	ADR	PITTSFORD	CHURCH ROAD	100.0%	109.83	109.83	14.4 W	11	10	8	5	4	15
20	53001	FRE	WHITE CLOUD	WILLIAM STREET	100.0%	24.07	24.07	4.8 W	2	1	1	0	0	4
21	157004	FLT	MILBOURNE	DARTMOUTH	100.0%	10.14	10.14	4.8 W	1	0	0	0	1	2
22	50502	SAG	BRISTOL	MILLER	100.0%	5.76	5.76	4.8 W	0	0	1	0	0	1
23	53801	FLT	COURT	WOODLAWN	100.0%	8.40	8.40	4.8 W	0	0	0	0	0	0
24	128401	KAL	MILLERS POINT	MEADOW VIEW	99.3%	10.93	10.85	4.8 W	0	0	6	0	2	2
25	10202	LAN	GRAND LEDGE	HARTEL ROAD	98.9%	13.27	13.12	4.8 W	0	2	0	0	0	0
26	107601	ALM	ISABELLA	PICKARD	98.7%	14.99	14.79	4.8 W	0	0	0	0	0	0
27	50501	SAG	BRISTOL	BRISTOL	98.2%	6.27	6.15	4.8 W	0	1	0	0	0	0
28	29303	WBR	MARKEY	FOREST ESTATES	98.1%	21.04	20.63	4.8 W	2	7	2	1	3	6
29	21303	JAC	SUMMIT	FOURTH STREET	97.8%	11.59	11.33	4.8 W	1	0	0	0	2	0
30	39303	SAG	NIAGARA	NIAGARA	97.2%	9.09	8.83	4.8 W	2	0	0	1	1	0
31	63403	KAL	KILGORE	MOUNT EVEREST	97.1%	8.36	8.12	4.8 W	2	2	0	0	1	0
32	155401	SMN	DUNBAR	DUNBAR	97.0%	17.16	16.65	7.2 W	0	1	0	2	0	0
33	37601	JAC	BATTEESE	COON HILL	97.0%	46.84	45.43	14.4 W	3	12	1	6	2	26
34	57002	CLD	COLON	PALMER	96.2%	56.69	54.55	4.8 W	3	3	3	5	14	6
35	26901	HML	OTSEGO	OTSEGO	96.2%	7.52	7.23	4.8 W	1	0	0	0	0	3
36	140202	WBR	SIMMONS	CABIN LAKE	96.0%	14.16	13.59	14.4 W	0	1	1	1	1	1
37	127701	MDL	LEVELY	ALLBRIGHT	95.6%	87.79	83.95	14.4 W	3	11	6	4	12	15
38	149002	LAN	PACKARD	PACKARD	94.2%	18.66	17.58	14.4 W	2	0	0	0	1	1
39	24301	KAL	AUSTIN	WEST LAKE	94.1%	29.89	28.13	4.8 W	4	3	5	2	1	6
40	33802	CLR	HARRISON	HARRISON	94.0%	45.46	42.74	4.8 W	3	1	4	8	2	6
41	48601	BCK	MORGAN	ORCHARD	93.6%	27.33	25.59	4.8 W	2	2	3	3	11	3
42	132304	MDL	ORCHARD ROAD	ST ANDREWS	92.7%	16.05	14.89	4.8 W	0	0	1	2	2	0
43	60701	MUS	GETTY	MARQUETTE	92.3%	26.56	24.53	7.2 W	2	1	3	2	2	0
44	67404	LAN	DEXTER TRAIL	DANSVILLE	89.0%	46.24	41.16	14.4 W	6	4	2	3	4	5
45	50101	KAL	EASTWOOD	TEXEL	88.7%	12.21	10.83	4.8 W	1	3	1	1	2	6
46	104201	GRN	ROGUE RIVER	CANNON FARMS	88.7%	58.08	51.51	14.4 W	19	10	2	4	4	8
47	71702	JAC	SPRING ARBOR	ARBOR HILLS	88.5%	52.74	46.69	4.8 W	5	5	7	3	10	6
48	27502	KAL	OAKWOOD	PARKVIEW	88.3%	10.14	8.95	4.8 W	3	2	3	5	3	5
49	22202	GRN	COWAN LAKE	RAMSDELL	87.0%	64.19	55.82	14.4 W	15	17	10	12	6	18
50	156202	BCK	CRANBROOK	11 MILE ROAD	85.5%	23.18	19.82	14.4 W	2	0	2	2	2	3
51	32002	KAL	STADIUM	COLLEGE	84.3%	6.14	5.18	4.8 W	0	0	1	2	3	0
52	32503	GRA	BOSTON SQUARE	HALL	83.3%	10.45	8.71	7.2 W	1	2	1	0	2	1
53	57001	CLD	COLON	COLON	83.1%	61.58	51.19	4.8 W	10	1	10	1	10	9
54	6802	BEN	HOMESTEAD	BEULAH	82.7%	83.69	69.19	7.2 W	14	17	12	10	12	21
55	147602	LAN	VAN ATTA	VAN ATTA	81.3%	54.62	44.42	4.8 W	4	0	0	2	3	2
56	70801	GRA	MICHIGAN	LYDIA	81.2%	8.15	6.62	7.2 W	1	0	1	0	0	1
57	161902	GRE	EMERSON	KILMER	81.0%	53.87	43.66	7.2 W	5	4	7	8	7	3
58	129601	JAC	BLACKMAN	SANDSTONE	78.7%	53.20	41.89	14.4 W	13	14	8	4	11	7
59	42002	BCK	BEADLE	SPAULDING	75.6%	47.05	35.56	4.8 W	11	7	6	15	12	7
60	48001	BNC	PELLSTON	BURT LAKE	74.9%	73.81	55.25	13.2 D	24	14	8	20	23	16
61	150001	WBR	WITHEY LAKE	PETTIT	74.6%	100.48	74.91	14.4 W	23	9	17	19	15	13
62	82904	GRA	MULLINS	ROYAL VISTA	69.5%	34.94	24.27	7.2 W	2	8	2	1	0	2
63	80901	BCK	FIFTEEN MILE RD	A DRIVE	67.7%	35.40	23.96	14.4 W	4	1	1	4	0	8
64	106503	FLT	FOURTEENTH ST	LIBERTY ST	67.3%	7.95	5.35	4.8 W	2	0	0	0	0	2
65	129401	JAC	BROUGHWELL	MINARD	62.3%	179.04	111.51	14.4 W	27	23	16	20	29	39
66	154302	GVL	HARVARD LAKE	COURTLAND	61.2%	47.27	28.91	14.4 W	6	4	1	5	3	6
67	35002	MUS	FRUITPORT	JUDSON ROAD	60.9%	38.71	23.56	7.2 W	5	4	14	6	4	10
68	39702	KAL	GULL LAKE	WILLOW BEACH	60.0%	18.05	10.83	4.8 W	2	9	4	9	3	7
69	151601	TWS	HUBBARD LAKE	HUBBARD LAKE	56.0%	15.41	8.63	14.4 W	4	0	4	2	2	4
70	100502	OWS	CHAPIN	MARION	55.6%	108.47	60.34	4.8 W	21	10	6	9	6	2
71	33803	CLR	HARRISON	STOCKWELL	54.5%	34.82	18.97	4.8 W	3	2	5	6	8	4
72	75901	JAC	REYNOLDS	REYNOLDS	52.5%	47.74	25.06	14.4 W	10	8	9	10	4	13
73	57301	BIG	OHMAN ROAD	EVART	51.0%	39.95	20.38	14.4 W	4	7	3	4	10	11
74	7402	ADR	HUDSON	CITY	51.0%	48.38	24.67	4.8 W	5	9	3	7	5	3
75				Totals		2,480.54	2,041.42		378	284	223	264	301	379
76				Percent Improvement						24.9%	41.0%	30.2%	20.4%	-0.3%
77									1 Yr Prior	Yr Trim	1 Yr Post	2 Yr Post	3 Yr Post	4 Yr Post
78				Totals	Only 100% cleared Circuits				96	43	22	33	41	62
79				Percent Improvement						55.2%	77.1%	65.6%	57.3%	35.4%
80									1 Yr Prior	Yr Trim	1 Yr Post	2 Yr Post	3 Yr Post	4 Yr Post

81 Note 1 - The percent cleared is the percent of miles cleared for the year listed versus the circuit configuration miles in 2020. Circuits cleared less than 50% not shown.

MICHIGAN PUBLIC SERVICE COMMISSION

Case No.: U-21389
Exhibit No.: A-45 (PLB-4)
Page: 10 of 10
Witness: PLBolden
Date: May 2023

Consumers Energy Company
Line Clearing Reliability Resuts
Reliability Pre and Post Clearing for 2018, 2019, 2020 and 2021 Cleared LVD Circuits
(minimum 50% of circuit miles cleared for year listed, primary voltage outage incidents)

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	
1	Including MEDs													
2	Circuits Cleared in 2018								Tree Related Outage Incidents					
3	FEEDER_ID	WHQ	Substation	Circuit	% Cleared[1]	Circuit Mil	Comp Mile	Voltage (kV	2017	2018	2019	2020	2021	2022
4	24203	CAD	MCBAIN	LUCAS	100.0%	11.88	11.88	14.4 D	17	10	2	0	1	0
5	39202	JAC	MORRELL	WEST AVENUE	100.0%	11.02	11.02	4.8 W	4	3	0	2	1	3
6	155801	SMN	SCHOOL ROAD	MOROCCO	100.0%	48.56	48.56	7.2 W	8	7	1	3	17	3
7	50302	GRN	NORTH PARK	COIT	100.0%	5.43	5.43	7.2 W	1	0	0	0	0	0
8	702	MUS	MUSKEGON HEIGHTS	LEAHY	100.0%	2.88	2.88	7.2 W	1	0	1	0	0	0
9	101801	KAL	COLONY FARM	BTR PARK	100.0%	3.94	3.94	14.4 W	2	0	0	0	0	0
10	148302	CLR	MANNSIDING	MANNSIDING	100.0%	60.62	60.62	14.4 W	5	8	6	14	9	7
11	19203	ADR	RIGA	BIERMAN	100.0%	39.56	39.56	7.2 W	1	0	0	0	0	0
12	98203	GRA	LEFFINGWELL	RAPIDSTAN	100.0%	5.66	5.66	7.2 W	1	1	1	0	0	2
13	93901	WBR	LYON MANOR	TREASURE	100.0%	17.40	17.40	4.8 W	13	6	0	4	6	6
14	32501	GRA	BOSTON SQUARE	NELAND	100.0%	8.92	8.92	7.2 W	1	1	0	0	0	1
15	704	MUS	MUSKEGON HEIGHTS	HEIGHTS	100.0%	11.07	11.07	7.2 W	3	1	1	0	2	1
16	81503	LAN	HARPER ROAD	ONONDAGA	100.0%	51.21	51.21	14.4 W	14	9	6	4	7	11
17	158201	WBR	RYNO	MORENCI	100.0%	70.77	70.77	14.4 W	40	8	2	17	8	5
18	67504	MUS	MCCRACKEN	SHERMAN	100.0%	7.82	7.82	7.2 W	1	0	1	1	1	1
19	42601	ADR	PITTSFORD	CHURCH ROAD	100.0%	109.83	109.83	14.4 W	18	12	9	6	8	15
20	53001	FRE	WHITE CLOUD	WILLIAM STREET	100.0%	24.07	24.07	4.8 W	4	4	4	1	1	4
21	157004	FLT	MILBOURNE	DARTMOUTH	100.0%	10.14	10.14	4.8 W	1	1	0	1	1	2
22	50502	SAG	BRISTOL	MILLER	100.0%	5.76	5.76	4.8 W	0	0	1	2	0	1
23	53801	FLT	COURT	WOODLAWN	100.0%	8.40	8.40	4.8 W	0	0	0	1	0	0
24	128401	KAL	MILLERS POINT	MEADOW VIEW	99.3%	10.93	10.85	4.8 W	0	0	6	0	2	2
25	10202	LAN	GRAND LEDGE	HARTEL ROAD	98.9%	13.27	13.12	4.8 W	0	2	0	0	1	0
26	107601	ALM	ISABELLA	PICKARD	98.7%	14.99	14.79	4.8 W	0	0	0	0	0	0
27	50501	SAG	BRISTOL	BRISTOL	98.2%	6.27	6.15	4.8 W	0	1	0	1	1	0
28	29303	WBR	MARKEY	FOREST ESTATES	98.1%	21.04	20.63	4.8 W	5	22	2	3	4	6
29	21303	JAC	SUMMIT	FOURTH STREET	97.8%	11.59	11.33	4.8 W	1	0	1	1	2	0
30	39303	SAG	NIAGARA	NIAGARA	97.2%	9.09	8.83	4.8 W	2	0	0	3	1	0
31	63403	KAL	KILGORE	MOUNT EVEREST	97.1%	8.36	8.12	4.8 W	2	2	0	0	1	0
32	155401	SMN	DUNBAR	DUNBAR	97.0%	17.16	16.65	7.2 W	0	1	0	2	0	0
33	37601	JAC	BATTEESE	COON HILL	97.0%	46.84	45.43	14.4 W	10	13	4	10	5	26
34	57002	CLD	COLON	PALMER	96.2%	56.69	54.55	4.8 W	3	4	4	7	24	6
35	26901	HML	OTSEGO	OTSEGO	96.2%	7.52	7.23	4.8 W	1	0	0	1	0	3
36	140202	WBR	SIMMONS	CABIN LAKE	96.0%	14.16	13.59	14.4 W	0	1	2	2	3	1
37	127701	MDL	LEVELY	ALLBRIGHT	95.6%	87.79	83.95	14.4 W	7	18	8	6	28	15
38	149002	LAN	PACKARD	PACKARD	94.2%	18.66	17.58	14.4 W	6	0	2	1	2	1
39	24301	KAL	AUSTIN	WEST LAKE	94.1%	29.89	28.13	4.8 W	7	4	9	5	1	6
40	33802	CLR	HARRISON	HARRISON	94.0%	45.46	42.74	4.8 W	4	2	6	13	6	6
41	48601	BCK	MORGAN	ORCHARD	93.6%	27.33	25.59	4.8 W	3	3	5	6	16	3
42	132304	MDL	ORCHARD ROAD	ST ANDREWS	92.7%	16.05	14.89	4.8 W	0	2	2	5	2	0
43	60701	MUS	GETTY	MARQUETTE	92.3%	26.56	24.53	7.2 W	2	1	3	2	5	0
44	67404	LAN	DEXTER TRAIL	DANSVILLE	89.0%	46.24	41.16	14.4 W	7	6	3	3	4	5
45	50101	KAL	EASTWOOD	TEXEL	88.7%	12.21	10.83	4.8 W	1	4	3	1	3	6
46	104201	GRN	ROGUE RIVER	CANNON FARMS	88.7%	58.08	51.51	14.4 W	20	11	11	5	7	8
47	71702	JAC	SPRING ARBOR	ARBOR HILLS	88.5%	52.74	46.69	4.8 W	8	6	9	3	15	6
48	27502	KAL	OAKWOOD	PARKVIEW	88.3%	10.14	8.95	4.8 W	5	3	4	6	3	5
49	22202	GRN	COWAN LAKE	RAMSDELL	87.0%	64.19	55.82	14.4 W	17	25	22	19	20	18
50	156202	BCK	CRANBROOK	11 MILE ROAD	85.5%	23.18	19.82	14.4 W	3	0	2	2	5	3
51	32002	KAL	STADIUM	COLLEGE	84.3%	6.14	5.18	4.8 W	0	0	1	3	5	0
52	32503	GRA	BOSTON SQUARE	HALL	83.3%	10.45	8.71	7.2 W	2	3	2	0	2	1
53	57001	CLD	COLON	COLON	83.1%	61.58	51.19	4.8 W	11	2	12	2	33	9
54	6802	BEN	HOMESTEAD	BEULAH	82.7%	83.69	69.19	7.2 W	19	22	15	18	32	21
55	147602	LAN	VAN ATTA	VAN ATTA	81.3%	54.62	44.42	4.8 W	5	1	0	3	6	2
56	70801	GRA	MICHIGAN	LYDIA	81.2%	8.15	6.62	7.2 W	1	0	1	0	0	1
57	161902	GRE	EMERSON	KILMER	81.0%	53.87	43.66	7.2 W	6	7	12	9	12	3
58	129601	JAC	BLACKMAN	SANDSTONE	78.7%	53.20	41.89	14.4 W	20	15	10	5	14	7
59	42002	BCK	BEADLE	SPAULDING	75.6%	47.05	35.56	4.8 W	12	7	10	22	19	7
60	48001	BNC	PELLSTON	BURT LAKE	74.9%	73.81	55.25	13.2 D	37	21	9	27	32	16
61	150001	WBR	WITHEY LAKE	PETTIT	74.6%	100.48	74.91	14.4 W	38	17	20	27	26	13
62	82904	GRA	MULLINS	ROYAL VISTA	69.5%	34.94	24.27	7.2 W	5	9	4	3	3	2
63	80901	BCK	FIFTEEN MILE RD	A DRIVE	67.7%	35.40	23.96	14.4 W	6	1	2	5	1	8
64	106503	FLT	FOURTEENTH ST	LIBERTY ST	67.3%	7.95	5.35	4.8 W	2	0	0	0	0	2
65	129401	JAC	BROUGHWELL	MINARD	62.3%	179.04	111.51	14.4 W	48	30	25	26	47	39
66	154302	GVL	HARVARD LAKE	COURTLAND	61.2%	47.27	28.91	14.4 W	8	7	6	9	10	6
67	35002	MUS	FRUITPORT	JUDSON ROAD	60.9%	38.71	23.56	7.2 W	5	6	22	7	8	10
68	39702	KAL	GULL LAKE	WILLOW BEACH	60.0%	18.05	10.83	4.8 W	5	12	5	12	6	7
69	151601	TWS	HUBBARD LAKE	HUBBARD LAKE	56.0%	15.41	8.63	14.4 W	5	1	4	3	3	4
70	100502	OWS	CHAPIN	MARION	55.6%	108.47	60.34	4.8 W	27	13	9	15	7	2
71	33803	CLR	HARRISON	STOCKWELL	54.5%	34.82	18.97	4.8 W	7	3	6	10	22	4
72	75901	JAC	REYNOLDS	REYNOLDS	52.5%	47.74	25.06	14.4 W	16	9	9	12	10	13
73	57301	BIG	OHMAN ROAD	EVART	51.0%	39.95	20.38	14.4 W	7	10	9	7	20	11
74	7402	ADR	HUDSON	CITY	51.0%	48.38	24.67	4.8 W	6	9	4	7	10	3
75				Totals		2480.54	2041.42		547	407	340	395	551	379
76				Percent Improvement						25.6%	37.8%	27.8%	-0.7%	30.7%
77									1 Yr Prior	Yr Trim	1 Yr Post	2 Yr Post	3 Yr Post	4 Yr Post
78				Totals	Only 100% cleared Circuits				135	71	35	56	62	62
79				Percent Improvement						47.4%	74.1%	58.5%	54.1%	54.1%
80									1 Yr Prior	Yr Trim	1 Yr Post	2 Yr Post	3 Yr Post	4 Yr Post

81 Note 1 - The percent cleared is the percent of miles cleared for the year listed versus the circuit configuration miles in 2020. Circuits cleared less than 50% not shown.

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Justification of 7-Year Cycle v Other Cycles

Case No.: U-21389
Exhibit No.: A-46 (PLB-5)
Page: 1 of 1
Witness: PLBolden
Date: May 2023

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)
1		4.8/8.32 kV System				7.2/12.47 kV System				14.4/24.9 kV System			
2	Years Since Last Cleared / Cycle Years	Incidents per Mile per Year	Incidents Per Year for Cycle Years	Contractor Cycle $ Per Incident	Contractor $ Annual LVD Cycle Cost	7.2 kV Incidents / Mile / Year	Incidents Per Year	Contractor Cycle $ Per Incident	Contractor $ Annual LVD Cycle Cost	14.4 kV Incidents / Mile / Year	Incidents Per Year	Contractor Cycle $ Per Incident	Contractor $ Annual LVD Cycle Cost
3	1	0.1951				0.2450				0.2445			
4	2	0.1999	6327	$15,881	$100,471,860	0.2611	2627	$12,394	$32,555,969	0.2593	4509	$12,451	$56,141,796
5	3	0.2025	6380	$10,498	$66,981,240	0.2720	2692	$8,062	$21,703,979	0.2693	4613	$8,114	$37,427,864
6	4	0.2035	6415	$7,831	$50,235,930	0.2795	2744	$5,931	$16,277,985	0.2757	4693	$5,981	$28,070,898
7	5	0.2035	6436	$7,879	$50,707,740	0.2854	2788	$5,893	$16,430,865	0.2797	4756	$5,958	$28,334,537
8	6	0.2031	6447	$7,652	$49,332,689	0.2915	2828	$5,653	$15,985,307	0.2825	4806	$5,736	$27,566,184
9	7	0.2029	6455	$7,290	$47,058,046	0.2996	2868	$5,317	$15,248,252	0.2853	4849	$5,423	$26,295,156
10	8	0.2035	6463	$6,863	$44,357,445	0.3115	2914	$4,933	$14,373,175	0.2893	4890	$5,068	$24,786,110
11	9	0.2055	6476	$6,407	$41,494,015	0.3290	2969	$4,528	$13,445,336	0.2957	4935	$4,698	$23,186,080
12	10	0.2095	6500	$5,943	$38,625,636	0.3539	3040	$4,117	$12,515,893	0.3057	4989	$4,326	$21,583,283
13	11	0.2161	6538	$5,484	$35,852,775	0.3880	3130	$3,712	$11,617,400	0.3205	5057	$3,962	$20,033,860
14	12	0.2259	6596	$5,040	$33,242,410	0.4331	3243	$3,321	$10,771,562	0.3413	5144	$3,611	$18,575,237
15	13	0.2395	6679	$4,589	$30,840,911	0.4910	3386	$2,934	$9,993,403	0.3693	5257	$3,258	$17,233,324
16	14	0.2575	6791	$4,176	$28,681,400	0.5635	3562	$2,581	$9,293,655	0.4057	5400	$2,934	$16,026,630
17	15	0.2805	6937	$3,801	$26,788,166	0.6524	3776	$2,265	$8,680,189	0.4517	5579	$2,641	$14,968,726

	Cost per Incident Reduced	Expected Incidents	Incident Reduction from 2019 Total	Contractor Full Circuit Dollars	Cycle 14.4/7.2/4.8
18					
19	**$14,420.36**	14100	5900	$85,076,804	5/7/9
20	$15,308.04	14079	5921	$90,640,835	5/7/7
21	$15,858.61	13980	6020	$95,473,142	5/5/5
22	$15,301.23	13999	6001	$91,823,448	5/5/7
23	$14,425.39	14020	5980	$86,259,417	5/5/9
24	$14,446.59	14060	5940	$85,813,858	5/6/9
25	$15,328.17	14039	5961	$91,377,889	5/6/7

27 14.4 kV needs 5 year cycle - too many outages/complaints when longer
28 7.2 kV vary between 5-7 years for analysis
29 4.8 kV vary between 7 and 9 years for analysis

	Years Since Last Cleared	2021 Contractor $/Mile
4	$6,273
5	$7,915
6	$9,240
7	$10,283
8	$11,078
9	$11,658
10	$12,058
11	$12,311
12	$12,453
13	$12,516
14	$12,535
15	$12,544
16	$12,576
17	$12,667
18	$12,850

	kV System Miles		
4.8	32034	3559
7.2	10380	1483
14.4	17900	3580
Total	60314	8622

2021 Cost per Mile for Years Since Last Cleared

Years Since Last Cleared	Maintenance	Repetitive Outage	First Zone	CEMI
3	$4,280	$14,845	$5,278	$16,559
4	$6,273	$15,080	$4,922	$16,559
5	$7,915	$15,354	$4,669	$16,559
6	$9,240	$15,666	$4,520	$16,559
7	$10,283	$16,017	$4,475	$16,559
8	$11,078	$16,407	$4,534	$16,559
9	$11,658	$16,835	$4,697	$16,559
10	$12,058	$17,302	$4,963	$16,559
11	$12,311	$17,808	$5,333	$16,559
12	$12,453	$18,353	$5,807	$16,559
13	$12,516	$18,936	$6,385	$16,559
14	$12,535	$19,557	$7,066	$16,559
15	$12,544	$20,218	$7,851	$16,559
16	$12,576	$20,917	$8,740	$16,559
17	$12,667	$21,654	$9,733	$16,559
18	$12,850	$22,431	$10,830	$16,559
19	$13,158	$23,246	$12,030	$16,559
20	$13,627	$24,099	$13,334	$16,559
21	$14,290	$24,992	$14,742	$16,559
22	$15,180	$25,923	$16,254	$16,559
23	$16,333	$26,892	$17,869	$16,559
24	$17,783	$27,900	$19,589	$16,559
25	$19,562	$28,947	$21,412	$16,559
26	$21,706	$30,033	$23,339	$16,559
27	$24,248	$31,157	$25,369	$16,559
28	$27,222	$32,320	$27,504	$16,559
29	$30,662	$33,521	$29,742	$16,559
30+	$34,603	$34,762	$32,084	$16,559

CEMI work not coorelated to YSLT, $16,559 is 2021 CEMI average

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
Forestry Operations
($000)

Case No.: U-21389
Exhibit No.: A-47 (PLB-6)
Page: 1 of 2
Witness: PLBolden
Date: May 2023

Line No.	(a) Description	(b) 2022 Actual	(c) Projected 12-Mos Ending 2/28/2025
	Forestry Operations Administration and Work		
1	**Planning**	**6,251**	**8,110**
	Labor	3,774	4,666
	Material	0	0
	Contractor	1,476	2,267
	Non-Labor Overheads	1,000	1,177
	Non-Labor Other	0	
2	**Line Clearing Contractor Costs**	**95,753**	**110,779**
	Labor	0	0
	Material	0	0
	Contractor	95,753	110,779
	Non-Labor Overheads	0	0
	Non-Labor Other	0	0
3	**Total "Description of Area" O&M Expenses**	**$ 102,003**	**$ 118,889**
	Labor	3,774	4,666
	Material	0	0
	Contractor	97,229	113,046
	Non-Labor Overheads	1,000	1,177
	Non-Labor Other	0	0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of O&M Expenses Projected Using Inflation
Forestry Operations
($000)

Case No.: U-21389
Exhibit No.: A-47 (PLB-6)
Page: 2 of 2
Witness: PLBolden
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No.	Description	2022 Actual	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2022	Merit & Inflation 12 Mos Ending Dec 31, 2023	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2023	Merit & Inflation 12 Mos Ending Dec 31, 2024	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2024	Merit & Inflation 2 Mos Ending 2/28/2025	Other Adjustments	Projected O&M 12 Mos Ending 2/28/2025
				(c) * Inflation Rate		(e) * Inflation Rate		(g) * Inflation Rate		(b) + (d) + (f) + (h) + (i)
1	**Forestry Operations Administration and Work Planning**	**6,251**	**6,251**	**244**	**6,654**	**146**	**8,040**	**28**	**1,441**	**8,110**
	Labor	3,774	3,774	147	3,921	86	4,650	16	642	4,666
	Material	0	0	0	0	0	0	0	0	0
	Contractor	1,476	1,476	58	1,710	38	2,214	8	688	2,267
	Non-Labor Overheads	1,000	1,000	39	1,022	22	1,176	4	111	1,177
	Non-Labor Other	0	0	0	0	0	0	0	0	0
2	**Line Clearing Contractor Costs**	**95,753**	**95,753**	**3,734**	**93,376**	**2,054**	**109,610**	**384**	**8,854**	**110,779**
	Labor	0	0	0	0	0	0	0	0	0
	Material	0	0	0	0	0	0	0	0	0
	Contractor	95,753	95,753	3,734	93,376	2,054	109,610	384	8,854	110,779
	Non-Labor Overheads	0	0	0	0	0	0	0	0	0
	Non-Labor Other	0	0	0	0	0	0	0	0	0
3	**Total Forestry Operations O&M Expenses**	**$ 102,003**	**$ 102,003**	**$ 3,978**	**$ 100,030**	**$ 2,201**	**$ 117,650**	**$ 412**	**$ 10,295**	**$ 118,889**
	Labor	3,774	3,774	147	3,921	86	4,650	16	642	4,666
	Material	0	0	0	0	0	0	0	0	0
	Contractor	97,229	97,229	3,792	95,087	2,092	111,824	391	9,542	113,046
	Non-Labor Overheads	1,000	1,000	39	1,022	22	1,176	4	111	1,177
	Non-Labor Other	0	0	0	0	0	0	0	0	0

Executive Summary

Report Name:	**Forestry Management Process Review**
Report Number:	**2018 - 14**
Assessed Risk:	**Risk Based**
Business Owner:	**Chris Niemi, Manager of Forestry Operations**

Area of Focus

The scope was designed to perform an assessment of the Forestry Management Program. More specifically, the audit focused on evaluating the following:

- Forestry governance, processes, procedures, policies and controls;
- Roles, responsibilities, resources, and maturity of the organization; and
- Forestry planning, work management and other management monitoring activities.

2018 Catastrophic California Wildfires and Risk Considerations for CMS

In 2018, California experienced its most deadly and destructive wildfire season, burning nearly 2 million acres of land, causing billions of dollars in damages. A common risk that power and utility companies face is the potential to be held liable for damages and claims caused by wildfires if both of the following factors are present: (a) the utility's equipment caused the fire and (b) the utility is found to have acted negligently based on inappropriate behavior and/or inadequate forestry management. California utilities face a unique and significant risk as they can be held liable under the state law of "reverse condemnation" for the damages caused by wildfires started by their equipment even if they are not found to have acted negligently. The catastrophic impact of this risk recently presented itself with the news that PG&E, California's largest utility, filed for bankruptcy resulting from the billions of dollars in estimated potential liability resulting from the 2017 and 2018 wildfires. Multiple public sources (e.g. NY Times, Fortune, others) have cited that PG&E's bankruptcy filing includes over $30 billion in estimated liabilities related to the wildfires.

More specifically, PGE is being investigated to determine first if their equipment caused the ignition of the fire in their service territory and second to further determine if they were negligent in the operation and maintenance of the associated equipment. Based on publicly available information, it is expected that if their equipment is determined to have caused the fire, they may be liable for the entire cost of the damage caused regardless if they were negligent. If they are also found to have been negligent in the operation of their equipment, additional civil and criminal penalties may apply.

What does this mean for CMS? IA identified the following key factors that reduce this type of significant risk for the Company:

- Per discussions with CE management, they believe California law exposes the California utilities to significantly more exposure from wildfire liability than Michigan law since Michigan law requires negligence to be determined in the operation and maintenance of utility equipment for liability to be assigned;
- Management is currently monitoring and helping address this risk through effective forestry management and line clearing practices as well as proactive monitoring of potential risks that could present themselves from climate changes;
- The fire risk season in Michigan is considered to be significantly shorter and less risky than the western states due to Michigan's climate. Based on statistics tracked and published by government agencies (Congressional Research Service, Michigan DNR), on average, wildfires in Michigan over the past 10 years represent less than 0.01% of wildfires across the US and are typically contained to only a few acres or less at a time; and
- Wildfires are more widely and rapidly accessible for first responders to prevent from spreading as compared to states with large forests in mountainous regions.

Positive Highlights

IA identified multiple positive highlights, including:

- A strong Forestry leadership team with substantial knowledge and experience in technical and field operations and a demonstrated desire to deliver solid forestry performance;
- A Forestry Management planning process that includes refined modeling and data analytics, which represents better industry practice and planning maturity ahead of industry peers;
- Detailed and timely measuring and reporting of third-party Forestry Management contractor performance, including strong quarterly contractor quality performance scoring process, which includes areas such as safety performance and on-call/storm and customer relations responsiveness; and
- Strong use of data visualization and strong participation in the Reliability Rally Room.

Executive Summary

Process Overview and Key Gaps Identified

The forestry process is complex, requiring assessment and monitoring of multiple factors that impact the identification, planning, scheduling and execution of program activities, that include, but are not limited to:

- Operational safety;
- Compliance to state and federal requirements and guidelines;
- Availability and timing of Operations and Maintenance (O&M) budget;
- Other company programs and investment activities requiring support from Forestry resources; and
- Monitoring contractor commercial terms and conditions; and Contractor resource constraints due to nation-wide seasonal demand and unpredictable events, such as regulatory changes and natural disasters.

Management is aware of the risks that each of the aforementioned areas can present related to forestry management. However, IA believes that management has an opportunity to increase the effectiveness and efficiency of the program through the following:

- Evaluating and outlining what risks and impacts to forestry management are controllable, semi-controllable, and non-controllable;
- Performing additional qualitative and/or quantitative risk assessments to understand the magnitude and direction of program risks; and
- Moving to a more proactive approach that is risk-informed, condition based and flexible in order to carry out forestry management activities at opportune times based on cost, risk and/or program objectives.

The Company plans to spend approximately $285 million from 2018 through 2022 for the Forestry Management Program. Development of the risk management program capabilities will likely enhance managements' ability to deliver on program objectives and operate in a safe manner that reduces additional cost and time that could have been avoided.

Summary of Findings

IA identified one finding that does not represent a significant risk to ongoing operations, where enhancements can be made to improve program maturity and improve resource efficiency and effectiveness.

Summary of Findings			Mgmt. Response
#	**Description**	**Priority Rating***	**Target Completion Date**
1.	**Enhancements to Forestry Management Planning and Monitoring** Managements' statistical model to provide the basis for planning, selecting, and prioritizing the annual forestry management plan is better industry practice. IA identified opportunities for management to enhance program planning and monitoring by incorporating additional risk considerations, which may allow management to take a more proactive approach to forestry management.	**Green**	4/30/19

*See Appendix B for definition of Priority Rating and Sarbanes Key Control.
Note 1: None of the findings are Sarbanes Key Controls.
Note 2: Management agrees with all of the findings identified.

Internal Audit Report CC Listing:

PKPoppee	BFRich	DMBaughman
RPHayes	GJRochow	MAMacdonald
JFBrossoit	GPBarba	CAShellberg
CAHendrian	GCPackard	CDuVall
BJHofmeister	MMGleespen	JMOConnor
DVRao	SMJohnson	Audit Committee
CMReynolds	LEYoungdahl	PwC

Executive Summary

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Detailed Findings, Recommendations, and Management Action Plans

Finding 1: Enhancements to Forestry Management Planning and Monitoring	**Sarbanes Portal Key Control or Risk Area: No**
Action Plan Priority: Green	**If Sarbanes Yes, Provide Reference: N/A**

Description of Issue
The Forestry Management team currently uses a statistical model to provide the basis for planning, selecting, and prioritizing circuits to be included in the annual plan. Management prioritizes the selected zones (i.e. segments of each circuit) for clearing based on current reliability performance with a goal to maximize the reliability benefit at the lowest cost. However, IA identified opportunities for management to enhance program planning and monitoring by incorporating risk considerations. For example, CMS Forestry management is cognizant of risk factors that could impact the achievability of program objectives, but does not perform and document a systematic risk assessment of the likelihood and magnitude of expected impacts on Forestry Management Program activities.

Forestry Management Program risk management is complex, requiring assessment and developing mitigating responses across multiple factors. Better industry practice includes use of:

- A risk framework to guide assessing the controllable, semi-controllable, and uncontrollable risks across functional activities such as Work Identification, Planning, Scheduling, Execution, and performance monitoring and reporting. The framework model should include appropriate figures-of-merit to estimate the impact of the risk on areas including but not limited to cost, productivity, and customer satisfaction; and
- In-depth qualitative and quantitative assessment of risk across safety, regulatory, cost, customer and other key operational considerations and constraints. Risk topics may include, but not be limited to:
    1. Operational safety;
    2. Compliance to state and federal requirements and guidelines;
    3. Available and timing of Operations and Maintenance (O&M) budget;
    4. Other company programs and investment activities requiring support from Forestry resources, such as:
        a. HVD and LVD capital investment activities; and
        b. Storm restoration efforts;
    5. Monitoring contractor commercial terms and conditions; and
    6. Contractor resource constraints due to nation-wide seasonal demand and unpredictable events such as regulatory changes and natural disasters.

Risk to CMS Energy
Application of a robust and systematic assessment of risk may allow management better visibility and preparedness to anticipate potential regulatory, customer, financial and operational impacts to the efficiency and effectiveness of the forestry management program.

Recommendation
Management should consider the following:

1. Create a forestry risk management multi-dimensional framework where topics are assessed against:
    a. Risk Category: Risk categories might include inherently *Controllable Risk* (e.g., capable of being directly engaged or influenced); *Semi-Controllable Risk* (e.g., capable of being indirectly influenced); and *Uncontrollable Risk* (e.g., the risk response must be reactive and not directly or indirectly manageable).
    b. An appropriate functional range of risk topics such as Work Identification, Planning, Scheduling, Execution and Performance Monitoring and Reporting.

Detailed Findings, Recommendations, and Management Action Plans

2. Develop one or more figures-of-merit to define appropriate dependent variables to assess risk across each topic area.
3. For each framework element, qualitatively or quantitatively assess the magnitude and direction of the uncertainty in the risk assessment. Elements may include, but not be limited to:
    a. Operational safety;
    b. Compliance to state and federal requirements and guidelines;
    c. Available and timing of Operations and Maintenance (O&M) budget;
    d. Other company programs and investment activities requiring support from Forestry resources, such as:
        i. HVD and LVD capital investment activities; and
        ii. Storm restoration efforts;
    e. Monitoring contractor commercial terms and conditions; and
    f. Contractor resource constraints due to nation-wide seasonal demand and unpredictable events such as regulatory changes and natural disasters;
4. To help perform the data analytics, Forestry may find it useful to utilize risk management assessment tools such as but not limited to the Microsoft Excel Add-in Risk Detective (see http://www.riskdetective.com/). Some minor training in the selected risk management assessment tool may be necessary;
5. Forestry should perform and update the risk assessment annually, or as needed based on changing field conditions, regulations, budget, or other areas determined by management that may impact the risk environment.

Management Action Plan:

Responsible Department Personnel:
MAP Owner: Christopher J. Niemi, Manager of Forestry Operations

MAP Support Role: John M. O'Connor, Senior Technical Analyst Lead

Management Action Plan:
Management agrees with IA's findings and will perform the following:

1. Create a forestry risk management multi-dimensional framework where topics are assessed against: Risk Category: Risk categories might include inherently *Controllable Risk* (e.g., capable of being directly engaged or influenced); *Semi-Controllable Risk* (e.g., capable of being indirectly influenced); and *Uncontrollable Risk* (e.g., the risk response must be reactive and not directly or indirectly manageable) that possibly affect Work Identification, Planning, Scheduling, Execution and Performance Monitoring and Reporting;
2. Define appropriate dependent variables to assess risk across each topic area;
3. For each framework element, qualitatively or quantitatively assess the magnitude and direction of the uncertainty in the risk assessment framework. Elements may include, but not be limited to:
    a. Operational safety;
    b. Compliance to state and federal requirements;
    c. Operations and Maintenance (O&M) budget;
    d. HVD and LVD capital work and storm restoration activities requiring support from Forestry resources;
    e. Contractor resource constraints;
4. Utilize Microsoft Excel Add-in Risk Detective risk management assessment tool or similar tool with IT approval;
5. Perform and update the risk assessment annually by January 31st, or as needed based on changing field conditions, regulations, budget, or other areas determined by management that may impact the risk environment throughout the year.

Target Date: 4/30/19

Appendix A – Background and Scope Details

Background:
Consumers Energy's (CE) distributes electricity to approximately 1.8 million electric customers in Michigan. CE owns and operates 60,931 miles of transmission and distribution overhead electric lines as detailed in the table below.

Electric Overhead Lines	Miles
138 kilovolts transmission	214
138 kilovolts high-voltage distribution	188
46 kilovolts and 69 kilovolts high-voltage distribution	4,431
Low-voltage electric distribution	56,098
Total	60,931

CE's Vegetation Management Program helps ensure that trees and other vegetation do not interfere with the safe and reliable delivery of electricity. CE Foresters have either a bachelor or Master of Science degree in Forestry (or related field of study) or are an arborist certification through the International Society of Arboriculture. Additionally, CE utilizes contractors who employ qualified line-clearance arborists to maintain minimum clearances following industry-accepted standards necessary to minimize power outages.

CE utilizes a statistical model to provide the basis for planning, selecting, and prioritizing circuits to be included in the annual Vegetation Management plan. The statistical model output is based on circuit voltage, historic reliability performance and other factors, such as tree density and years since the circuit was last cleared of trees and brush. Management prioritizes the selected zones (i.e. segments of each circuit) for clearing based on current reliability performance, with a goal to maximize the reliability benefit at the lowest cost. For emergent events, demand trim work is conducted. While the annual trimming is focused within the legal right-of-way, trees located outside the easement area may be marked for removal if they are dead or dying and pose a significant risk to the reliable operation of the system.

Risk Overview:
Vegetation management program, policies, procedures, standards and training may be incomplete or not be in place, resulting in inconsistent or incomplete line clearance and other vegetation management operating practices, process weaknesses and performance deficiencies, which could result in operational, financial, regulatory and reputational impacts.

Audit Objectives:
The objectives of this audit were to evaluate the design and operating effectiveness of the overall Vegetation Management Program governance, processes, business practices, standards and controls to help ensure that the program is in line with the Company's expectations, regulatory standards and general business practices.

Audit Scope:
The audit scope focused on the following areas associated with Vegetation Management:

- Program governance, controls, policies, procedures and standards;
- Roles, responsibilities, resources, and maturity of the organization to support the Vegetation Management Program and provide tactical support to the organization in meeting the program requirements;
- Process related to monitoring of key contractual terms and conditions with third-party vendors, including timeliness of tree trimming activities, vendor performance, and the accuracy and completeness of invoices paid by CE for forestry / vegetation management activities;
- Key performance indicators, visual management and other tools used to monitor progress and the overall Program; and
- Processes to manage any special record keeping and data management requirements.

The audit scope also included field observations of vegetation management activities.

Out of Scope:
Storm related vegetation management activities for events of greater than 3% of CE customers (or which do not include local and out-of-state foreign /mutual assistance) resources were considered out of scope.

Appendix B – Definition of Red, Yellow, Green and Sarbanes Key Control

Period covered:
The audit focused on January 2014 through August 2018 to obtain enough data and information to assess and establish observations, trends and findings.

Procedures:
Internal Audit (IA) performed the following procedures:

1. Conducted an opening meeting with key process owners;
2. Performed a walkthrough and evaluated the processes and controls in place for the aforementioned areas in the audit scope section;
3. Obtained the documents, electronic files, and other records required to perform the review and evaluation;
4. Identified potential areas of risk and evaluated the mitigation activities (if available) for reasonableness and verified that the mitigations were being performed timely;
5. Prepared and validated observations and identified gaps;
6. Identified additional areas for more detailed analysis and testing;
7. Conducted follow-up interviews and obtained supplemental documentation, as needed;
8. Conducted weekly engagement status updates with key stakeholders and shared preliminary observations, report progress and communicated any additional needs;
9. Conducted a closing meeting with key stakeholders and shared observations;
10. Provided a draft audit report with findings, priority color coding and recommendations to management for review;
11. Obtained Management Action Plans (MAPs) from the process owner; and
12. Issued the final report.

Red	Represents a significant area of risk that requires immediate action and escalation to senior management and the Audit Committee. The condition(s) requires improvement with more than usual management involvement and monitoring until the risk is mitigated. The management action plan to remediate the risks identified would be considered a "high" priority item.
Yellow	Represents a moderate area of risk that requires management action. Management is required to provide countermeasures to remediate the risk identified and improve the overall control environment. The management action plan to remediate the risks identified would be considered a "medium" priority item.
Green	Represents a low area of risk that is unlikely to result in moderate or significant impacts to the Company. Management is required to provide countermeasures to remediate the risk identified OR accept the risk with the approval of senior management. The management action plan to remediate the risks identified would be considered a "low" priority item.
Sarbanes	Findings that relate to a SOX key control or risk area as determined by the Executive Director Internal Control and Compliance, will be identified by "yes" in the report.

Line No.	(a) Feeder ID	(b) Substation	(c) Circuit	(d) HQ	(e) Voltage	(f) Circuit Miles	(g) Work Plan Miles	(h) Circuit Customers	(i) Average Outages per Incident	(j) Years Since Last Cleared	(k) Relative Risk Score (0-100)	(l) 3-Year Weighted Average Incidents per Mile	(m) Customers Impacted	(n) Estimated Cost per Customer Outage	(o) Customer Density per Mile	(p) On Cycle Miles	(q) Backlog Miles	Notes
1	501	IRVING	HYDRO	HST	2.4 D	0.02	0.02	1	0.00	35	35.08	0.000	0	$0	50.0	0.00	0.02	
2	601	SHEPHERD	SHEPHERD	ALM	4.8 W	48.94	48.94	1117	98.38	28	68.66	0.266	1279	$517	22.8	0.00	48.94	
3	703	MUSKEGON HEIGHTS	EAST CENTRAL	MUS	7.2 W	5.27	5.27	1179	373.50	7	42.80	0.380	747	$95	223.7	5.27	0.00	
4	705	MUSKEGON HEIGHTS	MUSKEGON	MUS	7.2 W	6.95	6.95	1471	234.33	8	25.27	0.432	703	$133	211.7	0.00	6.95	
5	901	LYONS	LYONS-MUIR	GVL	4.8 W	45.68	45.68	1002	60.68	24	74.66	0.679	1881	$328	21.9	0.00	45.68	
6	902	LYONS	COLLINS-RURAL	GVL	4.8 W	21.05	21.05	314	42.88	22	56.36	1.188	1072	$287	14.9	0.00	21.05	
7	1301	CENTREVILLE	BUSINESS	CLD	14.4 W	62.28	62.28	1217	71.79	15	77.55	0.835	3733	$225	19.5	0.00	62.28	
8	1402	CERESCO	CERESCO	BCK	4.8 W	3.80	3.80	135	16.50	21	30.12	0.526	33	$1,555	35.5	0.00	3.80	
9	1902	ROBERTS STREET	DETTMAN	JAC	4.8 W	12.29	12.29	1413	1107.00	23	39.94	0.081	1107	$150	115.0	0.00	12.29	
10	1904	ROBERTS STREET	FOOTE HOSPITAL	JAC	4.8 W	3.07	3.07	493	0.00	35	27.55	0.000	0	$0	160.6	0.00	3.07	
11	2002	GREENWOOD	INDIAN LAKE	WBR	14.4 W	94.81	94.81	1363	135.00	7	78.90	0.622	7965	$198	14.4	0.00	94.81	
12	2201	WEBBER DAM	PLANT	LAN	7.2 D	0.03	0.03	1	0.00	35	15.35	0.000	0	$0	33.3	0.00	0.03	
13	2303	BLINTON	MCWAIN	FLT	14.4 W	47.87	47.87	2515	157.71	17	73.43	0.292	2208	$293	52.5	0.00	47.87	
14	2502	SUTTONS BAY	SUTTONS BAY	TRA	7.2 W	21.36	21.36	921	64.15	9	51.03	0.609	834	$346	43.1	0.00	21.36	
15	3801	HOLLY	GRANGE HALL	FLT	4.8 W	13.39	13.39	1236	301.80	17	64.17	0.373	1509	$120	92.3	0.00	13.39	
16	3802	HOLLY	ACADEMY	FLT	4.8 W	8.61	8.61	887	40.75	23	53.44	0.465	163	$713	103.0	0.00	8.61	
17	3901	MAUMEE	MAPLE ST	ADR	7.2 W	15.47	15.47	2005	119.67	7	55.15	0.388	718	$291	129.6	15.47	0.00	
18	3902	MAUMEE	LENAWEE ST	ADR	7.2 W	14.55	14.55	1680	547.50	7	40.34	0.275	2190	$90	115.5	14.55	0.00	
19	4201	FOOTE HYDRO	DISTRIBUTION	TWS	4.8 W	13.19	13.19	360	73.00	9	54.14	0.682	657	$497	27.3	13.19	0.00	
20	4503	LARKIN	N MIDLAND	MDL	4.8 W	5.65	5.65	485	274.86	13	60.27	1.239	1924	$88	85.8	0.00	5.65	
21	4702	SPRING DRIVE	HESS LAKE	FRE	14.4 W	26.80	26.80	457	74.11	14	73.14	1.418	2816	$226	17.1	0.00	26.80	
22	5401	STANLEY	SUMMIT	FLT	4.8 W	27.74	27.74	2521	44.82	23	64.15	0.397	493	$760	90.9	0.00	27.74	
23	5602	FENTON	SILVER LAKE	FLT	4.8 W	13.63	13.63	995	571.75	30	63.72	0.293	2287	$80	73.0	0.00	13.63	
24	6202	GRAND BLANC	REID	FLT	4.8 W	14.80	14.80	1485	76.30	35	72.89	0.676	763	$262	100.3	0.00	14.80	
25	6601	LABARGE	BLODGETT LAKE	GRE	4.8 W	46.38	32.50	731	129.32		55.14				15.8	0.00	46.38	2022 Carryover
26	6703	OWOSSO	OAKWOOD	OWS	4.8 W	4.68	4.68	678	0.00	25	25.77	0.000	0	$0	144.9	0.00	4.68	
27	6704	OWOSSO	POWER	OWS	4.8 W	1.99	1.99	291	0.00	35	25.43	0.000	0	$0	146.2	0.00	1.99	
28	6705	OWOSSO	BUSINESS	OWS	4.8 W	4.31	4.31	914	0.00	15	15.97	0.000	0	$0	212.1	0.00	4.31	
29	8002	ALCONA DAM	CURTISVILLE	TWS	4.8 D	19.11	19.11	411	74.73	28	81.08	1.361	1943	$239	21.5	0.00	19.11	
30	8204	AUGUSTA	AUGUSTA	KAL	4.8 W	29.45	29.45	901	143.54	12	76.38	1.324	5598	$91	30.6	0.00	29.45	
31	10005	WEALTHY STREET	WATSON	GRA	7.2 W	3.77	3.77	169	0.00	24	15.44	0.000	0	$0	44.8	0.00	3.77	
32	10007	WEALTHY STREET	GODFREY	GRA	7.2 W	7.04	7.04	1381	83.00	9	20.39	0.284	166	$573	196.2	0.00	7.04	
33	10203	GRAND LEDGE	WILLOW	LAN	4.8 W	19.86	19.86	1157	410.86	14	48.41	0.352	2876	$93	58.3	0.00	19.86	
34	11004	HASTINGS	VIKING	HST	4.8 W	36.54	36.54	1174	212.14	9	61.34	0.575	4455	$111	32.1	36.54	0.00	
35	12002	LEELANAU	BELANGER CREEK	TRA	7.2 W	12.72	12.72	185	75.40	12	49.02	1.179	1131	$152	14.5	0.00	12.72	
36	13403	TECUMSEH	BRITTON	ADR	7.2 W	24.16	24.16	2270	971.33	8	61.38	0.248	5828	$56	94.0	0.00	24.16	
37	13501	TWELFTH STREET	WESTFIELD	KAL	4.8 W	32.80	32.80	2844	670.33	13	59.45	0.457	10055	$44	86.7	0.00	32.80	
38	14502	GREENVILLE	WASHINGTON ST	GVL	4.8 W	45.08	35.90	1815	91.65		77.34				40.3	0.00	45.08	2022 Carryover
39	15802	EATON RESEARCH	40TH STREET	KAL	7.9 W	1.07	1.07	6	0.00	35	10.22	0.000	0	$0	5.6	0.00	1.07	
40	16201	REED CITY	YOPLAIT	BIG	4.8 W	0.50	0.50	1	0.00	29	10.62	0.000	0	$0	2.0	0.00	0.50	
41	16203	REED CITY	HOLDENVILLE	BIG	4.8 W	30.91	30.91	763	138.22	11	78.60	0.744	3179	$187	24.7	0.00	30.91	
42	16502	LESLIE INDUSTRIAL	INDUSTRIAL	JAC	4.8 W	6.92	6.92	257	66.00	35	35.69	0.145	66	$1,415	37.1	0.00	6.92	
43	17302	MERIDIAN	LAKE LANSING	LAN	4.8 W	16.02	16.02	1085	363.67	24	47.45	0.187	1091	$198	67.7	0.00	16.02	
44	18502	PULLMAN	PULLMAN	HML	4.8 W	38.86	29.80	759	83.83		73.51				19.5	0.00	38.86	2022 Carryover
45	19402	LAKE LANSING	WHITE HILLS	LAN	4.8 W	28.41	28.41	1796	450.50	35	51.55	0.211	2703	$142	63.2	0.00	28.41	
46	20701	DURAND	CITY	OWS	4.8 W	28.29	28.29	1717	99.67	14	62.76	0.318	897	$426	60.7	0.00	28.29	
47	21401	PATTERSON	BRIDGE	BCY	4.8 W	8.14	8.14	123	54.00	23	30.95	0.246	108	$1,018	15.1	0.00	8.14	
48	21403	PATTERSON	STATE	BCY	4.8 W	6.58	6.58	405	17.00	23	12.58	0.152	17	$5,225	61.6	0.00	6.58	
49	21802	WILDWOOD	MACKLIN	JAC	4.8 W	8.79	8.79	1272	306.50	20	61.68	0.910	2452	$48	144.7	0.00	8.79	
50	21901	GOGUAC	GOGUAC	BCK	4.8 W	11.70	11.70	1461	185.00	13	38.74	0.427	925	$171	124.9	0.00	11.70	
51	22202	COWAN LAKE	RAMSDELL	GRN	14.4 W	64.40	64.40	1596	108.86	5	76.68	0.885	6205	$141	24.8	64.40	0.00	
52	22401	CALKINS	FLUSHING ROAD	FLT	4.8 W	16.07	16.07	1216	42.00	25	61.05	0.124	84	$2,583	75.7	0.00	16.07	
53	22901	COOPER	NAGEL	KAL	4.8 W	41.92	41.92	1196	136.17	9	77.96	1.097	6264	$133	28.5	41.92	0.00	
54	23101	MENDON	PARK	CLD	4.8 W	0.37	0.37	1	0.00	27	7.55	0.000	0	$0	2.7	0.00	0.37	
55	23505	BEALS ROAD	BURTON HEIGHTS	GRA	7.2 W	5.44	5.44	536	39.00	24	22.76	0.184	39	$1,883	98.5	0.00	5.44	
56	23802	LAKE MITCHELL	CANAL	CAD	4.8 W	20.38	20.38	1427	199.30	9	77.74	0.981	3986	$69	70.0	20.38	0.00	
57	24104	DOEHLER JARVIS	COTTAGE GROVE	GRA	7.2 W	2.17	2.17	388	40.00	35	37.59	0.461	40	$732	178.8	0.00	2.17	
58	24901	BITTERSWEET	DOWN HILL	HML	4.8 W	0.05	0.05	2	2.00	35	11.36	20.000	2	$8,619	40.0	0.00	0.05	

59	25104	NORTH MUSKEGON	SANITARIUM	MUS	7.2 W	9.10	9.10	704	68.33	7	24.03	0.659	410	$300	77.4	9.10	0.00	
60	25201	ONEKAMA	ONEKAMA	BEN	7.2 W	75.52	75.52	1637	82.09	8	83.54	0.861	5336	$254	21.7	0.00	75.52	
61	25701	OSHTEMO	ALMENA	KAL	4.8 W	38.92	38.92	1133	144.09	15	68.60	0.848	4755	$147	29.1	0.00	38.92	
62	25803	DEWITT	GENEVA LAKE	LAN	4.8 W	40.65	5.50	2894	459.38		65.23				71.2	40.65	0.00	2022 Carryover
63	25901	HANOVER	PULASKI	JAC	4.8 W	35.81	35.81	384	25.08	17	78.74	1.731	1555	$397	10.7	0.00	35.81	
64	26902	OTSEGO	FARMER	HML	4.8 W	40.30	40.30	870	101.15	9	87.82	1.315	5361	$126	21.6	40.30	0.00	
65	27401	CONKLIN PARK	HOLLY	BIG	4.8 W	53.25	6.40	696	42.83		76.67				13.1	53.25	0.00	2022 Carryover
66	27801	DIXIE	HARVARD	FLT	4.8 W	14.91	14.91	1602	152.00	24	66.96	0.134	304	$662	107.4	0.00	14.91	
67	27803	DIXIE	GEORGE STREET	FLT	4.8 W	9.65	9.65	812	183.50	24	62.58	0.207	367	$355	84.1	0.00	9.65	
68	27901	HAGER PARK	WELLINGTON	GRA	7.2 W	30.67	30.67	1045	75.35	28	74.50	0.554	1281	$323	34.1	0.00	30.67	
69	28003	OTISVILLE	FRANCIS	FLT	4.8 W	37.10	37.10	1179	69.90	20	83.59	0.809	2097	$242	31.8	0.00	37.10	
70	28302	CEDAR SPRINGS	EDGERTON	GRN	14.4 W	79.08	28.00	2289	209.82		57.79				28.9	0.00	79.08	2022 Carryover
71	28903	MILLER ROAD	NERREDIA STREET	FLT	4.8 W	3.28	3.28	116	88.00	35	21.76	0.305	88	$503	35.4	0.00	3.28	
72	29402	KEARSLEY	BRIAR LANE	FLT	4.8 W	8.80	8.80	499	84.00	21	58.49	0.114	84	$1,414	56.7	0.00	8.80	
73	29404	KEARSLEY	SHILLELAGH	FLT	4.8 W	25.54	25.54	1841	189.00	21	73.52	0.626	3024	$114	72.1	0.00	25.54	
74	29405	KEARSLEY	CRAIG	FLT	4.8 W	9.66	9.66	893	28.00	24	50.64	0.104	28	$4,658	92.4	0.00	9.66	
75	29502	STOCKBRIDGE	STOCKBRIDGE	JAC	4.8 W	8.34	8.34	697	23.33	24	24.70	0.360	70	$1,771	83.6	0.00	8.34	
76	29701	LAMBERTVILLE	WHITEFORD	SMN	7.2 W	14.48	14.48	851	89.00	7	36.61	0.345	445	$439	58.8	14.48	0.00	
77	29902	NORTON	HILE ROAD	MUS	7.2 W	28.53	28.53	2301	363.33	7	50.10	0.105	1090	$353	80.7	28.53	0.00	
78	30301	JOPPA	BECKLEY	BCK	4.8 W	34.78	31.05	681	81.43		58.41				19.6	0.00	34.78	2022 Carryover
79	30603	REMUS	LEPRINO	BIG	4.8 W	1.05	1.05	1	0.00	34	15.26	0.000	0	$0	1.0	0.00	1.05	
80	30701	SHIELDS	SHIELDS	SAG	4.8 W	18.59	18.59	1241	112.38	17	53.20	0.699	1461	$172	66.8	0.00	18.59	
81	31002	DUCK LAKE	DUCK LAKE	BCK	4.8 W	44.65	1.10	720	39.00		49.01				16.1	0.00	44.65	2022 Carryover
82	32101	ASHMAN CIRCLE	ASHMAN	MDL	4.8 W	11.35	11.35	2050	66.33	9	62.95	0.264	199	$770	180.6	11.35	0.00	
83	32103	ASHMAN CIRCLE	HIGH SCHOOL	MDL	4.8 W	8.20	8.20	1362	142.50	28	71.31	0.488	570	$194	166.1	0.00	8.20	
84	32702	COMSTOCK	TUNIER	KAL	4.8 W	20.49	20.49	1278	142.22	26	60.66	0.878	2560	$108	62.4	0.00	20.49	
85	33501	NORTH ALLEGAN	ROCKWELL	HML	4.8 W	19.11	19.11	576	144.28	17	56.10	0.942	2597	$99	30.1	0.00	19.11	
86	33602	LITCHFIELD	ADAMS RD	CLD	4.8 W	32.37	32.37	795	57.53	11	46.32	0.587	1093	$400	24.6	0.00	32.37	
87	33701	EAST GRANT	MUD FLAT	FRE	4.8 W	20.93	20.93	366	70.12	25	76.81	1.194	1753	$213	17.5	0.00	20.93	
88	33804	HARRISON	DODGE CITY	CLR	4.8 W	13.90	13.90	1007	101.63	29	74.36	1.151	1626	$208	72.4	0.00	13.90	
89	34402	HULL STREET	CRANBERRY	GRN	14.4 W	121.04	121.04	3455	76.57	15	88.95	1.033	9571	$204	28.5	0.00	121.04	
90	34503	KAWKAWLIN	RUSSELL	BCY	4.8 W	10.25	10.25	399	106.00	35	23.94	0.488	530	$261	38.9	0.00	10.25	
91	35101	BELSAY	BELSAY	FLT	4.8 W	19.35	19.35	1117	153.20	12	70.70	0.517	1532	$171	57.7	0.00	19.35	
92	35201	CARROLLTON	CARROLLTON	SAG	4.8 W	7.68	7.68	564	108.67	13	45.79	0.781	652	$159	73.4	0.00	7.68	
93	35202	CARROLLTON	MAPLE RIDGE	SAG	4.8 W	9.52	9.52	702	43.00	35	43.57	0.210	86	$1,494	73.7	0.00	9.52	
94	36201	WASHINGTON	FIRST STREET	LDG	14.4 W	9.18	9.18	433	104.75	25	29.89	0.436	419	$296	47.2	0.00	9.18	
95	36203	WASHINGTON	CONRAD	LDG	14.4 W	13.41	10.50	516	107.80		33.89				38.5	0.00	13.41	2022 Carryover
96	36403	IRON STREET	TERM	FLT	4.8 W	10.25	10.25	1474	311.57	25	55.00	0.683	2181	$63	143.8	0.00	10.25	
97	36802	APPLE	WOLF LAKE	MUS	4.8 W	14.11	14.11	962	193.50	9	68.79	0.425	1161	$209	68.2	14.11	0.00	
98	36901	COOLEY	WESTNEDGE	KAL	4.8 W	3.13	3.13	630	446.00	25	21.21	0.319	446	$95	201.3	0.00	3.13	
99	37303	RAVENNA	BRIGGS & STRATTON	MUS	13.2 D	0.10	0.10	1	0.00	35	15.35	0.000	0	$0	10.0	0.00	0.10	
100	39002	SLOAN	LAVELLE ROAD	FLT	4.8 W	6.11	6.11	1528	288.00	21	48.47	0.982	1728	$48	250.1	0.00	6.11	
101	39003	SLOAN	LONGFELLOW	FLT	4.8 W	14.49	4.00	2690	91.31		79.41				185.6	0.00	14.49	2022 Carryover
102	40303	LONG LAKE	TORREY RD	FLT	4.8 W	22.42	22.42	1506	273.56	13	50.00	0.401	2462	$123	67.2	0.00	22.42	
103	40403	ALBER	PLAZA	BCK	4.8 W	9.18	9.18	810	41.33	24	58.22	0.327	124	$999	88.2	0.00	9.18	
104	40802	OSCODA	BUTLER HEIGHTS	TWS	11.0 D	28.20	28.20	1663	464.00	7	82.88	0.319	4176	$137	59.0	0.00	28.20	
105	41101	KELLOGGSVILLE	HOME ACRES	GRA	7.2 W	11.59	11.59	2117	876.00	17	39.34	0.086	876	$179	182.7	0.00	11.59	
106	41202	SYLVAN	RURAL	JAC	4.8 W	50.97	50.97	843	64.54	11	74.88	0.726	2388	$350	16.5	0.00	50.97	
107	41402	BATH	PARK LAKE	LAN	4.8 W	50.22	50.22	1752	96.70	13	66.73	0.398	1934	$351	34.9	0.00	50.22	
108	41501	GLENDALE	HILLTOP	KAL	4.8 W	0.56	0.56	25	21.00	22	13.99	1.786	21	$1,305	44.6	0.00	0.56	
109	41503	GLENDALE	HERCULES	KAL	4.8 W	9.89	9.89	1183	199.20	9	65.01	0.506	996	$173	119.6	9.89	0.00	
110	42001	BEADLE	CREST	BCK	4.8 W	20.67	20.67	815	60.68	17	39.45	1.064	1335	$228	39.4	0.00	20.67	
111	42201	CLIMAX	AGGREGATES	KAL	4.8 W	8.20	8.20	117	51.13	34	44.53	0.976	409	$271	14.3	0.00	8.20	
112	45402	LATIMER	CARR LAKE	MUS	7.2 W	20.30	20.30	1612	280.67	11	39.42	0.443	2526	$108	79.4	0.00	20.30	
113	45403	LATIMER	OLTHOFF	MUS	7.2 W	0.72	0.72	7	0.00	35	10.05	0.000	0	$0	9.7	0.00	0.72	
114	46902	CENTRAL LAKE	CENTRAL LAKE	BNC	7.2 W	16.40	16.40	846	157.41	8	81.89	1.037	2676	$83	51.6	0.00	16.40	
115	47301	DIETZ ROAD	LAKE CHARLEVOIX	BNC	7.2 W	8.15	1.90	255	53.67		19.09				31.3	8.15	0.00	2022 Carryover
116	47501	BECKER	BEAR CREEK	MUS	7.2 W	14.21	14.21	833	77.56	13	39.28	0.633	698	$309	58.6	0.00	14.21	
117	48203	CHEBOYGAN	SEYMOUR	BNC	7.2 W	29.90	29.90	1487	134.86	7	56.64	0.702	2832	$154	49.7	29.90	0.00	
118	48301	AUBIL LAKE	TOWERS	HST	14.4 W	93.35	51.01	2659	188.45		69.82				28.5	0.00	93.35	2022 Carryover
119	48502	RODNEY	RODNEY	BIG	14.4 W	100.18	13.00	1942	138.78		67.70				19.4	0.00	100.18	2022 Carryover
120	49101	CRYSTAL	MT HOPE ROAD	GVL	4.8 W	32.95	32.95	556	90.59	27	75.89	0.819	2446	$182	16.9	0.00	32.95	
121	49102	CRYSTAL	CRYSTAL ROAD	GVL	4.8 W	45.41	12.40	1508	53.07		84.58				33.2	0.00	45.41	2022 Carryover
122	49901	STANDALE	STANDALE	GRA	7.2 W	25.62	25.62	4236	488.82	16	60.41	0.429	5377	$64	165.3	0.00	25.62	
123	49902	STANDALE	CHESTERFIELD	GRA	7.2 W	41.71	36.80	1606	62.76		82.77				38.5	0.00	41.71	2022 Carryover
124	50903	LETTS ROAD	WALKER	MDL	14.4 W	89.42	89.42	2027	67.99	35	84.52	0.984	5983	$244	22.7	0.00	89.42	

125	51401	READING	CITY	CLD	4.8 W	11.19	11.19	655	27.80	9	32.96	0.447	139	$1,087	58.5	11.19	0.00	
126	51801	INDIAN RIVER	RONDO	BNC	13.2 D	60.58	60.58	2154	180.08	9	94.15	0.611	6663	$147	35.6	0.00	60.58	
127	52001	WHITEHALL	PLANT 3	MUS	2.4 W	0.08	0.08	0	0.00	35	13.16	0.000	0	$0	0.0	0.00	0.08	
128	52003	WHITEHALL	HANSON	MUS	7.2 W	11.39	11.39	886	75.80	24	46.25	0.439	379	$406	77.8	0.00	11.39	
129	52004	WHITEHALL	MISCO	MUS	2.4 W	0.08	0.08	2	0.00	35	13.16	0.000	0	$0	25.0	0.00	0.08	
130	52301	WOOD STREET	AVENUE A	FLT	4.8 W	2.04	2.04	238	0.00	29	43.90	0.000	0	$0	116.7	0.00	2.04	
131	52302	WOOD STREET	MASON	FLT	4.8 W	9.72	9.72	893	73.00	26	53.56	0.206	146	$899	91.9	0.00	9.72	
132	52303	WOOD STREET	CHIPPEWA	FLT	4.8 W	1.64	1.64	171	0.00	35	12.76	0.000	0	$0	104.3	0.00	1.64	
133	52602	BOYNE CITY	VETERANS	BNC	7.2 W	24.00	11.70	1326	46.40		66.95				55.3	0.00	24.00	2022 Carryover
134	53002	WHITE CLOUD	PINE HILL	FRE	4.8 W	5.98	5.98	348	11.00	24	26.25	0.167	11	$7,339	58.2	0.00	5.98	
135	53401	MIDLAND	BUTTLES	MDL	4.8 W	6.95	6.95	715	0.00	22	27.09	0.000	0	$0	102.9	0.00	6.95	
136	53404	MIDLAND	NORTHWOOD	MDL	4.8 W	15.81	15.81	714	111.00	9	49.46	0.949	1665	$131	45.2	15.81	0.00	
137	54403	ORIOLE	HAMLIN	LDG	14.4 W	41.66	41.66	2012	143.63	5	65.53	0.840	5027	$153	48.3	41.66	0.00	
138	55104	DAVISON	CLARK STREET	FLT	4.8 W	26.90	4.80	1931	23.40		23.79				71.8	0.00	26.90	2022 Carryover
139	56902	NORTHPORT	MANITOU	TRA	7.2 W	34.34	34.34	529	53.37	14	81.22	1.019	1868	$367	15.4	0.00	34.34	
140	57301	OHMAN ROAD	EVART	BIG	14.4 W	40.03	40.03	1246	71.92	5	69.92	0.949	2733	$206	31.1	40.03	0.00	
141	57303	OHMAN ROAD	SEARS	BIG	14.4 W	84.52	84.52	1128	93.08	12	62.17	0.911	7167	$161	13.3	0.00	84.52	
142	57401	PENINSULA	MCKINLEY ROAD	TRA	7.2 W	19.90	19.90	640	89.22	24	68.00	0.905	1606	$167	32.2	0.00	19.90	
143	57402	PENINSULA	MAPLETON	TRA	7.2 W	118.48	109.80	2456	82.26		91.58				20.7	0.00	118.48	2022 Carryover
144	57701	JANES	BELAIR	SAG	4.8 W	21.78	21.78	1488	79.00	11	42.20	0.046	79	$3,722	68.3	0.00	21.78	
145	58101	SHELBY	STATE STREET	MUS	7.2 W	18.56	18.56	830	58.65	25	59.70	1.078	1173	$236	44.7	0.00	18.56	
146	58102	SHELBY	PINE STREET	MUS	7.2 W	13.93	3.10	547	43.17		55.28				39.3	0.00	13.93	2022 Carryover
147	58202	ENGLISHVILLE	PINE ISLAND	GRN	14.4 W	31.36	31.36	1724	293.80	14	66.31	0.478	4407	$105	55.0	0.00	31.36	
148	58602	LEITH STREET	DAVISON RD	FLT	4.8 W	1.87	1.87	142	27.00	9	29.36	0.535	27	$959	75.9	1.87	0.00	
149	58606	LEITH STREET	LEITH	FLT	4.8 W	17.00	17.00	2984	97.00	9	55.66	0.059	97	$2,366	175.5	17.00	0.00	
150	60101	TUSTIN	WWTV	CAD	14.4 W	54.56	54.56	506	77.11	5	64.71	0.348	1465	$532	9.3	54.56	0.00	
151	60401	OKEMOS	WKAR	LAN	4.8 W	17.61	2.50	1143	331.00		46.24				64.9	17.61	0.00	2022 Carryover
152	60601	BREEDSVILLE	BREEDSVILLE	KAL	14.4 D	116.47	116.47	1941	106.85	13	100.00	1.005	12501	$126	16.7	0.00	116.47	
153	60803	PALMER	LAKESIDE	KAL	4.8 W	6.72	6.72	301	105.80	35	39.65	0.744	529	$171	44.8	0.00	6.72	
154	61103	KENDALL	WESTWOOD	KAL	4.8 W	11.81	11.81	1855	151.60	9	55.32	0.423	758	$212	157.1	11.81	0.00	
155	61703	FRANKFORT	ELBERTA	BEN	7.2 W	34.64	34.64	986	65.23	8	78.28	1.241	2805	$256	28.5	0.00	34.64	
156	61902	BROADWAY	BLACK CREEK	MUS	7.2 W	16.05	16.05	1159	192.00	21	28.01	0.436	1344	$161	72.2	0.00	16.05	
157	63402	KILGORE	WISTERIA	KAL	4.8 W	8.50	8.50	1219	215.00	9	34.53	0.353	645	$178	143.4	8.50	0.00	
158	63404	KILGORE	TIMBERLANE	KAL	4.8 W	7.72	7.72	947	256.38	9	55.25	1.036	2051	$51	122.7	7.72	0.00	
159	63703	PLAINFIELD	KUTTSHILL	GRN	4.8 W	22.09	22.09	1394	57.79	11	36.50	0.860	1098	$272	63.1	0.00	22.09	
160	64401	WALLOON	WATERWORKS	BNC	7.2 W	12.74	12.74	447	62.33	8	54.67	2.119	1683	$153	35.1	0.00	12.74	
161	64402	WALLOON	CLARION	BNC	7.2 W	12.16	12.16	391	90.85	35	71.76	2.138	2362	$80	32.2	0.00	12.16	
162	64701	MAYFAIR	HAMADY	FLT	4.8 W	1.26	1.26	64	0.00	35	13.16	0.000	0	$0	50.8	0.00	1.26	
163	64704	MAYFAIR	HOME	FLT	4.8 W	13.11	13.11	2247	67.00	12	50.20	0.686	603	$294	171.4	0.00	13.11	
164	64705	MAYFAIR	PIERSON	FLT	4.8 W	10.72	10.72	1262	58.40	24	49.82	0.466	292	$496	117.7	0.00	10.72	
165	64801	BLUEGRASS	BLUEGRASS	ALM	4.8 W	17.15	17.15	1848	25.00	35	18.82	0.058	25	$9,261	107.8	0.00	17.15	
166	66601	ENSLEY	DISTRIBUTION	BIG	4.8 W	68.54	68.54	920	74.38	11	76.45	0.992	5058	$247	13.4	0.00	68.54	
167	67301	MACATAWA	RAILYARD	HML	4.8 W	2.53	2.53	36	0.00	34	15.64	0.000	0	$0	14.2	0.00	2.53	
168	67303	MACATAWA	WENDT PARK	HML	4.8 W	24.05	24.05	1201	105.42	35	52.04	0.499	1265	$257	49.9	0.00	24.05	
169	67402	DEXTER TRAIL	EWERS	LAN	4.8 W	17.71	17.71	262	45.00	34	53.76	0.621	495	$498	14.8	0.00	17.71	
170	67501	MCCRACKEN	MCCRACKEN	MUS	7.2 W	18.27	18.27	2072	929.29	9	62.66	0.383	6505	$38	113.4	0.00	18.27	
171	67502	MCCRACKEN	ENTERPRISE	MUS	7.2 W	0.89	0.89	47	17.00	18	6.44	1.124	17	$274	52.8	0.00	0.89	
172	68501	EAST BAY	PARSONS ROAD	TRA	7.2 W	1.94	1.94	3	0.00	35	12.77	0.000	0	$0	1.5	0.00	1.94	
173	69803	HOGAN ROAD	MCCASLIN LAKE	FLT	4.8 W	37.08	2.00	1499	214.11		47.03				40.4	0.00	37.08	2022 Carryover
174	70002	DEAN ROAD	SHANNON LAKE	FLT	14.4 W	60.46	0.10	2448	136.85		55.99				40.5	0.00	60.46	2022 Carryover
175	70003	DEAN ROAD	HOGAN	FLT	14.4 W	72.77	19.90	2047	90.30		54.65				28.1	0.00	72.77	2022 Carryover
176	70104	WALNUT	GILKEY	FLT	4.8 W	9.46	9.46	1901	241.00	17	56.50	0.317	723	$177	201.0	0.00	9.46	
177	70105	WALNUT	COLLEGE	FLT	4.8 W	0.06	0.06	1	0.00	35	12.80	0.000	0	$0	16.7	0.00	0.06	
178	70305	INGHAM	GREENWOOD PARK	JAC	4.8 W	6.39	6.39	2066	221.50	9	31.07	0.313	443	$195	323.3	6.39	0.00	
179	70402	FERGUSON	BROWNS LAKE	JAC	4.8 W	29.06	29.06	1473	30.68	13	41.55	0.964	859	$457	50.7	0.00	29.06	
180	70602	BOWEN	BOWEN	GRA	7.2 W	4.35	4.35	96	93.00	26	28.45	0.230	93	$631	22.1	0.00	4.35	
181	70704	STEVENS	HYNES	GRA	7.2 W	0.98	0.98	30	0.00	35	10.70	0.000	0	$0	30.6	0.00	0.98	
182	70705	STEVENS	(null)	GRA	7.2 W	0.01	0.01	0	0.00	35	9.87	0.000	0	$0	0.0	0.00	0.01	
183	72302	BARNARD	WEISS	SAG	4.8 W	9.02	9.02	1603	0.00	20	46.49	0.000	0	$0	177.7	0.00	9.02	
184	72601	MAYNARD	MAYNARD	GRA	7.2 W	11.75	11.75	309	76.40	19	41.06	1.277	1146	$185	26.3	0.00	11.75	
185	72602	MAYNARD	BESTWALL	GRA	7.2 W	4.00	4.00	31	0.00	34	25.68	0.000	0	$0	7.8	0.00	4.00	
186	72902	EIGHT POINT	LAKE GEORGE	CLR	14.4 W	50.66	50.66	1170	131.14	6	68.24	1.105	7344	$129	23.1	0.00	50.66	
187	73101	MONA LAKE	AIRPORT	MUS	7.2 W	31.50	31.50	3035	257.13	15	55.80	0.476	3857	$130	96.3	0.00	31.50	
188	74302	RED ARROW	BRISTOL	FLT	4.8 W	6.17	6.17	1119	518.50	26	34.69	0.324	1037	$80	181.4	0.00	6.17	
189	74303	RED ARROW	KEATS	FLT	4.8 W	9.07	9.07	1998	98.67	25	51.36	0.662	592	$207	220.3	0.00	9.07	
190	74304	RED ARROW	OGEMA	FLT	4.8 W	10.89	5.10	2014	391.43		54.92				184.9	0.00	10.89	2022 Carryover

191	74403	PINE RIVER	WRIGHT	ALM	4.8 W	1.39	1.39	158	0.00	35	17.71	0.000	0	$0	113.7	0.00	1.39	
192	74901	WURTSMITH	MISSION	TWS	14.4 W	30.10	30.10	970	143.00	12	61.57	0.498	2145	$189	32.2	0.00	30.10	
193	75902	REYNOLDS	SEARS	JAC	14.4 W	44.13	44.13	795	63.74	12	66.36	0.612	1721	$438	18.0	0.00	44.13	
194	76002	CHEYENNE	MCDONALDS	SAG	4.8 W	12.29	12.29	1320	190.00	11	49.50	0.081	190	$873	107.4	0.00	12.29	
195	76201	BEHNKE	ANGOLA ROAD	CLD	4.8 W	27.09	27.09	387	41.63	11	73.56	0.591	666	$549	14.3	0.00	27.09	
196	76602	JUDD ROAD	OTTAWA	FLT	4.8 W	9.20	9.20	400	66.88	35	36.22	0.870	535	$232	43.5	0.00	9.20	
197	76605	JUDD ROAD	CARMANWOOD	FLT	4.8 W	12.55	12.55	1636	328.75	30	50.99	0.319	1315	$129	130.4	0.00	12.55	
198	76901	SPRINKLE	BISHOP	KAL	4.8 W	0.31	0.31	2	0.00	35	9.87	0.000	0	$0	6.5	0.00	0.31	
199	77403	DEWEY	CONVENTION CENTER	GRA	7.2 W	2.95	2.95	791	0.00	24	21.60	0.000	0	$0	268.1	0.00	2.95	
200	77404	DEWEY	BRIDGEWATER	GRA	7.2 W	3.73	3.73	604	0.00	35	18.74	0.000	0	$0	161.9	0.00	3.73	
201	77604	KEATING	EAST BARNEY	MUS	7.2 W	9.49	9.49	889	81.67	7	34.48	0.316	245	$523	93.7	9.49	0.00	
202	78402	FOUNTAIN	DOWNTOWN	BCK	4.8 W	1.02	1.02	50	0.00	35	9.87	0.000	0	$0	49.0	0.00	1.02	
203	78405	FOUNTAIN	KELLOGG RESEARCH	BCK	4.8 W	0.02	0.02	2	0.00	35	9.87	0.000	0	$0	100.0	0.00	0.02	
204	79201	MIDDLEVILLE	BUSINESS	HST	4.8 W	51.94	51.94	1410	102.15	11	65.93	0.635	3371	$208	27.1	0.00	51.94	
205	79301	RAVINE	PATTERSON	KAL	4.8 W	14.71	14.71	1585	276.00	10	43.38	0.272	1104	$180	107.7	0.00	14.71	
206	79302	RAVINE	RAVINE	KAL	4.8 W	29.73	29.73	1655	94.60	13	63.89	0.841	2365	$170	55.7	0.00	29.73	
207	79602	LANDWER	VANWAGONER	MUS	7.2 W	4.82	4.82	155	10.00	33	19.19	0.207	10	$6,736	32.2	0.00	4.82	
208	81504	HARPER ROAD	AURELIUS	LAN	14.4 W	32.68	32.68	2349	352.00	19	37.45	0.245	2816	$157	71.9	0.00	32.68	
209	81802	ALPINE	WESTGATE	GRN	7.2 W	10.25	10.25	270	82.33	17	50.23	0.293	247	$560	26.3	0.00	10.25	
210	82402	DALE ROAD	BEAR CREEK	CLR	4.8 W	13.45	13.45	150	36.67	35	32.31	0.669	330	$724	11.2	0.00	13.45	
211	82902	MULLINS	ELMRIDGE	GRA	7.2 W	4.70	4.70	119	0.00	12	21.01	0.000	0	$0	25.3	0.00	4.70	
212	85702	COCHRAN	SNOW	LAN	14.4 W	28.04	28.04	1087	142.64	22	78.87	0.392	1569	$241	38.8	0.00	28.04	
213	86801	KOLASSA	KOSMERICK	CLD	14.4 W	107.85	61.18	1566	53.04		56.57				14.5	0.00	107.85	2022 Carryover
214	90001	DUPONT	E.I.DUPONT	MUS	11.0 W	0.01	0.01	0	0.00	35	13.16	0.000	0	$0	0.0	0.00	0.01	
215	90101	WAGER	FLINT PARK	FLT	4.8 W	11.48	11.48	1332	50.00	17	57.00	0.174	100	$1,550	116.0	0.00	11.48	
216	90301	LEE STREET	BLACK HILLS	GRA	7.2 W	2.89	2.89	85	0.00	34	18.35	0.000	0	$0	29.4	0.00	2.89	
217	90304	LEE STREET	KIRTLAND	GRA	7.2 W	12.91	12.91	3203	122.20	8	37.58	0.387	611	$285	248.1	0.00	12.91	
218	90402	KIESEL	EUCLID	BCY	4.8 W	14.21	14.21	1456	45.00	9	29.71	0.070	45	$4,263	102.5	14.21	0.00	
219	90403	KIESEL	HANDY	BCY	4.8 W	11.74	11.74	996	395.00	9	33.03	0.511	2370	$67	84.8	11.74	0.00	
220	90503	KENT AIRPORT	PATTERSON	GRE	7.2 W	3.07	3.07	51	0.00	34	18.35	0.000	0	$0	16.6	0.00	3.07	
221	90602	HARRIET	HARRIET	FLT	4.8 W	9.22	9.22	1151	16.00	35	54.55	0.325	48	$2,593	124.8	0.00	9.22	
222	90802	OAK STREET	WEST GANSON	JAC	4.8 W	8.51	8.51	1608	818.00	9	26.15	0.235	1636	$70	189.0	8.51	0.00	
223	91502	GRAND VALLEY	GRAND VALLEY	GRA	7.2 W	0.01	0.01	1	0.00	35	9.87	0.000	0	$0	100.0	0.00	0.01	
224	91603	AMPERSEE	NORTH COMMERCIAL	KAL	4.8 W	6.77	6.77	535	96.00	9	26.14	0.591	384	$243	79.0	6.77	0.00	
225	91702	CLAY	FREEZER	GRA	7.2 W	0.79	0.79	38	0.00	35	14.21	0.000	0	$0	48.1	0.00	0.79	
226	92301	BIG RAPIDS	FERRIS	BIG	7.2 D	0.84	0.84	1	0.00	11	11.12	0.000	0	$0	1.2	0.00	0.84	
227	92302	BIG RAPIDS	M-20	BIG	7.2 D	1.07	1.07	97	0.00	35	23.86	0.000	0	$0	90.7	0.00	1.07	
228	93802	RIX ROAD	UNDERPASS	KAL	4.8 W	53.64	53.64	2093	184.32	11	70.00	1.044	10322	$75	39.0	0.00	53.64	
229	93902	LYON MANOR	TOWN HALL	WBR	4.8 W	29.28	29.28	1510	266.31	15	61.06	0.888	6924	$104	51.6	0.00	29.28	
230	98204	LEFFINGWELL	NOTTINGHAM	GRA	7.2 W	11.72	4.60	691	108.13		37.27				59.0	0.00	11.72	2022 Carryover
231	99602	CENTER ROAD	EASTLAND	FLT	4.8 W	9.94	9.94	586	85.00	29	41.26	0.101	85	$1,579	59.0	0.00	9.94	
232	100201	SHAFFER	WOODLAND	GRE	7.2 W	0.86	0.86	6	0.00	35	15.55	0.000	0	$0	7.0	0.00	0.86	
233	100204	SHAFFER	EASTBROOK	GRE	7.2 W	2.57	2.57	35	0.00	21	14.57	0.000	0	$0	13.6	0.00	2.57	
234	100801	HARRIETTA	CABERFAE	CAD	14.4 D	10.40	10.40	199	80.80	3	16.83	0.962	808	$173	19.1	10.40	0.00	
235	100902	SURREY	MAIN STREET	CLR	14.4 W	37.75	37.75	1191	80.44	13	77.92	0.954	2896	$215	31.5	0.00	37.75	
236	101204	BARNUM CREEK	MALL	BCK	4.8 W	1.78	1.78	18	0.00	35	18.64	0.000	0	$0	10.1	0.00	1.78	
237	102102	LOCH ERIN	KINGSLEY	ADR	4.8 W	7.74	7.74	326	71.50	14	42.87	0.517	286	$365	42.1	0.00	7.74	
238	102201	FILLMORE	NORTH BLENDON	GRA	7.2 W	37.90	37.90	771	65.74	8	79.19	0.818	2038	$264	20.3	0.00	37.90	
239	102501	ROUND LAKE	ASPHALT	ADR	4.8 W	15.79	13.50	620	49.75		27.23				39.3	15.79	0.00	2022 Carryover
240	103302	SQUIRE HILL	HILLSIDE	FLT	4.8 W	16.45	16.45	1103	37.92	35	44.47	0.790	493	$450	67.1	0.00	16.45	
241	103802	JEFFS ROAD	ADLER ROAD	SMN	7.2 W	34.91	34.91	1933	41.96	7	59.01	0.659	965	$488	55.4	34.91	0.00	
242	106501	FOURTEENTH STREET	TOBIAS STREET	FLT	4.8 W	7.93	7.93	904	0.00	29	39.22	0.000	0	$0	114.0	0.00	7.93	
243	107503	OBERLIN	PRATT LAKE	CLR	14.4 W	74.99	74.99	1401	96.44	35	79.59	0.480	3472	$355	18.7	0.00	74.99	
244	108801	GOLDEN	SMITH'S CROSSING	MDL	4.8 W	3.29	3.29	70	65.33	21	24.64	0.912	196	$227	21.3	0.00	3.29	
245	109201	DAVENPORT	CONGRESS	SAG	4.8 W	17.94	17.94	2423	177.40	9	38.67	0.557	1774	$137	135.1	17.94	0.00	
246	109202	DAVENPORT	SCHAEFFER	SAG	4.8 W	1.57	1.57	31	0.00	35	21.46	0.000	0	$0	19.7	0.00	1.57	
247	111206	DRAKE ROAD	MAPLE HILL	KAL	4.8 W	3.68	3.68	395	68.00	34	22.98	0.543	136	$365	107.3	0.00	3.68	
248	111901	CHAUNCEY	AUSTIN	BCK	4.8 W	38.27	38.27	1457	45.40	24	74.22	1.124	1952	$265	38.1	0.00	38.27	
249	111902	CHAUNCEY	CASS	BCK	4.8 W	38.74	38.74	1531	64.72	11	49.45	0.645	1618	$323	39.5	0.00	38.74	
250	113401	HARING	SIXTH STREET	CAD	4.8 W	3.79	3.79	124	58.00	9	18.67	0.264	58	$882	32.7	3.79	0.00	
251	113601	EMERALD	BANBURY	KAL	4.8 W	9.15	9.15	2024	1487.20	9	45.58	0.546	7436	$17	221.2	9.15	0.00	
252	113604	EMERALD	EMERALD	KAL	4.8 W	0.68	0.68	4	4.00	35	9.87	2.941	8	$2,760	5.9	0.00	0.68	
253	114501	CADMUS	WINTER	ADR	7.2 W	8.31	8.31	1006	421.00	9	22.14	0.120	421	$266	121.1	0.00	8.31	
254	115902	BALLENGER	SALISBURY	FLT	4.8 W	6.11	6.11	1617	99.40	9	42.80	0.818	497	$166	264.6	6.11	0.00	
255	115903	BALLENGER	BRADLEY	FLT	4.8 W	13.37	13.37	2859	19.86	9	50.94	0.524	139	$1,299	213.8	13.37	0.00	
256	115904	BALLENGER	HOSPITAL	FLT	4.8 W	1.58	1.58	57	7.00	9	14.38	0.633	7	$3,047	36.1	1.58	0.00	

257	117901	SKYLARK	KING'S POINTE	FLT	4.8 W	22.79	22.80	1614	19.50		27.19				70.8	0.00	22.79	2022 Carryover
258	118302	BILLWOOD	LANSING ROAD	LAN	4.8 W	13.24	13.24	732	35.25	23	32.96	0.302	141	$1,268	55.3	0.00	13.24	
259	119601	PEWAMO	PEWAMO	LAN	12.0 D	0.81	0.81	5	0.00	13	11.25	0.000	0	$0	6.2	0.00	0.81	
260	123701	WILMOTT	WILMOTT	HML	4.8 W	40.11	40.11	2313	99.11	12	67.27	0.474	1883	$288	57.7	0.00	40.11	
261	124402	WESTWOOD	DURAND	JAC	4.8 W	7.05	7.05	1710	0	9	22.97	0.000	0	$0	242.6	7.05	0.00	
262	124502	CEDAR LAKE	VAN ETTEN	TWS	14.4 W	39.95	39.95	2193	244	15	63.43	0.626	6092	$89	54.9	0.00	39.95	
263	127403	DUQUITE	SAGANING	WBR	14.4 W	69.99	69.40	863	89		85.77				12.3	0.00	69.99	2022 Carryover
264	127601	COTTAGE GROVE	PREVO	BCY	14.4 W	126.49	39.50	1587	103		54.66				12.5	126.49	0.00	2022 Carryover
265	129902	ROSCOMMON	PIONEER	WBR	14.4 W	115.85	44.25	2164	67		60.07				18.7	0.00	115.85	2022 Carryover
266	131401	BELKNAP	BELKNAP	HML	4.8 W	13.94	13.94	167	11	26	34.18	1.793	274	$730	12.0	0.00	13.94	
267	134702	BELL ROAD	ALBEE	SAG	14.4 W	132.21	132.21	2429	123	17	69.39	0.514	8348	$214	18.4	0.00	132.21	
268	135202	FOREMAN	CUMBERLAND	GRE	4.8 W	43.03	43.03	956	75	20	68.71	0.488	1567	$453	22.2	0.00	43.03	
269	136602	M.A.E.	ALBAIN ROAD	SMN	7.2 W	13.25	13.25	892	37	7	32.17	0.075	37	$4,834	67.3	13.25	0.00	
270	136802	BROADMOOR	AIRWEST	GRE	7.2 W	3.12	3.12	127	0	34	15.26	0.000	0	$0	40.7	0.00	3.12	
271	136804	BROADMOOR	36TH STREET	GRE	7.2 W	3.84	3.84	72	0	34	15.26	0.000	0	$0	18.8	0.00	3.84	
272	138301	MILL GROVE	BABYLON	HML	14.4 W	25.18	25.18	611	109	5	53.14	0.635	1737	$196	24.3	25.18	0.00	
273	138302	MILL GROVE	ALLEGAN HYDRO	HML	14.4 W	48.08	48.08	1409	322	8	70.71	0.582	9014	$95	29.3	0.00	48.08	
274	147202	DORR CORNERS	100TH STREET	GRA	4.8 W	39.86	39.86	677	81	35	80.15	0.878	2852	$189	17.0	0.00	39.86	
275	148201	TITUS LAKE	CASINO	HML	4.8 W	2.66	2.66	24	0	20	14.29	0.000	0	$0	9.0	0.00	2.66	
276	149301	CHEESMAN	MONROE	ALM	4.8 W	10.12	10.12	374	0	35	16.58	0.000	0	$0	37.0	0.00	10.12	
277	150601	MISSION	UNIVERSITY	ALM	4.8 W	8.50	8.50	1203	1	35	13.70	0.118	1	$114,750	141.5	0.00	8.50	
278	150602	MISSION	THREE LEAVES	ALM	4.8 W	5.67	5.67	1243	0	35	18.64	0.000	0	$0	219.2	0.00	5.67	
279	151002	BALCOM	BANKERS	CLD	4.8 W	70.55	70.55	1394	78	9	61.52	0.936	5154	$185	19.8	70.55	0.00	
280	151202	PARAMOUNT	BIRD	GRN	7.2 W	37.14	37.14	2644	149	21	56.64	0.862	4764	$105	71.2	0.00	37.14	
281	151601	HUBBARD LAKE	HUBBARD LAKE	TWS	14.4 W	15.41	15.41	510	284	5	52.34	0.649	2841	$81	33.1	15.41	0.00	
282	154102	BLUE STAR	GANGES	HML	4.8 W	28.13	13.20	657	82		79.03				23.4	0.00	28.13	2022 Carryover
283	154601	PRICE ROAD	PRICE	MDL	14.4 W	39.42	39.42	1033	92	35	86.01	0.989	3575	$205	26.2	0.00	39.42	
284	156302	SCENIC LAKE	BEARD ROAD	OWS	4.8 W	25.51	10.40	918	62		59.39				36.0	0.00	25.51	2022 Carryover
285	157401	FOREST GROVE	FUTURE	GRA	7.2 W	0.03	0.03	0	0	35	9.87	0.000	0	$0	0.0	0.00	0.03	
286	157601	WEST CLARK LAKE	EAGLE POINT	JAC	4.8 W	13.35	13.24	496	59		49.81				37.2	0.00	13.35	2022 Carryover
287	160401	RATIGAN	GREELEY	GRN	14.4 W	42.65	12.60	711	51		83.17				16.7	0.00	42.65	2022 Carryover
288	162802	FISH LAKE	ROSE	FLT	4.8 W	22.12	22.12	1283	226	23	70.15	0.497	2489	$120	58.0	0.00	22.12	
289	163503	BENSTON	LEWIS	MUS	7.2 W	16.48	16.48	652	115	11	50.42	0.485	916	$243	39.6	0.00	16.48	
290	167403	SEVEN MILE	QUARTERLINE	BCY	14.4 W	12.94	12.94	146	53	13	31.05	0.386	265	$659	11.3	0.00	12.94	
291	168701	CLOVERLEAF	BUCHANAN	ALM	4.8 W	4.45	4.45	22	0	13	3.48	0.000	0	$0	4.9	0.00	4.45	

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Tree Outage Influence on CAIDI
Excluding MEDs 2020-2022 Averages

Case No.: U-21389
Exhibit No.: A-50 (PLB-9)
Page: 1 of 1
Witness: PLBolden
Date: May 2023

Line No.	(a) Description	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
1	Area of Fault by Cause Excluding MEDs 2020-2022									
2	2020-2022 AVERAGE									
3	A_AOF	A_CAUSE	A_SYS-CUST	# A_OUTAGE	A_CUST-OUT	A_CUST-MIN	A_CAIDI	A_SAIFI	A_SAIDI	A_CUST/OUT
4	Secondary	No Specific Cause Found	1844791	1319.7	1890.7	441602.5	233.088	0.0010	0.24	1.43
5	Secondary	Weather	1844791	1020.0	1521.3	543111.3	357.067	0.0008	0.29	1.49
6	Secondary	Trees	1844791	2979.7	5798.7	1875301.3	323.184	0.0031	1.02	1.95
7	Secondary	Trees outside of ROW	1844791	441.7	1445.7	405176.2	280.445	0.0008	0.22	3.27
8	Secondary	Animal	1844791	1351.3	1459.3	166365.2	113.909	0.0008	0.09	1.08
9	Secondary	Bird	1844791	143.0	180.0	23311.5	129.292	0.0001	0.01	1.26
10	Secondary	Public Tree Trimming	1844791	28.0	39.3	6799.7	173.257	0.0000	0.00	1.40
11	Secondary	Car/Pole Accident	1844791	136.3	607.0	179652.5	295.587	0.0003	0.10	4.45
12	Secondary	Planned/Scheduled	1844791	788.0	1796.3	180713.0	100.529	0.0010	0.10	2.28
13	Secondary	Public Damage	1844791	183.7	440.7	74027.2	168.210	0.0002	0.04	2.40
14	Secondary	Transmission/Generation	1844791	15.3	51.0	6468.8	126.443	0.0000	0.00	3.33
15	Secondary	Equipment Failure	1844791	3367.7	5438.3	1216582.1	223.542	0.0029	0.66	1.61
16	Secondary	Lightning	1844791	313.0	331.0	77876.3	235.374	0.0002	0.04	1.06
17	Secondary	Unique Incident	1844791	601.0	1495.3	197205.9	131.720	0.0008	0.11	2.49
18	Secondary	Forced Outage/Emergency	1844791	153.0	554.7	46542.6	83.827	0.0003	0.03	3.63
19	Transformer	No Specific Cause Found	1844791	842.3	5942.0	874113.7	147.022	0.0032	0.47	7.05
20	Transformer	Weather	1844791	580.0	4688.0	1672884.2	356.889	0.0025	0.90	8.08
21	Transformer	Trees	1844791	2145.0	19188.0	4943191.6	257.455	0.0104	2.67	8.95
22	Transformer	Trees outside of ROW	1844791	202.7	1510.7	482109.7	319.270	0.0008	0.26	7.45
23	Transformer	Animal	1844791	1499.0	11262.7	1129178.0	100.205	0.0061	0.61	7.51
24	Transformer	Bird	1844791	93.7	509.7	53850.9	105.632	0.0003	0.03	5.44
25	Transformer	Public Tree Trimming	1844791	25.0	215.7	31446.4	145.577	0.0001	0.02	8.63
26	Transformer	Car/Pole Accident	1844791	169.3	2318.0	543835.4	234.489	0.0013	0.29	13.69
27	Transformer	Planned/Scheduled	1844791	3687.3	29593.0	2613990.0	88.297	0.0160	1.41	8.03
28	Transformer	Public Damage	1844791	134.3	1353.0	312150.3	230.564	0.0007	0.17	10.07
29	Transformer	Transmission/Generation	1844791	9.7	80.3	11600.6	144.453	0.0000	0.01	8.31
30	Transformer	Equipment Failure	1844791	2337.3	18175.3	4093925.7	225.207	0.0098	2.22	7.78
31	Transformer	Lightning	1844791	134.3	678.0	234404.0	345.913	0.0004	0.13	5.05
32	Transformer	Unique Incident	1844791	390.7	3131.7	474803.6	151.608	0.0017	0.26	8.02
33	Transformer	Forced Outage/Emergency	1844791	642.3	6366.0	470200.5	73.781	0.0034	0.25	9.91
34	Primary	No Specific Cause Found	1844791	1159.0	79545.3	12442576.5	156.373	0.0430	6.72	68.63
35	Primary	Weather	1844791	1054.7	84007.3	25854170.1	307.916	0.0454	13.97	79.65
36	Primary	Trees	1844791	5221.7	341134.3	90644441.9	265.641	0.1844	48.98	65.33
37	Primary	Trees outside of ROW	1844791	1243.7	104825.7	24450609.3	233.227	0.0567	13.22	84.29
38	Primary	Animal	1844791	360.3	21292.3	2441701.1	114.647	0.0115	1.32	59.09
39	Primary	Bird	1844791	38.7	3842.0	460241.7	119.722	0.0021	0.25	99.36
40	Primary	Public Tree Trimming	1844791	62.0	4904.0	758253.4	154.533	0.0026	0.41	79.10
41	Primary	Car/Pole Accident	1844791	333.3	49991.0	11750264.1	234.980	0.0270	6.35	149.97
42	Primary	Planned/Scheduled	1844791	662.7	49734.7	6225042.5	125.189	0.0269	3.37	75.05
43	Primary	Public Damage	1844791	235.0	18669.0	3356521.9	179.869	0.0101	1.81	79.44
44	Primary	Transmission/Generation	1844791	17.0	3132.3	590153.3	188.363	0.0017	0.32	184.25
45	Primary	Equipment Failure	1844791	2186.7	174955.7	34473124.6	197.035	0.0946	18.65	80.01
46	Primary	Lightning	1844791	216.3	13471.7	2920862.6	216.853	0.0073	1.58	62.27
47	Primary	Unique Incident	1844791	378.0	35368.3	5125873.1	144.892	0.0191	2.77	93.57
48	Primary	Forced Outage/Emergency	1844791	390.0	40475.0	3738544.3	92.370	0.0219	2.03	103.78
49	Circuit	No Specific Cause Found	1844791	59.3	45210.0	5785172.8	127.845	0.0245	3.13	761.97
50	Circuit	Weather	1844791	55.0	38885.7	9171730.8	236.095	0.0210	4.97	707.01
51	Circuit	Trees	1844791	127.7	95994.3	18858874.2	196.560	0.0519	10.20	751.91
52	Circuit	Trees outside of ROW	1844791	46.3	37523.0	5579477.0	148.859	0.0203	3.02	809.85
53	Circuit	Animal	1844791	16.7	16617.7	2243142.9	135.051	0.0090	1.21	997.06
54	Circuit	Bird	1844791	7.0	5931.3	665780.6	112.303	0.0032	0.36	847.33
55	Circuit	Public Tree Trimming	1844791	3.7	2916.0	250025.2	85.855	0.0016	0.14	795.27
56	Circuit	Car/Pole Accident	1844791	50.0	50075.0	7047542.6	140.756	0.0271	3.81	1001.50
57	Circuit	Planned/Scheduled	1844791	44.3	39596.0	6391042.4	161.334	0.0214	3.45	893.14
58	Circuit	Public Damage	1844791	19.7	16149.3	1962526.3	121.599	0.0087	1.06	821.15
59	Circuit	Transmission/Generation	1844791	13.3	10111.7	1608297.0	159.345	0.0055	0.87	758.38
60	Circuit	Equipment Failure	1844791	111.0	81270.0	10894282.4	134.032	0.0439	5.89	732.16
61	Circuit	Lightning	1844791	7.0	6820.3	1015323.9	148.910	0.0037	0.55	974.33
62	Circuit	Unique Incident	1844791	38.7	27599.7	2338275.4	84.752	0.0149	1.26	713.78
63	Circuit	Forced Outage/Emergency	1844791	32.0	25649.7	1599506.1	62.321	0.0139	0.87	801.55
64	Dist Sub	No Specific Cause Found	1844791	3.3	1590.7	569476.4	356.713	0.0009	0.31	477.20
65	Dist Sub	Weather	1844791	0.7	553.3	147265.3	266.142	0.0003	0.08	830.00
66	Dist Sub	Animal	1844791	17.0	15590.0	3639598.7	233.497	0.0085	1.97	917.06
67	Dist Sub	Bird	1844791	5.7	3928.3	989243.0	251.672	0.0021	0.53	693.24
68	Dist Sub	Planned/Scheduled	1844791	8.3	5309.3	1251654.7	235.706	0.0029	0.68	637.12
69	Dist Sub	Transmission/Generation	1844791	0.7	201.3	49244.7	244.593	0.0001	0.03	302.00
70	Dist Sub	Equipment Failure	1844791	36.3	30632.3	7387112.8	241.455	0.0166	4.01	843.09
71	Dist Sub	Lightning	1844791	0.7	616.7	133044.2	215.747	0.0003	0.07	925.00
72	Dist Sub	Unique Incident	1844791	1.0	1045.7	516192.8	493.648	0.0006	0.28	1045.67
73	Dist Sub	Forced Outage/Emergency	1844791	1.3	1800.0	137336.3	76.234	0.0010	0.07	1350.00
74	HVD Line	No Specific Cause Found	1844791	0.7	27.0	259.8	9.609	0.0000	0.00	40.50
75	HVD Line	Weather	1844791	18.7	10310.7	4085893.4	395.783	0.0056	2.20	552.36
76	HVD Line	Trees	1844791	20.3	14575.3	4516207.9	309.297	0.0079	2.44	716.82
77	HVD Line	Trees outside of ROW	1844791	22.7	2856.0	745367.4	260.903	0.0015	0.40	126.00
78	HVD Line	Animal	1844791	0.3	0.3	26.2	78.202	0.0000	0.00	1.00
79	HVD Line	Public Tree Trimming	1844791	0.7	801.0	320072.0	399.591	0.0004	0.17	1201.50
80	HVD Line	Car/Pole Accident	1844791	9.0	6131.7	1443223.4	234.915	0.0033	0.78	681.30
81	HVD Line	Planned/Scheduled	1844791	7.7	5496.0	1301001.8	235.811	0.0030	0.70	716.87
82	HVD Line	Public Damage	1844791	3.3	1418.7	83463.5	58.872	0.0008	0.05	425.60
83	HVD Line	Transmission/Generation	1844791	31.0	20069.0	3504955.6	174.527	0.0108	1.89	647.39
84	HVD Line	Equipment Failure	1844791	107.7	85718.3	16275749.5	189.782	0.0463	8.80	796.15
85	HVD Line	Unique Incident	1844791	8.7	5141.7	358570.0	69.800	0.0028	0.19	593.27
86	HVD Line	Forced Outage/Emergency	1844791	5.7	3423.3	370948.1	108.359	0.0018	0.20	604.12
87	HVD Sub	No Specific Cause Found	1844791	19.0	16178	2181358.6	134.815	0.0087	1.17	851.47
88	HVD Sub	Animal	1844791	8.0	8500	1199017.4	141.061	0.0046	0.65	1062.50
89	HVD Sub	Bird	1844791	1.0	112	11452.0	102.250	0.0001	0.01	112.00
90	HVD Sub	Planned/Scheduled	1844791	4.0	4	270.9	67.520	0.0000	0.00	1.00
91	HVD Sub	Transmission/Generation	1844791	15.0	17712	2244194.4	126.575	0.0096	1.22	1180.80
92	HVD Sub	Equipment Failure	1844791	38.0	28218	2999577.6	106.544	0.0153	1.63	742.58
93	HVD Sub	Lightning	1844791	3.0	3488	575897.7	165.108	0.0019	0.31	1162.67
94	HVD Sub	Unique Incident	1844791	7.0	7281	1350155.2	184.912	0.0039	0.73	1040.14
95	ITC	No Specific Cause Found	1844791	8.0	805	94992.8	117.971	0.0004	0.05	100.63
96	ITC	Weather	1844791	9.0	8815	933531.7	105.967	0.0048	0.51	979.44
97	ITC	Trees	1844791	9.0	3701	336727.9	90.988	0.0020	0.18	411.22
98	ITC	Trees outside of ROW	1844791	1.0	1	129.1	129.067	0.0000	0.00	1.00
99	ITC	Planned/Scheduled	1844791	22.0	18114	4766417.1	262.973	0.0097	2.56	823.36
100	ITC	Public Damage	1844791	9.0	9131	993878.5	108.847	0.0049	0.54	1014.56
101	ITC	Transmission/Generation	1844791	33.0	32226	4147793.4	128.594	0.0175	2.25	976.55
102	ITC	Equipment Failure	1844791	25.0	13424	2160864.6	161.152	0.0073	1.17	536.96
103	ITC	Lightning	1844791	1.0	871	21121.8	24.250	0.0005	0.01	871.00
104	ITC	Unique Incident	1844791	3.0	84	25489.3	303.444	0.0000	0.01	28.00
105	ITC	Forced Outage/Emergency	1844791	3.0	3015	36214.0	12.011	0.0016	0.02	1005.00
106					2042676.3	395930792.1	18303.971	1.1047	214.07	41911.43

(k) Cause	(l) CUST	(m) CUST MIN	(n) CAIDI	(o) SAIDI CONTRIBUTION	(p) SAIFI CONTRIBUTION	(q) CAIDI CAUSE MIN X % SAIFI CONTR	(r) **CAIDI INFLUENCE**
No Specific Cause Found	141,411	21,230,414	150	11.5	0.08	10.96	**5.56%**
Weather	144,545	42,319,844	293	22.9	0.08	21.84	**11.07%**
Trees	**478,889**	**121,281,912**	**253**	**65.6**	**0.26**	**62.59**	**31.74%**
Trees - Outside of ROW	**148,353**	**31,721,071**	**214**	**17.2**	**0.08**	**16.37**	**8.30%**
Animal	69,617	10,089,577	145	5.5	0.04	5.21	**2.64%**
Bird	14,515	2,206,564	152	1.2	0.01	1.14	**0.58%**
Public Tree Trimming	8,883	1,368,255	154	0.7	0.00	0.71	**0.36%**
Car Pole Accident	109,164	20,976,166	192	11.3	0.06	10.82	**5.49%**
Planned/Scheduled	138,484	19,582,181	141	10.6	0.08	10.11	**5.12%**
Public Damage	41,137	6,137,531	149	3.3	0.02	3.17	**1.61%**
Transmission/Generation	51,050	8,000,522	157	4.3	0.03	4.13	**2.09%**
Equipment Failure	411,229	76,507,491	186	41.4	0.22	39.48	**20.02%**
Lightning	23,483	4,616,424	197	2.5	0.01	2.38	**1.21%**
Unique Incident	76,446	9,510,500	124	5.1	0.04	4.91	**2.49%**
Forced Outage/Emergency	80,642	6,579,347	82	3.6	0.04	3.40	**1.72%**
	-	-					
Totals	1,937,849	382,127,798		206.6	1.1	197.2	**100%**

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	))))))	Case No. U-21389

EXHIBITS

OF

EUGÈNE M.J.A. BREURING

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

Schedule E-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Annual Service Area Calendar Sales by Major Customer Classes and System Output
5-Year Calendar Historical
(GWh)

Case No.: U-21389
Exhibit No.: A-5 (EMB-1)
Schedule: E-1
Page: 1 of 2
Witness: EMBreuring
Date: May 2023

Total Company Electric Deliveries

Line No.	Year		(a) Residential	(b) Commercial	(c) Industrial	(d) Other	(e) Total	(f) Losses & Company Use GWh	(g) Losses & Company Use % of Output	(h) System Output
1	2018	Hist	13,051	13,046	11,599	535	38,231	3,101	7.5%	41,331
2	2019	Hist	12,485	12,619	11,209	503	36,815	2,917	7.3%	39,732
3	2020	Hist	13,331	11,918	9,642	512	35,403	2,792	7.3%	38,195
4	2021	Hist	13,229	12,436	10,086	493	36,244	2,777	7.1%	39,021
5	2022	Hist	12,977	12,602	11,292	463	37,333	2,775	6.9%	40,108

Bundled Electric Deliveries

	Year		Residential	Commercial	Industrial	Other	Total	Losses & Company Use GWh	Losses & Company Use % of Output	System Output
6	2018	Hist	13,051	12,034	8,833	535	34,453	2,997	8.0%	37,450
7	2019	Hist	12,485	11,638	8,424	503	33,050	2,862	8.0%	35,911
8	2020	Hist	13,331	11,014	6,952	512	31,810	2,742	7.9%	34,552
9	2021	Hist	13,229	11,504	7,375	493	32,600	2,660	7.5%	35,260
10	2022	Hist	12,977	11,676	8,455	463	33,570	2,756	7.6%	36,326

Choice Electric Deliveries

	Year		Residential	Commercial	Industrial	Other	Total	Losses & Company Use GWh	Losses & Company Use % of Output	System Output
11	2018	Hist	-	1,012	2,766	-	3,778	104	2.7%	3,881
12	2019	Hist	-	980	2,785	-	3,765	56	1.5%	3,821
13	2020	Hist	-	904	2,689	-	3,593	49	1.4%	3,643
14	2021	Hist	-	932	2,712	-	3,644	116	3.1%	3,760
15	2022	Hist	-	926	2,837	-	3,763	20	0.5%	3,783

Schedule E-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Annual Service Area Calendar Sales by Major Customer Classes
5-Year Calendar Historical - Weather-normalized
(GWh)

Case No.: U-21389
Exhibit No.: A-5 (EMB-1)
Schedule: E-1
Page: 2 of 2
Witness: EMBreuring
Date: May 2023

Total Company Electric Deliveries

Line No.	Year		(a) Residential	(b) Commercial	(c) Industrial	(d) Other	(e) Total
1	2018	Hist	12,450	12,786	11,568	534	37,339
2	2019	Hist	12,452	12,653	11,215	503	36,824
3	2020	Hist	13,105	11,870	9,641	512	35,127
4	2021	Hist	12,747	12,258	10,059	492	35,557
5	2022	Hist	12,619	12,450	11,283	462	36,815

Bundled Electric Deliveries

	Year		Residential	Commercial	Industrial	Other	Total
6	2018	Hist	12,450	11,798	8,805	534	33,587
7	2019	Hist	12,452	11,672	8,431	503	33,058
8	2020	Hist	13,105	10,973	6,950	512	31,539
9	2021	Hist	12,747	11,338	7,350	492	31,927
10	2022	Hist	12,619	11,528	8,448	462	33,058

Choice Electric Deliveries

	Year		Residential	Commercial	Industrial	Other	Total
11	2018	Hist	-	988	2,764	-	3,752
12	2019	Hist	-	981	2,784	-	3,766
13	2020	Hist	-	897	2,691	-	3,587
14	2021	Hist	-	921	2,709	-	3,630
15	2022	Hist	-	922	2,835	-	3,757

Schedule E-1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Annual Service Area Calendar Sales by Major Customer Classes and System Output
5-Year Projected
(GWh)

Case No.: U-21389
Exhibit No.: A-15 (EMB-2)
Schedule: E-1
Page: 1 of 1
Witness: EMBreuring
Date: May 2023

			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Total Company Electric Deliveries							**Losses & Company Use**		
Line No.	**Year**		**Residential**	**Commercial**	**Industrial**	**Other**	**Total**	**GWh**	**% of Output**	**System Output**
1	2023	Fcst	12,536	12,502	11,459	461	36,959	2,247	5.7%	39,206
2	2024	Fcst	12,572	12,221	11,438	494	36,725	2,170	5.6%	38,895
3	Test Year	Fcst	12,539	12,144	11,292	440	36,415	2,138	5.5%	38,553
4	2025	Fcst	12,585	11,979	11,731	152	36,448	2,096	5.4%	38,544
5	2026	Fcst	12,572	11,826	11,672	151	36,221	2,078	5.4%	38,300
6	2027	Fcst	12,562	11,806	11,818	150	36,335	2,009	5.2%	38,344
	Bundled Electric Deliveries							**Losses & Company Use**		
	Year		**Residential**	**Commercial**	**Industrial**	**Other**	**Total**	**GWh**	**% of Output**	**System Output**
7	2023	Fcst	12,536	11,557	8,633	461	33,187	2,158	6.1%	35,345
8	2024	Fcst	12,572	11,295	8,646	494	33,007	2,083	5.9%	35,091
9	Test Year	Fcst	12,539	11,222	8,505	440	32,705	2,055	5.9%	34,760
10	2025	Fcst	12,585	11,070	8,984	152	32,791	2,014	5.8%	34,805
11	2026	Fcst	12,572	10,928	8,971	151	32,622	1,998	5.8%	34,620
12	2027	Fcst	12,562	10,908	9,121	150	32,741	1,931	5.6%	34,672
	Choice Electric Deliveries							**Losses & Company Use**		
	Year		**Residential**	**Commercial**	**Industrial**	**Other**	**Total**	**GWh**	**% of Output**	**System Output**
13	2023	Fcst	-	945	2,826	-	3,771	90	2.3%	3,861
14	2024	Fcst	-	926	2,792	-	3,718	86	2.3%	3,804
15	Test Year	Fcst	-	923	2,786	-	3,709	83	2.2%	3,793
16	2025	Fcst	-	909	2,748	-	3,657	82	2.2%	3,739
17	2026	Fcst	-	898	2,701	-	3,599	81	2.2%	3,680
18	2027	Fcst	-	898	2,696	-	3,594	78	2.1%	3,672

Schedule E-2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Test Year Total Company Electric Revenues & Deliveries
March 2024 - February 2025

Case No.: U-21389
Exhibit No.: A-15 (EMB-3)
Schedule: E-2
Page: 1 of 1
Witness: EMBreuring
Date: May 2023

		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
			Less Non-Base Tariff Items							Test Year		Test Year	
Line No.	Description	2022 Actual	PSCR Factor	Surcharges	Other Adjustments	LTILRR	Weather Normalization	Change In Determinants	Pro Forma	PSCR Factor	Total Company	Non-Jurisdictional	Jurisdictional
	Adjusted Operating Revenues ($000)												
	Cycle Billed Tariff Revenue												
1	Base Tariff	$ 2,482,287	$ -	$ -	$ -	$ -	$ (28,999)	$ (323,155)	$ 318,173	$ -	$ 2,448,306	$ 445	$ 2,447,861
2	GSG Power Supply (1)	11,277	(11,277)	-	-	-	-	-	-	10,321	10,321	-	10,321
3	Base PSCR	1,879,841	-	-	-	-	(26,046)	(270,244)	251,224	-	1,834,775	23,665	1,811,110
4	PSCR Factor	54,854	(54,854)	-	-	-	-	-	-	180,558	180,558	107	180,451
5	Total Cycle Billed Tariff Revenue	4,428,258	(66,130)	-	-	-	(55,044)	(593,400)	569,397	190,879	4,473,960	24,217	4,449,743
	Cycle Billed Surcharge Revenue												
6	Energy Optimization	194,120	-	(194,105)	-	(16)	-	-	-	-	(0)	-	(0)
7	Deferral	-	-	1	-	(1)	-	-	-	-	-	-	-
8	Renewable Energy	(104,490)	-	104,490	-	-	-	-	-	-	-	-	-
9	Low-Income Assistance Fund	19,659	-	(19,659)	-	(0)	-	-	-	-	(0)	-	(0)
10	Securitization (Classic7)	35,869	-	(34,093)	-	(1,776)	-	-	-	-	0	-	0
11	Other Provisions for Refund	(37,157)	-	37,157	-	-	-	-	-	-	-	-	-
12	Total Cycle Billed Surcharge Revenue	108,001	-	(106,208)	-	(1,793)	-	-	-	-	0	-	0
13	Unbilled Revenue												
14	Base Tariff	46,858	-	-	(46,931)	73	-	-	-	-	0	-	0
15	Base PSCR	2,246	-	-	(2,246)	-	-	-	-	-	-	-	-
16	PSCR Factor	1,203	(1,203)	-	-	-	-	-	-	-	-	-	-
17	Total Unbilled Revenue	50,307	(1,203)	-	(49,177)	73	-	-	-	-	0	-	0
18	PSCR Over/Under Recovery	408,808	(408,808)	-	-	-	-	-	-	-	-	-	-
19	Total Calendar Revenue	4,995,375	(476,142)	(106,208)	(49,177)	(1,720)	(55,044)	(593,400)	569,397	190,879	4,473,960	24,217	4,449,743
20	Miscellaneous Revenue (2) (3) (4)	151,075	(612)	-	(115,171)	96,812	-	-	-	-	132,104	1,013	131,091
21	Intersystem Sales Revenue	217,787	-	-	(217,787)	-	-	-	493,581	-	493,581	122	493,459
22	Total Operating Revenue	$ 5,364,237	$ (476,754)	$ (106,208)	$ (382,135)	$ 95,092	$ (55,044)	$ (593,400)	$ 1,062,978	$ 190,879	$ 5,099,644	$ 25,352	$ 5,074,293
23													
24	Revenue Adjustments												
25	Jobwork Revenue	2,633	-	-	-	-	-	-	-	-	2,633	-	2,633
26	Jobwork Expense	(2,200)	-	-	-	-	-	-	-	-	(2,200)	-	(2,200)
27	Total Revenue Adjustments	433	-	-	-	-	-	-	-	-	433	-	433
28													
29	Adjusted Total Operating Revenue	$ 5,364,670	$ (476,754)	$ (106,208)	$ (382,135)	$ 95,092	$ (55,044)	$ (593,400)	$ 1,062,978	$ 190,879	$ 5,100,077	$ 25,352	$ 5,074,726
30													
31	**Electric Deliveries (MWh)**												
32	Cycle Billed Bundled Service	33,406,059	-	-	-	2,067,241	(116,300)	(4,802,422)	-	-	30,554,578	328,226	30,226,352
33	Cycle Billed Self-generation	111,345	-	-	-	-	-	(9,651)	-	-	101,694	-	101,694
34	Cycle Billed Electric Choice	3,759,083	-	-	-	-	(4,417)	(40,751)	-	-	3,713,915	-	3,713,915
35	Intersystem Sales	2,996,465	-	-	(2,996,465)	-	-	-	-	-	-	-	-
36	Unbilled Bundled Service	52,649	-	-	(52,649)	185,753	-	(185,753)	-	-	-	-	-
37	Unbilled Electric Choice	3,984	-	-	(3,984)		-	-	-	-	-	-	-
38	Total Electric Deliveries	40,329,585	-	-	(3,053,098)	2,252,993	(120,718)	(5,038,576)	-	-	34,370,187	328,226	34,041,961

Notes:
(1) GSG Power Supply (ln2, col. i), (EMB-6)
(2) Miscellaneous Revenues (ln20, col. b): 2022 P-521, Page 301(M) footnote
(3) Miscellaneous Revenues (ln20, col.d): Authorized Return on Renewable Energy Assets (2022 P-521, pg 301.1) removed; and LTILRR customer base tariff revenues (WP-2, ln 19 col. d)
(4) Miscellaneous Revenues (ln20, col. e): Confidential Exhibit A-87 (AMG-5), page 2 of 2, ln20, col.p

Schedule E-3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Electric Deliveries & Customer Counts by Rate Category
(Annual Deliveries in MWh)

Case No.: U-21389
Exhibit No.: A-15 (EMB-4)
Schedule: E-3
Page: 1 of 1
Witness: EMBreuring
Date: May 2023

		(a)	(b)	(c)	(d)	(e)	(f)
				Test Year			
		2022		Total Company		Jurisdictional	
Line No.	Description	Avg. No. of Customers	Annual Deliveries	Avg. No. of Customers	Annual Deliveries	No. of Customers	Annual Deliveries
	Bundled Residential Service						
1	Standard Service RS	15,581	147,420	14,474	142,308	14,474	142,308
2	Peak Pwr Savers / Dynamic Pricing	5	(2)	-	-	-	-
3	Time-of-Day RT	1	58	-	-	-	-
4	Electric Vehicles REV-1	-	-	-	-	-	-
5	Electric Vehicles REV-2	-	8	-	-	-	-
6	Nighttime Savers (RPM)	3,646	36,588	13,773	105,411	13,773	105,411
7	Summer On-Peak (RSP)	1,610,624	12,697,623	1,618,090	12,185,915	1,618,090	12,185,915
8	Smart Hours (RSH)	15,723	136,746	16,512	125,514	16,512	125,514
9	Total Bundled Residential	1,645,580	13,018,441	1,662,850	12,559,148	1,662,850	12,559,148
	Bundled Secondary Service						
10	Secondary Energy-only GS	198,297	4,114,927	196,122	3,996,698	196,122	3,996,698
11	Secondary Demand GSD	20,873	3,031,852	20,782	2,949,510	20,782	2,949,510
12	Secondary GSTU	845	38,445	918	27,489	918	27,489
13	Total Bundled Secondary	220,015	7,185,224	217,821	6,973,697	217,821	6,973,697
	Bundled Primary Service						
14	Primary Energy-only GP	1,513	805,117	1,479	805,656	1,479	805,656
15	Primary Demand GPD	1,117	7,604,517	796	4,580,914	796	4,580,914
16	Primary Time-of-Use GPTU	1,212	3,860,717	1,365	4,681,858	1,365	4,681,858
17	General Service Primary (EIP)	18	405,136	17	447,618	17	447,618
18	Special Contract (Rate_LED)	-	-	-	-	-	-
19	Total Bundled Primary	3,860	12,675,487	3,656	10,516,047	3,656	10,516,047
	Bundled Street Lighting Service						
20	Unmetered Lighting GUL	3,909	69,149	-	-	-	-
21	Metered Lighting GML	386	4,720	404	12,195	404	12,195
22	Unmetered GU	463	93,710	461	93,426	461	93,426
23	Unmetered Lighting GU-LED	789	16,845	-	-	-	-
24	Universal Unmetered Lighting UUL			4,686	71,839	4,686	71,839
25	Total Bundled Street Lighting	5,547	184,424	5,551	177,460	5,551	177,460
	Bundled Self-generation Service						
26	Self-generation GSG-1	-	-	-	-	-	-
27	Self-generation GSG-2	16	111,345	15	101,694	15	101,694
28	Total Bundled Self-generation	16	111,345	15	101,694	15	101,694
	Bundled Other Service						
29	Wholesale	1	325,294	1	310,379	-	-
30	Grand Rapids	1	17,189	1	17,847	-	-
31	Total Bundled Other	2	342,483	2	328,226	-	-
32	Cycle Billed Bundled Service	1,875,020	33,517,404	1,889,896	30,656,272	1,889,894	30,328,046
33	Unbilled		52,649		-	-	-
34	Calendar Bundled Service	1,875,020	33,570,053	1,889,896	30,656,272	1,889,894	30,328,046
	ROA Secondary Service		33,570,053				
35	Secondary Energy-only GS	95	22,917	96	23,026	96	23,026
36	Secondary Demand GSD	461	173,831	462	172,462	462	172,462
37	Total ROA Secondary	556	196,748	558	195,488	558	195,488
	ROA Primary Service						
38	Primary Energy-only GP	59	75,408	59	75,604	59	75,604
39	Primary Demand GPD	341	3,486,927	338	3,442,823	338	3,442,823
40	Total ROA Primary	400	3,562,335	396	3,518,427	396	3,518,427
41	Cycle Billed ROA Service	956	3,759,083	954	3,713,915	954	3,713,915
42	Unbilled ROA		3,984		-	-	-
43	Calendar ROA Service	956	3,763,067	954	3,713,915	954	3,713,915
44	**Cycle Billed Total Deliveries**	1,875,976	37,276,487	1,890,850	34,370,187	1,890,848	34,041,961
45	**Unbilled**	-	56,633		-	-	-
46	**Calendar Total Deliveries**	1,875,976	37,333,120	1,890,850	34,370,187	1,890,848	34,041,961

Schedule E-4

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Calculation of Annual System Load Factor
2018 - 2022 Historical / 2023 - 2027 Forecast

Case No.: U-21389
Exhibit No.: A-15 (EMB-5)
Schedule: E-4
Page: 1 of 1
Witness: EMBreuring
Date: May 2023

Line No.	Year		(a) System Output GWh	(b) System Peak Demand MW	(c) Annual Load Factor
1	2018	Hist	41,331	8,084	58.4%
2	2019	Hist	39,732	8,039	56.4%
3	2020	Hist	38,195	8,215	52.9%
4	2021	Hist	39,021	7,951	56.0%
5	2022	Hist	40,108	8,061	56.8%
6	2023	Fcst	39,206	7,625	58.7%
7	2024	Fcst	38,895	7,585	58.4%
8	Test Year	Fcst	38,553	7,585	58.0%
9	2025	Fcst	38,544	7,536	58.4%
10	2026	Fcst	38,300	7,520	58.1%
11	2027	Fcst	38,344	7,541	58.0%

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Estimated Electric Rate Case PSCR Factor
March 2024 - February 2025

Case No.: U-21389
Exhibit No.: A-51 (EMB-6)
Page: 1 of 1
Witness: EMBreuring
Date: May 2023

Line No.	Description		(a) Total Company	(b) Jurisdictional Factors	(c) Jurisdictional	(d) Non-Jurisdictional Factors	(e) Non-Jurisdictional
	Expenses ($000)						
1	System Power Supply Costs	(1)	$ 1,918,557	99.0%	$ 1,899,391	1.00%	$ 19,166
2	2022 Under-Recovery PSCR	(2)	$ 127,110	99.0%	$ 125,840	1.00%	$ 1,270
3	Transmission & Market Administrative Expense	(3)	543,730	99.1%	538,999	0.87%	4,731
4	PSCR Expenses		$ 2,589,397		$ 2,564,230		$ 25,167
	PSCR Revenue Contributions ($000)						
5	Intersystem Sales Revenue	(4)	$ 493,581	100.0%	$ 493,459	0.02%	$ 122
6	Self-Generation	(6)	10,321	100.0%	10,321	0.00%	-
7	GI-2		-	100.0%	-	0.00%	-
8	Base Jurisdictional PSCR x $0.05992		1,811,110	100.0%	1,811,110	0.00%	-
9	Base Non-Jurisdictional PSCR x $0.05992		1,069	0.0%	-	100.00%	1,069
10	Long-Term Industrial Load Retention Rate	(5)	68,759	100.0%	68,759	0.00%	-
11	Wholesale Fuel Revenue	(7)	22,596	0.0%	-	100.00%	22,596
12	PSCR Revenue Contributions		$ 2,407,436		$ 2,383,649		$ 23,787
13	PSCR (Over)/Under Recovery		$ 181,961		$ 180,581		$ 1,380
	Electric Deliveries (MWh)						
14	Jurisdictional Bundled Deliveries	(8)			32,472,424		
15	Less: Self-Generation	(9)			(101,694)		
16	Less: GI-2				-		
17	Less: Long-Term Industrial Load Retention Rate				(2,144,378)		
18	Total Bundled PSCR Deliveries				30,226,352		
	Estimated Jurisdictional PSCR Factor						
19	PSCR (Over)/Under Recovery ($000)				$ 180,581		
20	Total Bundled PSCR Deliveries (MWh)				30,226,352		
21	Total Jurisdictional PSCR Factor ($ per kWh)				**$ 0.00597**		
	Estimated PSCR Recovery						
22	PSCR Revenue Contributions		$ 2,407,436		$ 2,383,649		$ 23,787
23	Plus: PSCR (Over)/Under Recovery		180,451		180,451		-
24	Non-jurisdictional PSCR Factor Contribution		107		-		107
25	Total PSCR Revenues		$ 2,587,994		$ 2,564,100		$ 23,893
26	Total PSCR (Over)/Under Recovery		$ 1,403		$ 130		$ 1,273

Total Losses	0.0704
Less: Transmission	0.0000
System Losses	0.0704
System Efficiency	1.07573
PSCR Base @ Gen	0.05570
System Efficiency	1.07573
PSCR Base @ Del	**0.05992**

Notes:
(1) Exhibit A-146 (MLM-1), page 1, line 41; plus page 3, line 60; less page 1, line 35.
(2) WP-JCA-57
(3) Exhibit A-146 (MLM-1), page 1, line 35.
(4) Exhibit A-146 (MLM-1), page 3, line 60.
(5) Exhibit A-146 (MLM-1), page 1, line 42.
(6) Self-Generation PSCR Revenue from WP-AMG-15
(7) $0.0752/kWh from Case No. U-21255, Exhibit A-1, Schedule 4, page 1 (Supplemental Power: Energy Charge rate)
(8) Exhibit A-15 (EMB-4), Schedule E-3, line 34, column (f).
(9) Exhibit A-15 (EMB-4), Schedule E-3, line 28, column (f).

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of Electric and for other relief.	))))))	Case No. U-21389

EXHIBITS

OF

ADAM S. CARVETH

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

Schedule: B-5.2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual and Projected Capital Expenditures
Fleet Services
($000)

Case No.:	U-21389
Exhibit No.:	A-12 (ASC-1)
Schedule:	B-5.2
Page:	1 of 2
Witness:	ASCarveth
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
		Historical Year	**Projected Bridge Period**			**Projected Test Year**
Line No	**Description**	**12 Mos Ended 12/31/2022**	**12 Mos Ended 12/31/2023**	**2 Mos Ending 2/29/2024**	**14 Mos Ending 2/29/2024**	**12 Mos Ending 2/28/2025**
1	Fleet Vehicle Capital Replacement Plan	17,083	19,035	2,168	21,203	19,494
2	Fleet Expansion	2,054	-	-	-	-
3	Fleet Vehicle Electrification	-	-	-	-	1,123
4	Fleet Business Partner Funded	686	33	-	33	-
5	Fleet Tools - Garage	256	240	41	281	247
6	**Total Capital**	20,079	19,308	2,209	21,517	20,863

		Projected			
		2 Mos Ending 2/28/2023	**12 Mos Ending 2/29/2024**	**12 Mos Ending 2/28/2025**	**26 Mos Ending 2/28/2025**
7	Fleet Vehicle Capital Replacement Plan	7,386	13,817	19,494	40,697
8	Fleet Expansion	-	-	-	-
9	Fleet Vehicle Electrification	-	-	1,123	1,123
9	Fleet Business Partner Funded	-	33	-	33
10	Fleet Tools - Garage	40	241	247	528
11	**Total Capital**	7,426	14,091	20,863	42,380

Schedule: B-5.2

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual and Projected Capital Expenditures
Fleet Services
($000)

Case No.: U-21389
Exhibit No.: A-12 (ASC-1)
Schedule: B-5.2
Page: 2 of 2
Witness: ASCarveth
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
		Historical Year	**Projected Bridge Period**			**Projected Test Year**
Line No	**Description**	**12 Mos Ended 12/31/2022**	**12 Mos Ended 12/31/2023**	**2 Mos Ending 2/29/2024**	**14 Mos Ending 2/29/2024**	**12 Mos Ending 2/28/2025**
1	**Fleet Vehicle Capital Replacer**	17,083	19,035	2,168	21,203	19,494
	Contractor	3,620	4,047	461	4,508	4,144
	Labor	-	-	-	-	-
	Materials	13,359	14,784	1,684	16,468	15,141
	Business Expenses	104	204	23	227	209
	Contingency	-	-	-	-	-
	Other (Loadings, Chargebacks)	-	-	-	-	-
2	**Fleet Expansion**	2,054	-	-	-	-
	Contractor	435	-	-	-	-
	Labor	-	-	-	-	-
	Materials	1,606	-	-	-	-
	Business Expenses	13	-	-	-	-
	Contingency	-	-	-	-	-
	Other (Loadings, Chargebacks)	-	-	-	-	-
3	**Fleet Vehicle Electrification**	-	-	-	-	1,123
	Contractor	-	-	-	-	239
	Labor	-	-	-	-	-
	Materials	-	-	-	-	872
	Business Expenses	-	-	-	-	12
	Contingency	-	-	-	-	-
	Other (Loadings, Chargebacks)	-	-	-	-	-
4	**Fleet Business Partner Funde**	686	33	-	33	-
	Contractor	145	7	-	7	-
	Labor	-	-	-	-	-
	Materials	536	26	-	26	-
	Business Expenses	4	0	-	0	-
	Contingency	-	-	-	-	-
	Other (Loadings, Chargebacks)	-	-	-	-	-
5	**Fleet Tools - Garage**	256	240	41	281	247
	Contractor	-	-	-	-	-
	Labor	-	-	-	-	-
	Materials	256	240	41	281	247
	Business Expenses	-	-	-	-	-
	Contingency	-	-	-	-	-
	Other (Loadings, Chargebacks)	-	-	-	-	-
6	**Total Capital**	20,079	19,308	2,209	21,517	20,863

		Projected			
		2 Mos Ending 2/28/2023	**12 Mos Ending 2/29/2024**	**12 Mos Ending 2/28/2025**	**26 Mos Ending 2/28/2025**
7	**Fleet Vehicle Capital Replacer**	7,386	13,817	19,494	40,697
	Contractor	1,570	2,937	4,144	8,652
	Labor	-	-	-	-
	Materials	5,737	10,732	15,141	31,609
	Business Expenses	79	148	209	435
	Contingency	-	-	-	-
	Other (Loadings, Chargebacks)	-	-	-	-
8	**Fleet Expansion**	-	-	-	-
	Contractor	-	-	-	-
	Labor	-	-	-	-
	Materials	-	-	-	-
	Business Expenses	-	-	-	-
	Contingency	-	-	-	-
	Other (Loadings, Chargebacks)	-	-	-	-
9	**Fleet Vehicle Electrification**	-	-	1,123	1,123
	Contractor	-	-	239	239
	Labor	-	-	-	-
	Materials	-	-	872	872
	Business Expenses	-	-	12	12
	Contingency	-	-	-	-
	Other (Loadings, Chargebacks)	-	-	-	-
10	**Fleet Business Partner Funde**	-	33	-	33
	Contractor	-	7	-	7
	Labor	-	-	-	-
	Materials	-	26	-	26
	Business Expenses	-	0	-	0
	Contingency	-	-	-	-
	Other (Loadings, Chargebacks)	-	-	-	-
11	**Fleet Tools - Garage**	40	241	247	528
	Contractor	-	-	-	-
	Labor	-	-	-	-
	Materials	40	241	247	528
	Business Expenses	-	-	-	-
	Contingency	-	-	-	-
	Other (Loadings, Chargebacks)	-	-	-	-
12	**Total Capital**	7,426	14,091	20,863	42,380

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Fleet Responsibility Costs

Case No.: U-21389
Exhibit No.: A-52 (ASC-2)
Page: 1 of 1
Witness: ASCarveth
Date: May 2023

Categories	2016	2017	2018	2019	2020	2021	2022
Licensing	3,750,828	359,176	2,366,665	2,378,900	2,738,753	2,840,343	3,145,786
Technician	13,517,549	14,945,880	15,741,694	17,083,824	16,878,522	18,902,790	19,788,278
Parts	6,915,581	7,797,781	9,616,863	11,150,363	10,656,308	11,649,547	14,557,200
Outside Vendor	7,969,417	8,707,404	10,312,544	12,338,445	12,809,528	12,801,491	14,875,779
Fuel	10,986,225	14,273,104	16,894,736	15,398,764	12,808,774	17,865,478	25,105,355
Support Labor	4,179,501	4,310,356	4,639,242	5,203,200	5,096,942	5,034,713	5,031,440
Support Other	1,653,792	2,248,636	3,071,977	3,125,588	3,141,164	3,480,793	4,205,239
Total Cost	48,972,893	52,642,337	62,643,722	66,679,085	64,129,991	72,575,154	86,709,077

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Corporation
Detailed List of Projected Electric Capital Expenditures
Fleet Services
For the Years 2022, 2023, 2024 and test year 12 months ending 02/28/2025
($000)

Case No.: U-21389
Exhibit No.: A-53 (ASC-3)
Page: 1 of 1
Witness: ASCarveth
Date: May 2023

Line No.	(a)	(b)	(c) 12 months ending 12/31/2022 Projected Spend	(d) 12 months ending 12/31/2022 Projected Unit Count	(e) 12 months ending 12/31/2023 Projected Spend	(f) 12 months ending 12/31/2023 Projected Unit Count	(g) 12 months ending 12/31/2024 Projected Spend	(h) 12 months ending 12/31/2024 Projected Unit Count	(i) 12 months ending 2/28/2025 Projected Spend	(j) 12 months ending 2/28/2025 Projected Unit Count
									Test Year	
1	**Fleet Vehicle Capital Replacement Plan**		*($000)*	*(units)*	*($000)*	*(units)*	*($000)*	*(units)*	*($000)*	*(units)*
	Vehicle Spec	**Description**	**17,083**	**122**	**19,035**	**157**	**19,454**	**143**	**19,494**	**151**
	07	SEDAN MID SIZE 4DR	-	-	188	4	227	5	227	**5**
	22	1/2 TON PICKUP	27	4	620	11	726	19	1,083	19
	23	VAN CARGO	1,396	24	930	12	323	4	323	4
	26	1 TON PICKUP WITH SERVICE BODY SHORT CAB	672	18	192	2	-		-	-
	28	3/4 TON PICKUP	180	8	555	8	585	3	228	3
	36	1 TON PICKUP WITH SERVICE BODY	-	-	307	3	849	8	849	8
	39	VAN CARGO HI ROOF	62	1	212	2	-		-	-
	45	MECHANIC SERVICE TRUCK	329	2	-	-	183	1	183	1
	54	5 YARD DUMP TRUCK SINGLE AXLE	57	1	157	1	-	-	-	-
	55	10 YARD DUMP TRUCK TANDEM AXLE	34	1	-	-	-	-	-	-
	57	MEDIUM DUTY CRANE TRUCK	272	1	-	-	-	-	-	-
	59	STAKE RACK TRUCK	78	2	-	-	103	1	103	1
	60	ELECTRIC SERVICE TRUCK	316	6	-	-	706	6	706	6
	61	SUBSTATION OPERATIONS BUCKET TRUCK	225	1	-	-	-	-	-	-
	64	SERVICE TRUCK WITH AERIAL DEVICE	-	-	4,148	16	803	3	803	3
	65	STREETLIGHT TRUCK	-	-	-	-	1,298	3	1,298	3
	67	SUBSTATION OPERATIONS SERVICE TRUCK	62	1	-	-	-	-	-	-
	77	DIGGER DERRICK TRUCK	4,202	11	767	2	5,871	15	5,871	15
	85	TANDUM AXLE TRACTOR WITH FIFTH WHEEL HITCH	190	2	172	1	183	1	183	1
	89	BUCKET TRUCK	4,118	10	-	-	927	2	927	2
	90	FLATBED TRUCK	153	2	153	2	476	3	476	3
	96	BUCKET TRUCK	4,461	13	2,217	6	391	1	391	1
	96 - Electric	BUCKET TRUCK - ELECTRIC	-	-	600	1	-	-	-	-
	99	MISC. TRUCK	-	-	-	-	129	1	129	1
	EQUIPMENT	EQUIPMENT	629	5	1,796	15	1,623	13	2,053	19
	TRAILERS	TRAILERS	264	9	5,115	71	3,170	54	3,662	56
	Lease Buyout - Electric/Common		702		906		881		-	
	Rental Buyouts		11		-	-	-	-	-	
	Historical Disallowance - Toolkit Removal		(1,354)		-	-	-	-	-	
2	**Fleet Expansion**		*($000)*	*(units)*	*($000)*	*(units)*	*($000)*	*(units)*	*($000)*	*(units)*
	Vehicle Spec	**Description**	**2,054**	**34**	**-**	**-**	**-**	**-**	**-**	**-**
	22	1/2 TON PICKUP	19	4	-	-	-	-	-	-
	23	VAN CARGO	-	-	-	-	-	-	-	-
	90	FLATBED TRUCK	773	10	-	-	-	-	-	-
	Equipment	EQUIPMENT	519	3	-	-	-	-	-	-
	Trailers	TRAILERS	743	17	-	-	-	-	-	-
3	**Fleet Vehicle Electrification**		*($000)*	*(units)*	*($000)*	*(units)*	*($000)*	*(units)*	*($000)*	*(units)*
	Vehicle Spec	**Description**	**-**	**-**	**-**	**-**	**1,123**	**-**	**1,123**	**-**
	22/28	Electric Chevy Silverado, (Count 19, Line 1, Spec 22)	-	-	-	-	823	-	823	-
		Altec JEMS, (Count 6, Line 1, Spec 64, 89, 96)	-	-	-	-	300	-	300	-
3	**Fleet Business Partner Funded**		*($000)*	*(units)*	*($000)*	*(units)*	*($000)*	*(units)*	*($000)*	*(units)*
	Vehicle Spec	**Description**	**686**	**1**	**33**	**1**	**-**	**-**	**-**	**-**
	Generation Rebuild		686	1						
	22	1/2 TON PICKUP	-	-	33	1				
4	**Totals:**		**19,823**	**157**	**19,068**	**158**	**20,577**	**143**	**20,617**	**151**

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Corporation

Summary of Fleet Tooling Actual & Projected Capital Expenditures

Fleet Services

For the Years 2022, 2023, 2024 and test year 12 months ending 02/28/2025

($000)

Case No.: U-21389
Exhibit No.: A-54 (ASC-4)
Page: 1 of 1
Witness: ASCarveth
Date: May 2023

Line No.	(a)	(b) 12 months ending 12/31/2022 Historical	(c) 12 months ending 12/31/2023 Projected Spend	(d) 12 months ending 12/31/2024 Projected Spend	*Test Year* (e) 12 months ending 2/28/2025 Projected Spend
1	**Fleet Tools - Garage**				
	Tool Description				
	Shop Equipment	$ 92	$ 95	$ 110	$ 91
	Shop Tools	$ 120	$ 90	$ 68	$ 78
	Diagnostic Tools	$ 44	$ 55	$ 67	$ 78
2	**Fleet Tools Totals:**	**$ 256**	**$ 240**	**$ 246**	**$ 247**

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	))))))	Case No. U-21389

EXHIBITS

OF

THOMAS P. CLARK

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

EXHIBIT A-55 (TPC-1)
IS CONFIDENTIAL AND BEING FILED
UNDER SEAL WITH THE MPSC

EXHIBIT A-56 (TPC-2)
IS CONFIDENTIAL AND BEING FILED
UNDER SEAL WITH THE MPSC

Extract from the minutes of the meeting of the Board of Directors of Consumers Energy Company (the "Company"), duly called and held on January 21, 2021.

- - - - - - - - - - - - -

* * *

RESOLUTIONS APPROVING A CAPITAL EXPENDITURE FOR THE MUSTANG MILE SOLAR ENERGY LLC PROJECT

RESOLVED: That, upon the recommendation of the Finance Committee of the Board of Directors (the "Board") of Consumers Energy Company (the "Company"), the Board approves a capital expenditure in an amount of up to $262 million for the Mustang Mile Solar Energy LLC project, a solar project located in Lenawee County, Michigan and expected to be up to 150 megawatts (the "Project"), as discussed at the meeting; and

RESOLVED FURTHER: That the officers of the Company, and each of them, are authorized and directed, for and on behalf of the Company, to execute any and all documents and take all actions and do all things they may deem necessary or appropriate, and as counsel may advise, to fully and timely initiate and complete the Project referred to in the foregoing resolution, without further action of the Board, unless the total Project cost exceeds the authorized amount by 10% or more as provided for under the Financial Authorities Policy.

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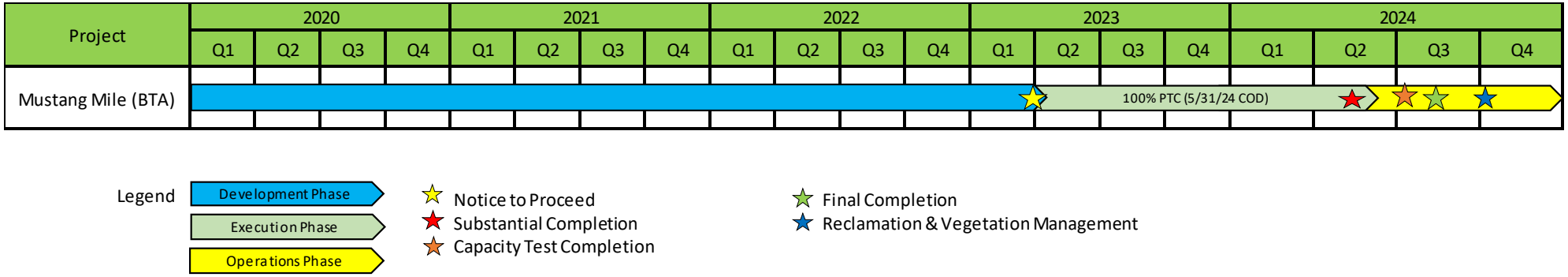
Mustang Mile Solar Project – Milestone Schedule



MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual and Projected Capital Expenditures
Company Owned IRP Solar Resources
($000's)

Case No.: U-21389
Exhibit No.: A-59 (TPC-5)
Page: 1 of 1
Witness: TPClark
Date: May 2023

Line No	Description	Historical Year 12 Mos Ended 12/31/2022	Bridge Year 14 Mos Ending 2/29/2024	Projected Test Year 12 Mos Ending 2/28/2025
	(a)	(b)	(c)	(d)
1	**Solar - 2019 IRP Solicitation - Mustang Mile Solar Project**	$ 162	$ 233,064	$ 49,337
2	Contractor	14	222,328	41,394
3	Labor	65	456	508
4	Materials	-	-	-
5	Business Expenses	28	792	93
6	Contingency	-	-	-
7	Other (Loadings, Chargebacks)	55	9,488	7,342
8	**Solar - 2020 IRP Solicitation - Washtenaw Solar Project**	$ 147	$ 122,186	$ 104,980
9	Contractor	-	116,445	94,643
10	Labor	49	314	279
11	Materials	-	-	-
12	Business Expenses	43	808	350
13	Contingency	-	-	-
14	Other (Loadings, Chargebacks)	55	4,619	9,708
15	**Solar - 2021 IRP Solicitation - Muskegon Solar Project**	$ 22,789	$ 61,930	$ 115,140
16	Contractor	22,132	56,643	105,397
17	Labor	68	314	553
18	Materials	-	-	-
19	Business Expenses	176	2,258	1,200
20	Contingency	-	-	-
21	Other (Loadings, Chargebacks)	413	2,715	7,990
15	**Total Capital**	$ 23,098	$ 417,180	$ 269,457

EXHIBIT A-60 (TPC-6)
IS CONFIDENTIAL AND BEING FILED
UNDER SEAL WITH THE MPSC

Extract from the minutes of the meeting of the Special Board of Directors of Consumers Energy Company (the "Company"), duly called and held on September 29, 2021.

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* * *

BOARD RESOLUTIONS APPROVING A CAPITAL EXPENDITURE FOR THE WASHTENAW SOLAR ENERGY LLC PROJECT

RESOLVED: That, upon the recommendation of Management of Consumers Energy Company (the "Company"), the Board of Directors (the "Board") of the Company approves a capital expenditure in an amount of up to $232 million for the Washtenaw Solar Energy LLC project, a solar project located in Washtenaw County, Michigan and expected to be up to 150 megawatts (the "Project"), as discussed at the meeting; and

RESOLVED FURTHER: That the officers of the Company, and each of them, are authorized and directed, for and on behalf of the Company, to execute any and all documents and take all actions and do all things they may deem necessary or appropriate, and as counsel may advise, to fully and timely initiate and complete the Project referred to in the foregoing resolution, without further action of the Board, unless the total Project cost exceeds the authorized amount by 10% or more as provided for under the Financial Authorities Policy.

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Washtenaw Solar Project – Milestone Schedule

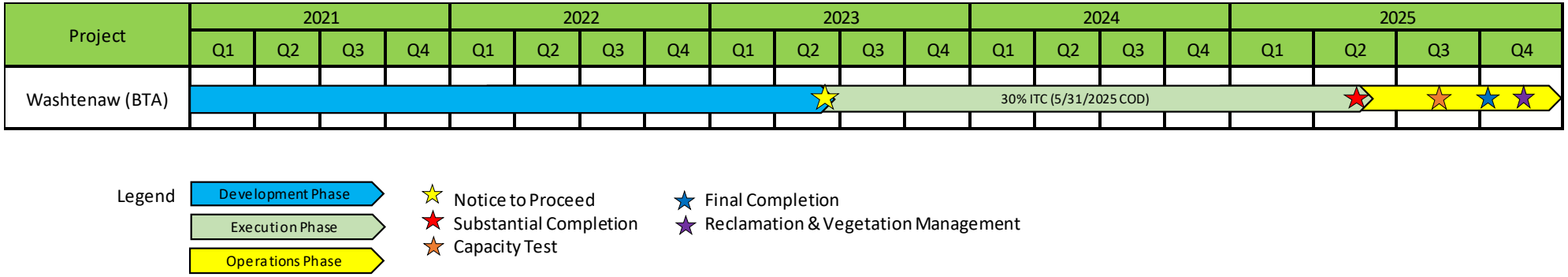

EXHIBIT A-63 (TPC-9)
IS CONFIDENTIAL AND BEING FILED
UNDER SEAL WITH THE MPSC

EXHIBIT A-64 (TPC-10)
IS CONFIDENTIAL AND BEING FILED
UNDER SEAL WITH THE MPSC

EXHIBIT A-65 (TPC-11)
IS CONFIDENTIAL AND BEING FILED
UNDER SEAL WITH THE MPSC

EXHIBIT A-66 (TPC-12)
IS CONFIDENTIAL AND BEING FILED
UNDER SEAL WITH THE MPSC

Extract from the minutes of the meeting of the Board of Directors of Consumers Energy Company (the "Company"), duly called and held on January 25, 2023.

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* * *

PROPOSED FINANCE RESOLUTIONS APPROVING A CAPITAL EXPENDITURE FOR THE MUSKEGON SOLAR ENERGY CENTER PROJECT

RESOLVED: That the Finance Committee (the "Committee") of Consumers Energy Company (the "Company") approves a capital expenditure in an amount of $354 million for the Muskegon Solar Energy Center Project, a solar project located in Muskegon County, Michigan and expected to be up to 250 megawatts (the "Project"), as discussed at the meeting; and

RESOLVED FURTHER: That the officers of the Company, and each of them, are authorized and directed, for and on behalf of the Company, to execute any and all documents and take all actions and do all things they may deem necessary or appropriate, and as counsel may advise, to fully and timely complete the Project without further action of the Committee unless the total Project cost exceeds the authorized amount by 10% or more as provided for under the Financial Authorities Policy.

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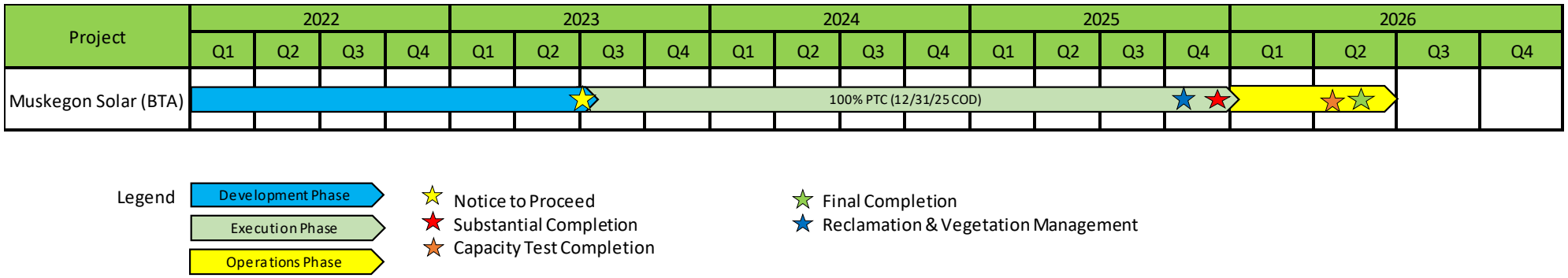
MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
2021 IRP Solicitation – Muskegon Solar Energy Center Project – Milestone Schedule

Case No.: U-21389
Exhibit No.: A-68 (TPC-14)
Page: 1 of 1
Witness: TPClark
Date: May 2023

Muskegon Solar Energy Center Project – Milestone Schedule



Stakeholder Outreach Meeting

2021 IRP - Settlement Agreement Battery Deployment Program

August 17th, 2022

Consumers Energy
Count on Us®

Agenda

10:00 – 10:05	Welcome and Introductions
10:05 – 10:20	Battery Deployment Program Overview
10:20 – 10:35	Battery Deployment Program Competitive Solicitation Overview
10:35 – 10:50	Stakeholder Feedback – Clarifying Questions
10:50 – 11:00	Written Feedback Instructions and Next Steps

Introductions

Consumers Energy Presenters

- Sara Walz | Director of Electric Supply Planning
- Chris McNalley | Senior Engineer Lead - Generation Planning Renewable Assets
- Demeury (Dex) Naranjo-Rodriguez | Planning Engineer - LVD Substation Planning
- Frank Gerzetich | Portfolio Manager - Supply Chain

Battery Deployment Program Overview

2021 Integrated Resource Plan Settlement Agreement

Battery Deployment Program:

The parties agree to the approval of the battery deployment program as proposed by Company witness Richard T. Blumenstock. The parties agree that ***the Company will conduct stakeholder outreach to solicit feedback regarding the battery deployment program prior to the issuance of the first battery deployment program competitive solicitation****. The approval to recover the costs associated with the batteries acquired in the battery deployment program will be sought in future electric rate cases.*

Stakeholder feedback is being requested prior to RFP for consideration. Incorporation of feedback is not guaranteed. The Company will provide written responses to all comments, suggestions, and questions.

Battery Deployment Program Key Elements

The battery deployment program is designed to expand the Company's learnings of potential benefits to the distribution system from storage. The program targets…

- **Localized** batteries to identify benefits and impacts to reliability, resiliency and performance
- Batteries **in isolation or in combination with solar** in areas considered vulnerable or opportunistic
- Provision of Supply for Electric Vehicle Growth
- **Competitive solicitation** of distribution-connected assets
- **Company-owned** assets to expedite the pace of installation and learnings
- **Flexible** acquisition of capacity over years 2024-2027 based on economics

Proposed Program Deployment Schedule

The battery deployment program was initially designed to add distribution supply assets to conservatively follow potential electric vehicle (EV), other electrification or load growth.

Commercial Operation Date	Incremental Battery Capacity (MW)	Cumulative Battery Capacity (MW)
Dec 31, 2024	5	5
Dec 31, 2025	10	15
Dec 31, 2026	20	35
Dec 31, 2027	40	75

Capacity will be acquired flexibly for years 2024-2027, as economically viable through competitive solicitation.

Battery Deployment Program Competitive Solicitation Overview

Battery Storage Solicitation Structure

Product

- Single solicitation event
  - Initial 5 MW / 20 MWh
  - Options for up to 75 MW / 300 MWh
- Capacity on-line between 2024-2027
- See technical specification for additional information

Proposed Bid Option 1

Equipment Manufacturer / EPC Contract

- The Company identifies sites based on parameters of the program and then bids out for an Integrator contract.
- All engineering, procurement, and construction to be provided by single entity through construction.

Proposed Bid Option 2

Equipment Only Contract

- Separating award for major equipment and "balance of plant".
- The Company solicits bids for major equipment and "balance of plant" separately

Solicitation Timing

Exact date and timing subject to change

- RFP issued Q3 2022
- Bids due Q4 2022
- Bid award Q4 2022

EPC = Engineering, Procurement, Construction

RFP Technical Specification and Siting

Battery System Criteria	
Interconnection	Distribution Connected (<69 kV)
	Interconnection to Consumers Energy System
Size and Technology	0.1 MW or Larger (maximum 20MW)
	Battery Technologies – Flexible (Li-Ion, Iron Redox, Vanadium Flow, etc.)
Location	Vulnerable Communities (defined later) and Public Safety Requirements
Operating Parameters	Minimum Duration of 4 Hours
	Meets Qualification for MISO Market Participation
	Lifespan of Asset Minimum 15 Years
Configuration	Standalone or Renewable Hybrid Systems
Use Cases	Distribution Capacity Deferral, Voltage Support, Resiliency, Power Quality, Energy Arbitrage, Capacity Credit, etc.

RFP Evaluation Criteria

Siting Criteria
Located in Vulnerable Communities
Opportunistic Locations
Company-owned Land, Brownfields, Pollinator Habitat etc.

Value-Added Criteria
Minority and Women Business Development
Michigan / Union Labor and Content

Vulnerable communities are defined as communities that have an environmental or demographic "index", as examined by the Environmental Protection Agency (EPA) EJSCREEN Tool or MIEJScreen Tool, as scoring at the 75th percentile or above

Opportunistic locations are circuits or locations that would provide electric system benefits such as capacity deferral, resiliency improvements, or operational improvements

Clarifying Questions

Stakeholder Feedback Areas

1. Capacity Acquisition Schedule
   - Single solicitation for up to 75 MW over the period of 2024-2027
2. Contract Options
   - EPC Contract vs Equipment-only Contract
3. Evaluation Criteria
4. RFP Schedule Timing

Written Feedback Instructions and Next Steps

Please submit comments, suggestions, and follow up questions via email to Kenneth.Johnston@cmsenergy.com

Deadline to submit comments and recommendations is Wednesday, August 24th.

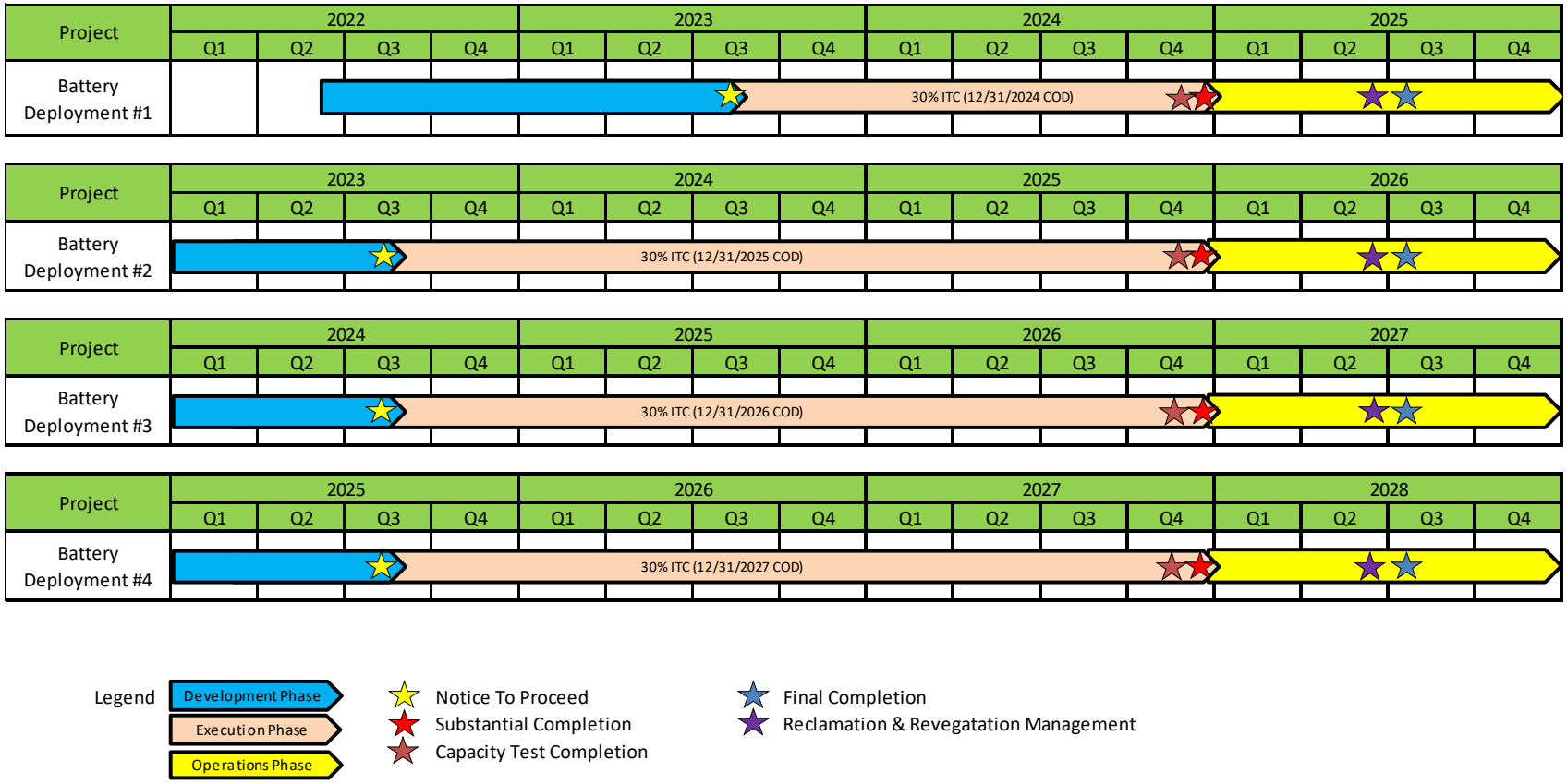
Materials presented today will be distributed to all participants.

Thank you for your participation!

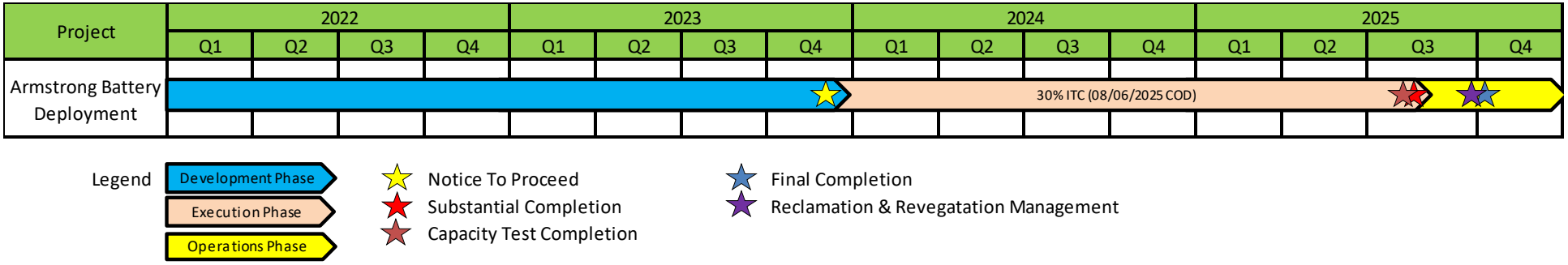
MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
2021 IRP Solicitation – 75MW Battery Energy System Storage –
Milestone Schedule

Case No.: U-21389
Exhibit No.: A-70 (TPC-16)
Page: 1 of 1
Witness: TPClark
Date: May 2023

Battery Energy System Storage – Milestone Schedule



Armstrong Battery Deployment – Milestone Schedule



S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	))))))	Case No. U-21389

EXHIBIT

OF

JASON R. COKER

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Business Case Costs and Benefits
2007 - 2032
(000)

Case No.: U-21389
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Smart Grid Program - Annual Capital Expenditures

Line No.	(a) Utility	(b) Description	(c) 2007	(d) 2008	(e) 2009	(f) 2010	(g) 2011	(h) 2012	(i) 2013	(j) 2014	(k) 2015	(l) 2016	(m) 2017	(n) 2018	(o) 2019	(p) 2020
1	Electric	Meters	$ -	$ 1,424	$ 1,231	$ 930	$ 128	$ 9,602	$ 21,432	$ 29,976	$ 62,152	$ 109,569	$ 53,679	$ -	$ -	$ -
2		Field Equipment/Facilities	$ -	$ 113	$ 1,305	$ 1,510	$ 341	$ 259	$ 171	$ 154	$ 270	$ 1,200	$ 5,965	$ 6,331	$ 8,440	$ 8,580
3		Software/Systems Development	$ 7,889	$ 8,214	$ 12,259	$ 15,909	$ 19,654	$ 20,770	$ 32,100	$ 31,990	$ 45,038	$ 24,918	$ (1,734)	$ 1,162	$ 16,390	$ 952
4		SG Infrastructure	$ -	$ -	$ -	$ 2,789	$ 7,834	$ 5,912	$ 1,109	$ 976	$ 1,463	$ 3,391	$ 750	$ 1,943	$ 2,827	$ 3,375
5		Pilot Prep & Project Management	$ -	$ 7,883	$ 8,932	$ 13,283	$ 9,558	$ 7,919	$ 6,194	$ 6,063	$ 6,657	$ 4,790	$ 2,493	$ -	$ -	$ -
6		Total Capital Costs before Avoidance - Electric	$ 7,889	$ 17,634	$ 23,726	$ 34,421	$ 37,515	$ 44,463	$ 61,005	$ 69,159	$ 115,581	$ 143,868	$ 61,153	$ 9,436	$ 27,657	$ 12,907
7		Avoided Capital Costs - Electric	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (306)	$ (240)	$ 410	$ 352	$ 263	$ 274
8		Total Capital Costs Net - Electric	$ 7,889	$ 17,634	$ 23,726	$ 34,421	$ 37,515	$ 44,463	$ 61,005	$ 69,159	$ 115,274	$ 143,628	$ 61,563	$ 9,787	$ 27,920	$ 13,181
9																
10	Gas	Modules	$ -	$ -	$ -	$ 5	$ -	$ -	$ -	$ -	$ 6,663	$ 25,404	$ 15,845	$ -	$ -	$ -
11		Field Equipment/Facilities	$ -	$ 15	$ 162	$ 95	$ 41	$ 37	$ 23	$ 21	$ -	$ -	$ -	$ -	$ -	$ -
12		Software/Systems Development	$ 1,076	$ 1,120	$ 1,524	$ 2,143	$ 2,664	$ 2,832	$ 4,377	$ 4,362	$ 5,995	$ 3,359	$ (54)	$ 158	$ 165	$ 130
13		SG Infrastructure	$ -	$ -	$ -	$ 380	$ 1,068	$ 806	$ 151	$ 133	$ 200	$ 470	$ 102	$ 265	$ 385	$ 460
14		Pilot Prep & Project Management	$ -	$ 1,573	$ 2,348	$ 3,016	$ 1,737	$ 1,183	$ 827	$ 727	$ 872	$ 667	$ 354	$ -	$ -	$ -
15		Total Capital Costs before Avoidance - Gas	$ 1,076	$ 2,709	$ 4,034	$ 5,639	$ 5,510	$ 4,858	$ 5,379	$ 5,243	$ 13,730	$ 29,900	$ 16,248	$ 423	$ 550	$ 590
16		Avoided Capital Costs - Gas	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (10)	$ (20)	$ (34)	$ (42)	$ (43)	$ (43)
17		Total Capital Costs Net - Gas	$ 1,076	$ 2,709	$ 4,034	$ 5,639	$ 5,510	$ 4,858	$ 5,379	$ 5,243	$ 13,720	$ 29,881	$ 16,213	$ 381	$ 507	$ 547
18																
19	Total	Meter/Module Purchases, including Set & Test	$ -	$ 1,424	$ 1,231	$ 935	$ 128	$ 9,602	$ 21,432	$ 29,976	$ 68,816	$ 134,973	$ 69,524	$ -	$ -	$ -
20		Field Equipment/Facilities	$ -	$ 128	$ 1,466	$ 1,605	$ 382	$ 296	$ 194	$ 174	$ 270	$ 1,200	$ 5,965	$ 6,331	$ 8,440	$ 8,580
21		Software/Systems Development	$ 8,965	$ 9,334	$ 13,782	$ 18,052	$ 22,318	$ 23,602	$ 36,477	$ 36,353	$ 51,033	$ 28,277	$ (1,788)	$ 1,320	$ 16,555	$ 1,082
22		SG Infrastructure	$ -	$ -	$ -	$ 3,170	$ 8,903	$ 6,719	$ 1,260	$ 1,109	$ 1,663	$ 3,861	$ 853	$ 2,208	$ 3,212	$ 3,835
23		Pilot Prep & Project Management	$ -	$ 9,456	$ 11,280	$ 16,299	$ 11,294	$ 9,102	$ 7,021	$ 6,790	$ 7,529	$ 5,457	$ 2,848	$ -	$ -	$ -
24		Total Capital Costs before Avoidance	$ 8,965	$ 20,342	$ 27,760	$ 40,060	$ 43,025	$ 49,320	$ 66,384	$ 74,402	$ 129,311	$ 173,768	$ 77,401	$ 9,859	$ 28,207	$ 13,498
25		Avoided Capital Costs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (316)	$ (260)	$ 375	$ 309	$ 220	$ 231
26		Total Capital Costs Net	$ 8,965	$ 20,342	$ 27,760	$ 40,060	$ 43,025	$ 49,320	$ 66,384	$ 74,402	$ 128,994	$ 173,508	$ 77,776	$ 10,168	$ 28,428	$ 13,729
27																
28																
29		Note:														
30		Cost of Removal	$ -	$ -	$ -	$ -	$ -	$ 129	$ 120	$ 1	$ -	$ 59	$ 23	$ -	$ -	$ -
31		Total Capital Costs Incl COR before Avoidance	$ 8,965	$ 20,342	$ 27,760	$ 40,060	$ 43,025	$ 49,450	$ 66,504	$ 74,403	$ 129,311	$ 173,827	$ 77,424	$ 9,859	$ 28,207	$ 13,498
32		Cml Total Capital Costs Incl COR before Avoidance	$ 8,965	$ 29,307	$ 57,067	$ 97,127	$ 140,152	$ 189,602	$ 256,106	$ 330,509	$ 459,820	$ 633,647	$ 711,071	$ 720,930	$ 749,137	$ 762,634

Total NPV Benefit of -$71.6 million based on nominal values 2007 - 2012 and present values 2013 - 2032.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Business Case Costs and Benefits
2007 - 2032
(000)

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Smart Grid Program - Annual Capital Expenditures

Line No.	(a) Utility	(b) Description	(c) 2021	(d) 2022	(e) 2023	(f) 2024	(g) 2025	(h) 2026	(i) 2027	(j) 2028	(k) 2029	(l) 2030	(m) 2031	(n) 2032	(o) Total 2007-2032
1	Electric	Meters	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 290,123
2		Field Equipment/Facilities	$ 7,651	$ 6,941	$ 4,125	$ 4,176	$ 4,224	$ 4,248	$ 4,310	$ 4,331	$ 4,406	$ 4,425	$ 4,437	$ 4,445	$ 92,357
3		Software/Systems Development	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 235,511
4		SG Infrastructure	$ 2,916	$ 2,342	$ 2,569	$ 3,064	$ 2,985	$ 2,617	$ 2,577	$ 2,850	$ 2,943	$ 2,756	$ 2,648	$ 2,760	$ 65,395
5		Pilot Prep & Project Management	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 73,771
6		Total Capital Costs before Avoidance - Electric	$ 10,566	$ 9,282	$ 6,695	$ 7,239	$ 7,209	$ 6,865	$ 6,887	$ 7,182	$ 7,348	$ 7,181	$ 7,085	$ 7,204	$ 757,156
7		Avoided Capital Costs - Electric	$ (882)	$ 423	$ 445	$ 299	$ 245	$ 226	$ 229	$ 251	$ 450	$ 451	$ 454	$ 457	$ 3,801
8		Total Capital Costs Net - Electric	$ 9,685	$ 9,705	$ 7,140	$ 7,539	$ 7,454	$ 7,091	$ 7,116	$ 7,432	$ 7,798	$ 7,632	$ 7,539	$ 7,661	$ 760,957
9															
10	Gas	Modules	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 47,918
11		Field Equipment/Facilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 394
12		Software/Systems Development	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 29,851
13		SG Infrastructure	$ 398	$ 319	$ 350	$ 418	$ 407	$ 357	$ 351	$ 389	$ 401	$ 376	$ 361	$ 376	$ 8,925
14		Pilot Prep & Project Management	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 13,305
15		Total Capital Costs before Avoidance - Gas	$ 398	$ 319	$ 350	$ 418	$ 407	$ 357	$ 351	$ 389	$ 401	$ 376	$ 361	$ 376	$ 100,392
16		Avoided Capital Costs - Gas	$ (43)	$ (43)	$ (43)	$ (43)	$ (43)	$ (43)	$ (43)	$ (43)	$ (43)	$ (43)	$ (43)	$ (43)	$ (707)
17		Total Capital Costs Net - Gas	$ 355	$ 276	$ 307	$ 375	$ 364	$ 314	$ 309	$ 346	$ 358	$ 333	$ 318	$ 333	$ 99,685
18															
19	Total	Meter/Module Purchases, including Set & Test	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 338,040
20		Field Equipment/Facilities	$ 7,651	$ 6,941	$ 4,125	$ 4,176	$ 4,224	$ 4,248	$ 4,310	$ 4,331	$ 4,406	$ 4,425	$ 4,437	$ 4,445	$ 92,750
21		Software/Systems Development	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 265,362
22		SG Infrastructure	$ 3,313	$ 2,661	$ 2,920	$ 3,482	$ 3,392	$ 2,974	$ 2,929	$ 3,239	$ 3,344	$ 3,132	$ 3,009	$ 3,136	$ 74,320
23		Pilot Prep & Project Management	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 87,076
24		Total Capital Costs before Avoidance	$ 10,964	$ 9,602	$ 7,045	$ 7,657	$ 7,616	$ 7,221	$ 7,239	$ 7,570	$ 7,750	$ 7,557	$ 7,446	$ 7,581	$ 857,549
25		Avoided Capital Costs	$ (925)	$ 380	$ 402	$ 257	$ 202	$ 184	$ 186	$ 208	$ 407	$ 408	$ 411	$ 414	$ 3,094
26		Total Capital Costs Net	$ 10,039	$ 9,981	$ 7,448	$ 7,914	$ 7,818	$ 7,405	$ 7,425	$ 7,778	$ 8,156	$ 7,965	$ 7,857	$ 7,994	$ 860,642
27															
28															
29		Note:													
30		Cost of Removal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 332
31		Total Capital Costs Incl COR before Avoidance	$ 10,964	$ 9,602	$ 7,045	$ 7,657	$ 7,616	$ 7,221	$ 7,239	$ 7,570	$ 7,750	$ 7,557	$ 7,446	$ 7,581	$ 857,881
32		Cml Total Capital Costs Incl COR before Avoidance	$ 773,598	$ 783,200	$ 790,245	$ 797,902	$ 805,518	$ 812,740	$ 819,978	$ 827,548	$ 835,298	$ 842,855	$ 850,301	$ 857,881	

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Smart Grid Program - Benefits and O&M costs

Line No.	(a) Utility	(b) Description	(c) 2007	(d) 2008	(e) 2009	(f) 2010	(g) 2011	(h) 2012	(i) 2013	(j) 2014	(k) 2015	(l) 2016	(m) 2017	(n) 2018	(o) 2019	(p) 2020
33	Electric	Meter Reading	$ -	$ -	$ -	$ -	$ -	$ -	$ (116)	$ (1,878)	$ (5,151)	$ (9,767)	$ (16,577)	$ (19,196)	$ (19,926)	$ (20,325)
34		Uncollectible Expense	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (128)	$ (3,685)	$ (6,227)	$ (8,181)	$ (8,344)	$ (8,511)
35		Other O&M	$ -	$ -	$ -	$ -	$ -	$ -	$ (1,271)	$ (1,115)	$ (2,917)	$ (4,690)	$ (7,375)	$ (7,942)	$ (8,183)	$ (8,508)
36		AC Load Control Avoided Generation, Transmission	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (135)	$ (960)	$ (3,502)	$ (4,674)
37		Demand Response Avoided Generation, Transmission	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (0)	$ (47)	$ (490)	$ (954)	$ (1,809)
38		Theft Reduction	$ -	$ -	$ -	$ -	$ -	$ (93)	$ (919)	$ (1,837)	$ (4,787)	$ (6,943)	$ (8,342)	$ (9,810)	$ (15,126)	$ (22,561)
39		AMI Induced Conservation & Efficiency Energy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (2,906)	$ (5,571)	$ (7,991)	$ (10,912)	$ (8,513)
40		Load Management Conserved Energy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
41		Demand Response Conserved Energy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (1,417)
42		Property Tax (Savings) - Legacy Meters	$ -	$ -	$ -	$ -	$ -	$ (33)	$ (97)	$ (235)	$ (500)	$ (835)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)
43		Terminal Value	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
44		Total Non Capital Benefits before Costs - Electric	$ -	$ -	$ -	$ -	$ -	$ (126)	$ (2,403)	$ (5,064)	$ (13,482)	$ (28,827)	$ (45,340)	$ (55,636)	$ (68,014)	$ (77,384)
45		Common	$ 382	$ 67	$ 545	$ 1,165	$ 1,094	$ 2,586	$ 5,977	$ 4,853	$ 6,466	$ 6,821	$ 8,606	$ 9,360	$ 9,502	$ 9,724
46		Meters, Modules & Communications	$ -	$ -	$ -	$ -	$ -	$ 97	$ 963	$ 1,310	$ 1,671	$ 3,226	$ 4,898	$ 5,227	$ 5,228	$ 5,228
47		Customer Engagement	$ -	$ -	$ -	$ -	$ -	$ 1,538	$ 2,444	$ 1,956	$ 1,833	$ 4,179	$ 5,275	$ 7,938	$ 21,493	$ 9,299
48		Load Control Program	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 195	$ 665	$ 2,567	$ 3,017	$ 2,726	$ 2,625
49		Demand Response Program	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 16	$ 194	$ 2,219	$ 986	$ 606	$ 618
50		Property Taxes - AMI	$ -	$ 24	$ 44	$ 70	$ 52	$ 335	$ 862	$ 1,572	$ 2,977	$ 5,402	$ 6,644	$ 6,515	$ 6,407	$ 6,270
51		Total Non Capital Benefits Net - Electric	$ 382	$ 91	$ 589	$ 1,235	$ 1,146	$ 4,430	$ 7,843	$ 4,627	$ (325)	$ (8,340)	$ (15,131)	$ (22,594)	$ (22,052)	$ (43,620)
52																
53	Gas	Meter Reading	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 0	$ (591)	$ (1,965)	$ (2,507)	$ (2,602)	$ (2,654)
54		Uncollectible Expense	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (168)	$ (1,335)	$ (2,144)	$ (2,187)	$ (2,231)
55		Other O&M	$ -	$ -	$ -	$ -	$ -	$ -	$ (68)	$ 10	$ (1)	$ (214)	$ (411)	$ (444)	$ (454)	$ (468)
56		Theft Reduction	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (235)	$ (462)	$ (531)	$ (667)	$ (890)	$ (3,460)
57		AMI Induced Conservation & Efficiency Energy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (199)	$ (1,433)	$ (2,247)	$ (2,585)	$ (2,705)
58		LAUF Gas Reduction Enabled	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (22)	$ (173)	$ (181)	$ (190)
59		Terminal Value	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
60		Total Non Capital Benefits before Costs - Gas	$ -	$ -	$ -	$ -	$ -	$ -	$ (68)	$ 10	$ (236)	$ (1,634)	$ (5,697)	$ (8,182)	$ (8,900)	$ (11,709)
61		Common	$ 367	$ 64	$ 87	$ 143	$ 73	$ 127	$ 36	$ 11	$ 216	$ 746	$ 1,173	$ 1,276	$ 1,296	$ 1,326
62		Meters, Modules & Communications	$ -	$ -	$ -	$ -	$ -	$ 5	$ 6	$ -	$ 42	$ 466	$ 1,237	$ 1,371	$ 1,371	$ 1,371
63		Property Taxes - AMI	$ -	$ -	$ -	$ 5	$ 5	$ 8	$ 12	$ 11	$ 141	$ 692	$ 891	$ 831	$ 778	$ 728
64		Total Non Capital Benefits Net - Gas	$ 367	$ 64	$ 87	$ 148	$ 78	$ 140	$ (14)	$ 32	$ 164	$ 271	$ (2,396)	$ (4,704)	$ (5,455)	$ (8,283)
65																
66	Total	Meter Reading	$ -	$ -	$ -	$ -	$ -	$ -	$ (116)	$ (1,878)	$ (5,151)	$ (10,358)	$ (18,542)	$ (21,704)	$ (22,529)	$ (22,979)
67		Uncollectible Expense	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (128)	$ (3,853)	$ (7,562)	$ (10,325)	$ (10,531)	$ (10,742)
68		Other O&M	$ -	$ -	$ -	$ -	$ -	$ -	$ (1,339)	$ (1,105)	$ (2,917)	$ (4,905)	$ (7,786)	$ (8,386)	$ (8,637)	$ (8,976)
69		AC Load Control Avoided Generation, Transmission	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (135)	$ (960)	$ (3,502)	$ (4,674)
70		Demand Response Avoided Generation, Transmission	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (0)	$ (47)	$ (490)	$ (954)	$ (1,809)
71		Theft Reduction	$ -	$ -	$ -	$ -	$ -	$ (93)	$ (919)	$ (1,837)	$ (5,023)	$ (7,405)	$ (8,873)	$ (10,477)	$ (16,016)	$ (26,021)
72		AMI Induced Conservation & Efficiency Energy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (3,105)	$ (7,004)	$ (10,238)	$ (13,497)	$ (11,218)
73		Load Management Conserved Energy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
74		Demand Response Conserved Energy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (1,417)
75		Property Tax (Savings) - Legacy Meters	$ -	$ -	$ -	$ -	$ -	$ (33)	$ (97)	$ (235)	$ (500)	$ (835)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)
76		LAUF Gas Reduction Enabled	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (22)	$ (173)	$ (181)	$ (190)
77		Terminal Value	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
78		Total Non Capital Benefits before Costs	$ -	$ -	$ -	$ -	$ -	$ (126)	$ (2,471)	$ (5,055)	$ (13,718)	$ (30,461)	$ (51,037)	$ (63,819)	$ (76,914)	$ (89,093)
79		Common	$ 749	$ 131	$ 632	$ 1,308	$ 1,167	$ 2,713	$ 6,013	$ 4,864	$ 6,682	$ 7,567	$ 9,779	$ 10,636	$ 10,798	$ 11,050
80		Meters, Modules & Communications	$ -	$ -	$ -	$ -	$ -	$ 102	$ 969	$ 1,310	$ 1,713	$ 3,692	$ 6,135	$ 6,598	$ 6,599	$ 6,599
81		Other O&M	$ -	$ -	$ -	$ -	$ -	$ 1,538	$ 2,444	$ 1,956	$ 1,833	$ 4,179	$ 5,275	$ 7,938	$ 21,493	$ 9,299
82		Load Control Program	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 195	$ 665	$ 2,567	$ 3,017	$ 2,726	$ 2,625
83		Demand Response Program	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 16	$ 194	$ 2,219	$ 986	$ 606	$ 618
84		Property Taxes - AMI	$ -	$ 24	$ 44	$ 75	$ 57	$ 343	$ 874	$ 1,583	$ 3,118	$ 6,094	$ 7,535	$ 7,346	$ 7,185	$ 6,999
85		Total Non Capital Benefits Net	$ 749	$ 155	$ 676	$ 1,383	$ 1,224	$ 4,569	$ 7,829	$ 4,659	$ (161)	$ (8,069)	$ (17,526)	$ (27,298)	$ (27,507)	$ (51,903)

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Smart Grid Program - Benefits and O&M Costs

Line No.	(a) Utility	(b) Description	(c) 2021	(d) 2022	(e) 2023	(f) 2024	(g) 2025	(h) 2026	(i) 2027	(j) 2028	(k) 2029	(l) 2030	(m) 2031	(n) 2032	(o) Total 2007-2032
33	Electric	Meter Reading	$ (20,935)	$ (21,563)	$ (22,210)	$ (22,876)	$ (23,562)	$ (24,269)	$ (24,997)	$ (25,747)	$ (26,519)	$ (27,315)	$ (28,134)	$ (28,978)	$ (390,041)
34		Uncollectible Expense	$ (8,681)	$ (8,855)	$ (9,032)	$ (9,213)	$ (9,397)	$ (9,585)	$ (9,776)	$ (9,972)	$ (10,171)	$ (10,375)	$ (10,582)	$ (10,794)	$ (151,509)
35		Other O&M	$ (8,826)	$ (9,104)	$ (9,363)	$ (9,613)	$ (9,865)	$ (10,124)	$ (10,392)	$ (10,669)	$ (10,953)	$ (11,247)	$ (11,550)	$ (11,863)	$ (165,570)
36		AC Load Control Avoided Generation, Transmission	$ (6,080)	$ (7,333)	$ (8,458)	$ (9,395)	$ (10,384)	$ (11,391)	$ (12,424)	$ (13,498)	$ (14,596)	$ (15,718)	$ (16,856)	$ (18,009)	$ (153,414)
37		Demand Response Avoided Generation, Transmission	$ (10,982)	$ (10,976)	$ (10,968)	$ (12,320)	$ (14,135)	$ (16,186)	$ (18,299)	$ (20,308)	$ (20,695)	$ (21,089)	$ (21,489)	$ (21,898)	$ (202,645)
38		Theft Reduction	$ (27,997)	$ (35,010)	$ (39,052)	$ (39,833)	$ (40,629)	$ (41,442)	$ (42,271)	$ (43,116)	$ (43,978)	$ (44,858)	$ (45,755)	$ (46,670)	$ (561,029)
39		AMI Induced Conservation & Efficiency Energy	$ (8,683)	$ (8,857)	$ (9,034)	$ (9,215)	$ (9,399)	$ (9,587)	$ (9,779)	$ (9,974)	$ (10,174)	$ (10,377)	$ (10,585)	$ (10,797)	$ (152,354)
40		Load Management Conserved Energy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
41		Demand Response Conserved Energy	$ (1,577)	$ (1,681)	$ (1,744)	$ (1,810)	$ (1,865)	$ (1,920)	$ (1,978)	$ (2,037)	$ (2,097)	$ (2,156)	$ (2,215)	$ (2,270)	$ (24,767)
42		Property Tax (Savings) - Legacy Meters	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (18,767)
43		Terminal Value	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (244,979)	$ (244,979)
44		Total Non Capital Benefits before Costs - Electric	$ (94,829)	$ (104,445)	$ (110,927)	$ (115,340)	$ (120,304)	$ (125,571)	$ (130,983)	$ (136,388)	$ (140,251)	$ (144,202)	$ (148,234)	$ (397,324)	$ (2,065,075)
45		Common	$ 11,294	$ 11,525	$ 10,781	$ 11,012	$ 11,258	$ 11,510	$ 11,774	$ 12,032	$ 12,297	$ 12,579	$ 12,868	$ 13,171	$ 209,249
46		Meters, Modules & Communications	$ 5,228	$ 5,228	$ 5,228	$ 5,228	$ 5,228	$ 5,228	$ 5,228	$ 5,228	$ 5,228	$ 5,228	$ 5,228	$ 5,228	$ 90,579
47		Customer Engagement	$ 3,598	$ 3,614	$ 3,631	$ 3,647	$ 3,664	$ 3,682	$ 3,700	$ 3,718	$ 3,736	$ 3,755	$ 3,775	$ 3,794	$ 100,270
48		Load Control Program	$ 2,530	$ 1,690	$ 587	$ 1,573	$ 1,590	$ 1,608	$ 1,627	$ 1,647	$ 1,668	$ 1,689	$ 1,712	$ 1,736	$ 31,450
49		Demand Response Program	$ 874	$ 416	$ 460	$ 669	$ 683	$ 696	$ 710	$ 724	$ 739	$ 754	$ 769	$ 784	$ 12,918
50		Property Taxes - AMI	$ 6,138	$ 5,987	$ 5,873	$ 5,712	$ 5,556	$ 5,399	$ 5,253	$ 5,124	$ 5,025	$ 4,981	$ 5,002	$ 5,051	$ 102,276
51		Total Non Capital Benefits Net - Electric	$ (65,167)	$ (75,985)	$ (84,367)	$ (87,499)	$ (92,325)	$ (97,448)	$ (102,691)	$ (107,915)	$ (111,558)	$ (115,217)	$ (118,881)	$ (367,560)	$ (1,518,333)
52															
53	Gas	Meter Reading	$ (2,734)	$ (2,816)	$ (2,901)	$ (2,988)	$ (3,077)	$ (3,170)	$ (3,265)	$ (3,363)	$ (3,464)	$ (3,567)	$ (3,674)	$ (3,785)	$ (49,122)
54		Uncollectible Expense	$ (2,276)	$ (2,321)	$ (2,367)	$ (2,415)	$ (2,463)	$ (2,512)	$ (2,563)	$ (2,614)	$ (2,666)	$ (2,719)	$ (2,774)	$ (2,829)	$ (38,585)
55		Other O&M	$ (484)	$ (501)	$ (519)	$ (537)	$ (556)	$ (575)	$ (595)	$ (615)	$ (636)	$ (658)	$ (680)	$ (703)	$ (9,111)
56		Theft Reduction	$ (4,501)	$ (5,570)	$ (7,363)	$ (7,601)	$ (7,753)	$ (7,908)	$ (8,066)	$ (8,227)	$ (8,392)	$ (8,560)	$ (8,731)	$ (8,906)	$ (97,824)
57		AMI Induced Conservation & Efficiency Energy	$ (2,846)	$ (3,002)	$ (3,174)	$ (3,352)	$ (3,419)	$ (3,487)	$ (3,557)	$ (3,628)	$ (3,701)	$ (3,775)	$ (3,850)	$ (3,927)	$ (50,888)
58		LAUF Gas Reduction Enabled	$ (201)	$ (213)	$ (225)	$ (238)	$ (243)	$ (248)	$ (252)	$ (256)	$ (260)	$ (263)	$ (267)	$ (270)	$ (3,502)
59		Terminal Value	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (33,406)	$ (33,406)
60		Total Non Capital Benefits before Costs - Gas	$ (13,042)	$ (14,424)	$ (16,550)	$ (17,131)	$ (17,511)	$ (17,900)	$ (18,297)	$ (18,703)	$ (19,119)	$ (19,543)	$ (19,977)	$ (53,826)	$ (282,439)
61		Common	$ 1,540	$ 1,572	$ 1,470	$ 1,502	$ 1,535	$ 1,570	$ 1,606	$ 1,641	$ 1,677	$ 1,715	$ 1,755	$ 1,796	$ 26,319
62		Meters, Modules & Communications	$ 1,371	$ 1,371	$ 1,371	$ 1,371	$ 1,371	$ 1,371	$ 1,371	$ 1,371	$ 1,371	$ 1,371	$ 1,371	$ 1,371	$ 22,324
63		Property Taxes - AMI	$ 685	$ 644	$ 603	$ 563	$ 522	$ 482	$ 441	$ 401	$ 362	$ 334	$ 326	$ 326	$ 9,792
64		Total Non Capital Benefits Net - Gas	$ (9,446)	$ (10,837)	$ (13,105)	$ (13,695)	$ (14,083)	$ (14,477)	$ (14,879)	$ (15,290)	$ (15,708)	$ (16,123)	$ (16,525)	$ (50,333)	$ (224,003)
65															
66	Total	Meter Reading	$ (23,669)	$ (24,379)	$ (25,110)	$ (25,864)	$ (26,639)	$ (27,439)	$ (28,262)	$ (29,110)	$ (29,983)	$ (30,882)	$ (31,809)	$ (32,763)	$ (439,164)
67		Uncollectible Expense	$ (10,957)	$ (11,176)	$ (11,399)	$ (11,627)	$ (11,860)	$ (12,097)	$ (12,339)	$ (12,586)	$ (12,838)	$ (13,094)	$ (13,356)	$ (13,623)	$ (190,094)
68		Other O&M	$ (9,310)	$ (9,605)	$ (9,882)	$ (10,150)	$ (10,420)	$ (10,699)	$ (10,987)	$ (11,284)	$ (11,590)	$ (11,905)	$ (12,231)	$ (12,566)	$ (174,681)
69		AC Load Control Avoided Generation, Transmission	$ (6,080)	$ (7,333)	$ (8,458)	$ (9,395)	$ (10,384)	$ (11,391)	$ (12,424)	$ (13,498)	$ (14,596)	$ (15,718)	$ (16,856)	$ (18,009)	$ (153,414)
70		Demand Response Avoided Generation, Transmission	$ (10,982)	$ (10,976)	$ (10,968)	$ (12,320)	$ (14,135)	$ (16,186)	$ (18,299)	$ (20,308)	$ (20,695)	$ (21,089)	$ (21,489)	$ (21,898)	$ (202,645)
71		Theft Reduction	$ (32,498)	$ (40,580)	$ (46,415)	$ (47,434)	$ (48,382)	$ (49,350)	$ (50,337)	$ (51,344)	$ (52,370)	$ (53,418)	$ (54,486)	$ (55,576)	$ (658,852)
72		AMI Induced Conservation & Efficiency Energy	$ (11,529)	$ (11,860)	$ (12,209)	$ (12,567)	$ (12,818)	$ (13,074)	$ (13,336)	$ (13,602)	$ (13,875)	$ (14,152)	$ (14,435)	$ (14,724)	$ (203,243)
73		Load Management Conserved Energy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
74		Demand Response Conserved Energy	$ (1,577)	$ (1,681)	$ (1,744)	$ (1,810)	$ (1,865)	$ (1,920)	$ (1,978)	$ (2,037)	$ (2,097)	$ (2,156)	$ (2,215)	$ (2,270)	$ (24,767)
75		Property Tax (Savings) - Legacy Meters	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (1,067)	$ (18,767)
76		LAUF Gas Reduction Enabled	$ (201)	$ (213)	$ (225)	$ (238)	$ (243)	$ (248)	$ (252)	$ (256)	$ (260)	$ (263)	$ (267)	$ (270)	$ (3,502)
77		Terminal Value	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (278,385)	$ (278,385)
78		Total Non Capital Benefits before Costs	$ (107,871)	$ (118,869)	$ (127,477)	$ (132,471)	$ (137,815)	$ (143,471)	$ (149,280)	$ (155,091)	$ (159,370)	$ (163,745)	$ (168,211)	$ (451,150)	$ (2,347,514)
79		Common	$ 12,835	$ 13,097	$ 12,251	$ 12,513	$ 12,793	$ 13,080	$ 13,380	$ 13,672	$ 13,974	$ 14,294	$ 14,623	$ 14,967	$ 235,568
80		Meters, Modules & Communications	$ 6,599	$ 6,599	$ 6,599	$ 6,599	$ 6,599	$ 6,599	$ 6,599	$ 6,599	$ 6,599	$ 6,599	$ 6,599	$ 6,599	$ 112,903
81		Other O&M	$ 3,598	$ 3,614	$ 3,631	$ 3,647	$ 3,664	$ 3,682	$ 3,700	$ 3,718	$ 3,736	$ 3,755	$ 3,775	$ 3,794	$ 100,270
82		Load Control Program	$ 2,530	$ 1,690	$ 587	$ 1,573	$ 1,590	$ 1,608	$ 1,627	$ 1,647	$ 1,668	$ 1,689	$ 1,712	$ 1,736	$ 31,450
83		Demand Response Program	$ 874	$ 416	$ 460	$ 669	$ 683	$ 696	$ 710	$ 724	$ 739	$ 754	$ 769	$ 784	$ 12,918
84		Property Taxes - AMI	$ 6,823	$ 6,631	$ 6,477	$ 6,275	$ 6,078	$ 5,881	$ 5,695	$ 5,526	$ 5,388	$ 5,315	$ 5,328	$ 5,377	$ 112,068
85		Total Non Capital Benefits Net	$ (74,613)	$ (86,822)	$ (97,472)	$ (101,194)	$ (106,408)	$ (111,926)	$ (117,570)	$ (123,205)	$ (127,266)	$ (131,339)	$ (135,406)	$ (417,893)	$ (1,742,336)

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
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Smart Grid Program - Annual Calculation of Pretax Return on AMI Investment

Line No.	(a) Utility	(b) Description	(c) 2007	(d) 2008	(e) 2009	(f) 2010	(g) 2011	(h) 2012	(i) 2013	(j) 2014	(k) 2015	(l) 2016	(m) 2017	(n) 2018	(o) 2019	(p) 2020
86	Electric	Beginning Plant in Service Value	$ -	$ 7,889	$ 25,487	$ 49,111	$ 83,376	$ 116,739	$ 151,423	$ 199,494	$ 251,849	$ 345,377	$ 460,025	$ 486,608	$ 459,004	$ 457,704
87		Ending Plant in Service Value	$ 7,889	$ 25,487	$ 49,111	$ 83,376	$ 116,739	$ 151,423	$ 199,494	$ 251,849	$ 345,377	$ 460,025	$ 486,608	$ 459,004	$ 457,704	$ 429,447
88																
89		Average Plant in Service Value [(Line 86 + Line 87)/2]	$ 3,945	$ 16,688	$ 37,299	$ 66,244	$ 100,058	$ 134,081	$ 175,459	$ 225,672	$ 298,613	$ 402,701	$ 473,317	$ 472,806	$ 458,354	$ 443,575
90		Pre-tax Cost of Capital (Actual approved amounts through 2022,			9.76%	9.76%	9.82%	9.13%	9.13%	9.13%	8.90%	8.90%	8.58%	7.32%	7.40%	7.40%
91		then most recently approved after 2022)														
92																
93		Pretax Return on AMI Investment	$ -	$ -	$ 3,640	$ 6,465	$ 9,826	$ 12,242	$ 16,019	$ 20,604	$ 26,577	$ 35,840	$ 40,611	$ 34,609	$ 33,918	$ 32,825
94																
95	Gas	Beginning Plant in Service Value	$ -	$ 1,076	$ 3,769	$ 7,641	$ 13,186	$ 18,032	$ 21,449	$ 25,061	$ 28,177	$ 39,235	$ 65,277	$ 76,472	$ 71,418	$ 66,459
96		Ending Plant in Service Value	$ 1,076	$ 3,769	$ 7,641	$ 13,186	$ 18,032	$ 21,449	$ 25,061	$ 28,177	$ 39,235	$ 65,277	$ 76,472	$ 71,418	$ 66,459	$ 61,502
97																
98		Average Plant in Service Value	$ 538	$ 2,422	$ 5,705	$ 10,413	$ 15,609	$ 19,741	$ 23,255	$ 26,619	$ 33,706	$ 52,256	$ 70,874	$ 73,945	$ 68,939	$ 63,981
99		Pre-tax Cost of Capital (Actual approved amounts through 2021,			9.76%	9.76%	9.82%	9.13%	9.13%	9.13%	8.90%	8.90%	8.58%	7.32%	7.40%	7.40%
100		then most recently approved after 2021)														
101																
102		Pretax Return on AMI Investment	$ -	$ -	$ 557	$ 1,016	$ 1,533	$ 1,802	$ 2,123	$ 2,430	$ 3,000	$ 4,651	$ 6,081	$ 5,413	$ 5,101	$ 4,735
103																
104	Total	Beginning Plant in Service Value	$ -	$ 8,965	$ 29,256	$ 56,752	$ 96,562	$ 134,771	$ 172,872	$ 224,556	$ 280,026	$ 384,613	$ 525,303	$ 563,080	$ 530,423	$ 524,163
105		Ending Plant in Service Value	$ 8,965	$ 29,256	$ 56,752	$ 96,562	$ 134,771	$ 172,872	$ 224,556	$ 280,026	$ 384,613	$ 525,303	$ 563,080	$ 530,423	$ 524,163	$ 490,949
106																
107		Average Plant in Service Value	$ 4,483	$ 19,111	$ 43,004	$ 76,657	$ 115,666	$ 153,821	$ 198,714	$ 252,291	$ 332,319	$ 454,958	$ 544,191	$ 546,751	$ 527,293	$ 507,556
108		Pre-tax Cost of Capital (Actual approved amounts through 2022,			9.76%	9.76%	9.82%	9.13%	9.13%	9.13%	8.90%	8.90%	8.58%	7.32%	7.40%	7.40%
109		then most recently approved after 2022)														
110		Pretax Return on AMI Investment	$ -	$ -	$ 4,197	$ 7,482	$ 11,358	$ 14,044	$ 18,143	$ 23,034	$ 29,576	$ 40,491	$ 46,692	$ 40,022	$ 39,020	$ 37,559

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
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Smart Grid Program - Annual Calculation of Pretax Return on AMI Investment

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
Line No.	**Utility**	**Description**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	
86	Electric	Beginning Plant in Service Value	$ 429,447	$ 397,959	$ 364,445	$ 327,628	$ 290,752	$ 253,237	$ 218,652	$ 188,828	$ 161,820	$ 138,271	$ 118,406	$ 101,844	
87		Ending Plant in Service Value	$ 397,959	$ 364,445	$ 327,628	$ 290,752	$ 253,237	$ 218,652	$ 188,828	$ 161,820	$ 138,271	$ 118,406	$ 101,844	$ 87,528	1000
88															
89		Average Plant in Service Value [(Line 86 + Line 87)/2]	$ 413,703	$ 381,202	$ 346,037	$ 309,190	$ 271,994	$ 235,945	$ 203,740	$ 175,324	$ 150,045	$ 128,338	$ 110,125	$ 94,686	
90		Pre-tax Cost of Capital (Actual approved amounts through 2022,	7.07%	7.03%	7.06%	7.06%	7.06%	7.06%	7.06%	7.06%	7.06%	7.06%	7.06%	7.06%	
91		then most recently approved after 2022)													
92															
93		Pretax Return on AMI Investment	$ 29,249	$ 26,814	$ 24,445	$ 21,842	$ 19,214	$ 16,668	$ 14,393	$ 12,385	$ 10,600	$ 9,066	$ 7,779	$ 6,689	
94															
95	Gas	Beginning Plant in Service Value	$ 61,502	$ 56,319	$ 51,035	$ 45,758	$ 40,524	$ 35,252	$ 30,525	$ 26,552	$ 22,930	$ 19,648	$ 16,723	$ 14,156	
96		Ending Plant in Service Value	$ 56,319	$ 51,035	$ 45,758	$ 40,524	$ 35,252	$ 30,525	$ 26,552	$ 22,930	$ 19,648	$ 16,723	$ 14,156	$ 11,768	
97															
98		Average Plant in Service Value	$ 58,911	$ 53,677	$ 48,397	$ 43,141	$ 37,888	$ 32,888	$ 28,538	$ 24,741	$ 21,289	$ 18,185	$ 15,439	$ 12,962	
99		Pre-tax Cost of Capital (Actual approved amounts through 2022,	7.07%	7.03%	7.06%	7.06%	7.06%	7.06%	7.06%	7.06%	7.06%	7.06%	7.06%	7.06%	
100		then most recently approved after 2022)													
101															
102		Pretax Return on AMI Investment	$ 4,165	$ 3,776	$ 3,419	$ 3,048	$ 2,676	$ 2,323	$ 2,016	$ 1,748	$ 1,504	$ 1,285	$ 1,091	$ 916	
103															
104	Total	Beginning Plant in Service Value	$ 490,949	$ 454,278	$ 415,480	$ 373,386	$ 331,276	$ 288,489	$ 249,177	$ 215,380	$ 184,750	$ 157,919	$ 135,128	$ 116,000	
105		Ending Plant in Service Value	$ 454,278	$ 415,480	$ 373,386	$ 331,276	$ 288,489	$ 249,177	$ 215,380	$ 184,750	$ 157,919	$ 135,128	$ 116,000	$ 99,296	
106															
107		Average Plant in Service Value	$ 472,614	$ 434,879	$ 394,433	$ 352,331	$ 309,882	$ 268,833	$ 232,279	$ 200,065	$ 171,334	$ 146,524	$ 125,564	$ 107,648	
108		Pre-tax Cost of Capital (Actual approved amounts through 2022,	7.07%	7.03%	7.06%	7.06%	7.06%	7.06%	7.06%	7.06%	7.06%	7.06%	7.06%	7.06%	
109		then most recently approved after 2022)													
110		Pretax Return on AMI Investment	$ 33,414	$ 30,589	$ 27,864	$ 24,890	$ 21,891	$ 18,991	$ 16,409	$ 14,133	$ 12,103	$ 10,351	$ 8,870	$ 7,605	

MICHIGAN PUBLIC SERVICE COMMISSION
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Smart Grid Program - Calculation of Net Present Value of Net Revenue Requirements - Total

	(a)	(b)	(c)		(d)		(e)		(f)		(g)		(h)		(i)
Line No.	Year	Description	Pretax Return on AMI Investment		AMI Depreciation		Revenue Requirements - Avoided Capital Costs		Total Non-Capital Benefits Net		Net Revenue Requirements		NPV Factor		NPV of Net Revenue Requirements
111	2009		$4.2	+	$0.1	+	$0.0	+	$0.7	=	$5.0	x	1.000000	=	$5.0
112	2010		$7.5	+	0.2	+	0.0	+	1.4	=	9.0	x	1.000000	=	9.0
113	2011		$11.4	+	4.8	+	0.0	+	1.2	=	17.4	x	1.000000	=	17.4
114	2012	First Year of Electric AMI Meter Installations	$14.0	+	10.9	+	0.0	+	4.6	=	29.5	x	1.000000	=	29.5
115	2013		$18.1	+	14.5	+	(0.1)	+	7.8	=	40.4	x	0.916338	=	37.0
116	2014		$23.0	+	18.8	+	(0.3)	+	4.7	=	46.2	x	0.839676	=	38.8
117	2015	First Year of Gas Module Installations	$29.6	+	24.7	+	(0.4)	+	(0.2)	=	53.8	x	0.774313	=	41.6
118	2016		$40.5	+	33.2	+	(0.4)	+	(8.1)	=	65.2	x	0.711031	=	46.3
119	2017	Electric AMI Meter and Gas Module Installations complete	$46.7	+	40.0	+	(0.4)	+	(17.5)	=	68.7	x	0.662599	=	45.5
120	2018		$40.0	+	42.5	+	(4.4)	+	(27.3)	=	50.9	x	0.654510	=	33.3
121	2019		$39.0	+	44.5	+	(4.2)	+	(27.5)	=	51.9	x	0.606694	=	31.5
122	2020		$37.6	+	46.7	+	(4.0)	+	(51.9)	=	28.4	x	0.564892	=	16.0
123	2021		$33.4	+	47.6	+	(3.8)	+	(74.6)	=	2.6	x	0.540742	=	1.4
124	2022		$30.6	+	48.4	+	(3.6)	+	(86.8)	=	(11.5)	x	0.506738	=	(5.8)
125	2023		$27.9	+	49.1	+	(3.4)	+	(97.5)	=	(23.9)	x	0.471966	=	(11.3)
126	2024		$24.9	+	49.8	+	(3.2)	+	(101.2)	=	(29.7)	x	0.440825	=	(13.1)
127	2025		$21.9	+	50.4	+	(2.9)	+	(106.4)	=	(37.0)	x	0.411739	=	(15.3)
128	2026		$19.0	+	46.5	+	(2.7)	+	(111.9)	=	(49.1)	x	0.384572	=	(18.9)
129	2027		$16.4	+	41.0	+	(2.5)	+	(117.6)	=	(62.6)	x	0.359197	=	(22.5)
130	2028		$14.1	+	38.2	+	(2.3)	+	(123.2)	=	(73.1)	x	0.335497	=	(24.5)
131	2029		$12.1	+	34.6	+	(2.0)	+	(127.3)	=	(82.6)	x	0.313360	=	(25.9)
132	2030		$10.4	+	30.3	+	(1.8)	+	(131.3)	=	(92.4)	x	0.292684	=	(27.1)
133	2031		$8.9	+	26.6	+	(1.5)	+	(135.4)	=	(101.5)	x	0.273373	=	(27.7)
134	2032		$7.6	+	24.3	+	(1.3)	+	(139.5)	=	(108.9)	x	0.255335	=	(27.8)
135	2032	Model Terminal Value							(286.1)	=	(286.1)	x	0.255061	=	(73.0)
136		Total 2009-2032	$538.7		$767.7		($45.1)		($1,750.9)		($489.6)				$59.6

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Business Case Costs and Benefits
2007 - 2032
(000,000)

Case No.: U-21389
Exhibit No.: A-72 (JRC-1)
Page: 8 of 8
Witness: JRCoker
Date: May 2023

Smart Grid Program - Calculation of Net Present Value of Net Revenue Requirements - Electric Portion

	(a)	(b)	(c)		(d)		(e)		(f)		(g)		(h)		(i)
Line No.	Year	Description	Pretax Return on AMI Investment		AMI Depreciation		Revenue Requirements - Avoided Capital Costs		Total Non-Capital Benefits Net		Net Revenue Requirements		NPV Factor		NPV of Net Revenue Requirements
137	2009		$3.640	+	$0.1	+	$0.0	+	$0.6	=	$4.3	x	1.000000	=	$4.3
138	2010		$6.465	+	0.2	+	0.0	+	1.2	=	7.9	x	1.000000	=	7.9
139	2011		$9.826	+	4.2	+	0.0	+	1.1	=	15.1	x	1.000000	=	15.1
140	2012	First Year of Electric AMI Meter Installations	$12.242	+	9.5	+	0.0	+	4.4	=	26.2	x	1.000000	=	26.2
141	2013		$16.019	+	12.8	+	(0.1)	+	7.8	=	36.5	x	0.916338	=	33.5
142	2014		$20.604	+	16.7	+	(0.3)	+	4.6	=	41.6	x	0.839676	=	34.9
143	2015	First Year of Gas Module Installations	$26.577	+	22.1	+	(0.4)	+	(0.3)	=	47.9	x	0.774313	=	37.1
144	2016		$35.840	+	29.3	+	(0.4)	+	(8.3)	=	56.4	x	0.711031	=	40.1
145	2017	Electric AMI Meter and Gas Module Installations complete	$40.611	+	34.9	+	(0.4)	+	(15.1)	=	60.0	x	0.662599	=	39.8
146	2018		$34.609	+	37.0	+	(4.4)	+	(22.6)	=	44.7	x	0.654510	=	29.2
147	2019		$33.918	+	39.0	+	(4.2)	+	(22.1)	=	46.7	x	0.606694	=	28.3
148	2020		$32.825	+	41.2	+	(4.0)	+	(43.6)	=	26.4	x	0.564892	=	14.9
149	2021		$29.249	+	42.1	+	(3.8)	+	(65.2)	=	2.3	x	0.540742	=	1.3
150	2022		$26.814	+	42.8	+	(3.6)	+	(76.0)	=	(10.0)	x	0.506738	=	(5.1)
151	2023		$24.445	+	43.5	+	(3.4)	+	(84.4)	=	(19.8)	x	0.471966	=	(9.3)
152	2024		$21.842	+	44.1	+	(3.2)	+	(87.5)	=	(24.7)	x	0.440825	=	(10.9)
153	2025		$19.214	+	44.7	+	(2.9)	+	(92.3)	=	(31.3)	x	0.411739	=	(12.9)
154	2026		$16.668	+	41.4	+	(2.7)	+	(97.4)	=	(42.0)	x	0.384572	=	(16.2)
155	2027		$14.393	+	36.7	+	(2.5)	+	(102.7)	=	(54.1)	x	0.359197	=	(19.4)
156	2028		$12.385	+	34.2	+	(2.3)	+	(107.9)	=	(63.6)	x	0.335497	=	(21.3)
157	2029		$10.600	+	30.9	+	(2.0)	+	(111.6)	=	(72.1)	x	0.313360	=	(22.6)
158	2030		$9.066	+	27.0	+	(1.8)	+	(115.2)	=	(80.9)	x	0.292684	=	(23.7)
159	2031		$7.779	+	23.6	+	(1.5)	+	(118.9)	=	(89.0)	x	0.273373	=	(24.3)
160	2032		$6.689	+	21.5	+	(1.3)	+	(122.6)	=	(95.7)	x	0.255335	=	(24.4)
161	2032	Model Terminal Value							(251.8)	=	(251.8)	x	0.255061	=	(64.2)
162		Total 2009-2032	$472.3		$679.5		($45.1)		($1,525.6)		($418.8)				$58.3

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	))))))	Case No. U-21389

EXHIBITS

OF

AMY M. CONRAD

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

OFFICER PLAN

Category	2022 MEASURE	Weighting
Safety	**Employee Safety** (Recordable Incident Rate & High-Risk Injuries (equally weighted) and Zero fatalities)	**5%**
People	**Culture Index** (Employee Empowerment, Employee Engagement and DEI)	**5%**
Customer	**Customer Experience** - CXi (Survey measuring Customer Experience)	**5%**
Reliability	**Electric Reliability** - SAIDI (System Average Interruption Duration Index)	**5%**
Price	**Affordability** (O&M Savings through Waste Elimination)	**5%**
Environmental	**Methane Emission Reduction** (Reduction of Methane Emissions through replacements of Mains and Services, and through implantation of gas venting protocols)	**5%**
	Total Operational Goals	**30%**
Financial	**Earnings** (Earnings Per Share)	**70%**
	Total Financial Goals	**70%**

NON-OFFICER PLAN

Category	2022 MEASURE	Weighting
Safety	**Employee Safety** (Recordable Incident Rate & High-Risk Injuries (equally weighted) and Zero fatalities)	**8%**
People	**Culture Index** (Employee Empowerment, Employee Engagement and DEI)	**8%**
Customer	**Customer Experience** - CXi (Survey measuring Customer Experience)	**8%**
Reliability	**Electric Reliability** - SAIDI (System Average Interruption Duration Index)	**8%**
Price	**Affordability** (O&M Savings through Waste Elimination)	**8%**
Environmental	**Methane Emission Reduction** (Reduction of Methane Emissions through replacements of Mains and Services, and through implantation of gas venting protocols)	**8%**
	Total Operational Goals	**50%**
Financial	**Earnings** (Earnings Per Share)	**50%**
	Total Financial Goals	**50%**

2022 Plan Year

	50% Threshold	75%	100% Target	125%	150%	175% Max
Employee Safety (Recordable Incidents Rate, High-Risk Injuries[1] & No fatalities[2])	a.1.74	a.1.31	**a.1.20**	a.1.15	a.1.10	a.1.03
	b. 34	b.32	**b.30**	b.28	b.26	b.24
Culture Index (Empowerment, Employee Engagement & DEI)	1 index at Target[3]	2 index at Target[3]	**All 3 indexes at Target[3]**	2 indexes at Target &1 Index above Target	1 index at Target & 2 Indexes above Target	3 Indexes above Target
Customer Experience (Survey Measuring CXi)	69	71	**73**	75	77	79
Electric Reliability (SAIDI)	190	185	**180**	175	165	152
Affordability [4] (O&M Savings through Waste Elimination)	$31M	$35M	**$39M**	$43M	$47M	$55M
Methane Emission (Reduction through replacement of mains and services)	301MT	318MT	**335MT**	351MT	378MT	400MT

1 High-Risk = Recordable or non-recordable injury caused by a release of high energy
2 A fatality = zero payout for employee safety
3 Target = +2 from 2021 actual. Baseline will be reaffirmed in 2022 with move to new survey platform.
4 The Company is not seeking recovery of this measure as it is financial in nature.

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company
Target Pay Level Market Analysis
Non-officer

Case No.: U-21389
Exhibit No.: A-74 (AMC-2)
Page: 1 of 1
Witness: AMConrad
Date: May 2023

Exempt Jobs:
2022 Market study

Job Family	# of Employees	Avg, Annual Salary	Market Data	Avg. Salary vs.Market
ACCOUNTING ANALYST	40	$ 112,717	$ 118,091	-4.6%
IT BUSINESS	15	$ 98,208	$ 99,224	-1.0%
IT PROJECT MGR	21	$ 153,028	$ 143,538	6.6%
BUSINESS SUPPORT	150	$ 89,748	$ 87,101	3.0%
COMMUNICATIONS	23	$ 94,892	$ 93,826	1.1%
ELEC./GAS FIELD LEADER	227	$ 127,986	$ 128,370	-0.3%
LEARNING & DEVELOPMENT	67	$ 95,050	Benchmark Pending	
ENGINEER	270	$ 113,220	$ 114,367	-1.0%
ENGINEER TECH	137	$ 95,805	$ 105,951	-9.6%
ENVIRONMENTAL PLANNER	15	$ 113,700	$ 115,502	-1.6%
FORESTERY	22	$ 82,712	$ 84,761	-2.4%
GENERAL TECHICAL ANALYST	58	$ 91,074	$ 90,521	0.6%
HUMAN RESOURCES	42	$ 100,261	Benchmark Pending	
SAFETY	10	$ 103,968	$ 101,803	2.1%
LABORATORY TECH	11	$ 108,078	$ 101,135	6.9%
RATE ANALYST	13	$ 108,382	$ 107,418	0.9%
EXCUTIVE ASSISTANT	22	$ 84,423	$ 84,031	0.5%
MAINTENANCE/PRODUCTION SUPV	41	$ 120,753	$ 138,965	-13.1%
SYSTEM CONTROLLER	25	$ 118,297	$ 154,708	-23.5%
PLANNER/SCHEDULER	24	$ 87,950	Benchmark Pending	
CORPORATE ACCOUNT MANAGER	20	$ 120,443	$ 123,512	-2.5%
EPC PROJECT MANAGER	62	$ 129,055	Benchmark Pending	
GENERATION ASSET MANAGER	16	$ 119,878	Benchmark Pending	
FINANCIAL ANALYST	29	$ 112,930	$ 117,922	-4.2%
TAX	7	$ 118,257	$ 112,485	5.1%
IT TECHNICAL	156	$ 109,704	$ 108,214	1.4%
IT SECURITY	49	$ 120,196	$ 111,427	7.9%
IT ARCHITECTURE	7	$ 169,715	$ 156,375	8.5%
			Average	-0.8%

Total exempt employees as a
% of market survey matches 40%

% of total base salaries Exempt & Non-Exempt 48%

Non-Exempt:
2022 Market study

Job Family	# of Employees	Avg, Annual Salary	Market Data	Avg. Salary vs.Market
Administrative Support Job Family	172	$57,541	$50,307	14.4%
Customer Service Revenue Recovery Job Family	33	$53,813	Benchmark Pending	
Operations Support Job Family	10	$70,240	$71,244	-1.4%
Technical Support Job Family	79	$92,860	$100,337	-7.5%
Distribution Project Delivery Job Family	147	$82,499	Benchmark Pending	
Technician Job Family	391	$74,358	$85,247	-12.8%
Paralegal Job Family	2	$95,090	$108,353	-12.2%
Dispatcher Job Family	71	$65,516	Benchmark Pending	
			Average	-1.3%

Total non-exempt employees as a
% of market survey matches 71%

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
Annual Incentive O&M Expenses
($000)

Case No.: U-21389
Exhibit No.: A-75 (AMC-3)
Page: 1 of 2
Witness: AMConrad
Date: May 2023

Line No.	(a) Description	(b) 2022 Actual	(c) Projected 12-Mos Ending 2/28/2025
1	**Annual Incentive - Officer**	**779**	**795**
	Labor (1)	779	795
	Material		
	Contractor		
	Non-Labor Overheads		
	Non-Labor Other		
2	**Annual Incentive - Non Officer (EICP)**	**1,439**	**1,608**
	Labor (1)	1,439	1,608
	Material		
	Contractor		
	Non-Labor Overheads		
	Non-Labor Other		
3	**Total Annual Incentive O&M Expenses**	**$ 2,218**	**$ 2,403**
	Labor	2,218	2,403
	Material	0	0
	Contractor	0	0
	Non-Labor Overheads	0	0
	Non-Labor Other	0	0

Footnotes
(1) Includes only O&M for operational incentive goals
(2) Amounts represent 2022 EICP assuming payout at 100% for operational incentive goals
Amount of actual payout based on 2022 incentive operational goal results were:

Officer	1,122
Non-officer	1,554
Total	$2,676

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of O&M Expenses Projected Using Inflation
Annual Incentive O&M Expenses
($000)

Case No.: U-21389
Exhibit No.: A-75 (AMC-3)
Page: 2 of 2
Witness: AMConrad
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No.	**Description**	**2022 Actual**	**Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2022**	**Merit & Inflation 12 Mos Ending Dec 31, 2023**	**Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2023**	**Merit & Inflation 12 Mos Ending Dec 31, 2024**	**Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2024**	**Merit & Inflation 2 Mos Ending 2/28/2025**	**Other Adjustments**	**Projected O&M 12 Mos Ending 2/28/2025**
				(c) * Inflation Rate		(e) * Inflation Rate		(g) * Inflation Rate		(b) + (d) + (f) + (h) + (i)
1	**Annual Incentive - Officer**	**779**	**779**	**30**	**775**	**17**	**792**	**3**	**-34**	**795**
	Labor	779	779	30	775	17	792	3	-34	795
	Material			0		0		0		0
	Contractor			0		0		0		0
	Non-Labor Overheads			0		0		0		0
	Non-Labor Other			0		0		0		0
2	**Annual Incentive - Non Officer (EICP)**	**1,439**	**1,439**	**56**	**1,568**	**34**	**1,602**	**6**	**73**	**1,608**
	Labor	1,439	1,439	56	1,568	34	1,602	6	73	1,608
	Material			0		0		0		0
	Contractor			0		0		0		0
	Non-Labor Overheads			0		0		0		0
	Non-Labor Other			0		0		0		0
3	**Total Annual Incentive O&M Expenses**	**$ 2,218**	**$ 2,218**	**$ 87**	**$ 2,343**	**$ 52**	**$ 2,394**	**$ 8**	**$ 39**	**$ 2,403**
	Labor	2,218	2,218	87	2,343	52	2,394	8	39	2,403
	Material	0	0	0	0	0	0	0	0	0
	Contractor	0	0	0	0	0	0	0	0	0
	Non-Labor Overheads	0	0	0	0	0	0	0	0	0
	Non-Labor Other	0	0	0	0	0	0	0	0	0

Notes

		2023	**2024**	**2025**
4	Annual merit increase			
	Annual merit increase	3.9%	2.2%	2.1%
	Number of months in the period	12	12	2
	Pro-rated merit increase	3.9%	2.2%	0.4%
	Annual inflation rates per WP-JCA-xx			
	Annual inflation rates	3.9%	2.2%	2.1%
	Number of months in the period	12	12	2
	Pro-rated inflation rate	3.9%	2.2%	0.4%

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	))))))	Case No. U-21389

EXHIBITS

OF

AUDRA L. CUMBERWORTH

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

Schedule B-5.3

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual and Project Capital Expenditures
Security
($000)

Case No.: U-21389
Exhibit No.: A-12 (ALC-1)
Schedule: B-5.3
Page: 1 of 1
Witness: ALCumberworth
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
		Historical Year	**Projected Bridge Period**			**Projected Test Year**
Line No.	**Description**	**12 Mos Ended 12/31/2022**	**12 Mos Ending 12/31/2023**	**2 Mos Ending 2/29/2024**	**14 Mos Ending 2/29/2024**	**12 Mos Ending 2/28/2025**
			-	-	-	-
1	**Enhancements**	**$ 2,849**	**$ 509**	**$ 91**	**$ 600**	**$ 543**
	Software	820	-	-	-	-
	Materials	7	-	-	-	-
	Labor	278	401	72	473	435
	Contractor Costs	1,626	-	-	-	-
	Overhead & Others	118	109	18	127	109
	Contingency	-	-	-	-	-
2	**Security**	**$ 2,807**	**$ 1,155**	**$ 941**	**$ 2,095**	**$ 6,494**
	Software	475	-	-	-	-
	Materials	1,835	985	442	1,427	2,567
	Labor	115	136	108	244	854
	Contractor Costs	268	-	365	365	2,771
	Overhead & Others	115	34	26	60	302
	Contingency	-	-	-	-	-
	Total Capital	**$ 5,656**	**$ 1,664**	**$ 1,031**	**$ 2,695**	**$ 7,038**

		Projected			
		2 Mos Ending 2/28/2023	**12 Mos Ending 2/29/2024**	**12 Mos Ending 2/28/2025**	**26 Mos Ending 2/28/2025**
3	**Enhancements**	**$ 85**	**$ 515**	**$ 543**	**$ 1,143**
	Software	-	-	-	-
	Materials	-	-	-	-
	Labor	67	406	435	908
	Contractor Costs	-	-	-	-
	Overhead & Others	18	109	109	235
	Contingency	-	-	-	-
4	**Security**	**$ 192**	**$ 1,903**	**$ 6,494**	**$ 8,590**
	Software	-	-	-	-
	Materials	164	1,263	2,567	3,994
	Labor	23	221	854	1,098
	Contractor Costs	-	365	2,771	3,136
	Overhead & Others	6	54	302	362
	Contingency	-	-	-	-
	Total Capital	**$ 277**	**$ 2,418**	**$ 7,038**	**$ 9,733**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates, and Detailed Costs of Actual and Projected Electric & Common Capital Expenditures and O&M Expenses
For the years 2022, 2023, 2024 and 2025
Security Department

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	SPEND YEAR	PROJECT NAME	PROGRAM	FERC CATEGORY	PROJECT SYNOPSES	IMPLEMENTATION DATE	COST/ BENEFIT RATIO	ELECTRIC PORTION CAPITAL SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-Electric	MATERIAL COSTS-Electric	LABOR COSTS-Electric	CONTRACTOR COSTS-Electric	OVERHEAD & OTHER COSTS-Electric	ELECTRIC PORTION O&M SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-Electric	MATERIAL COSTS-Electric	LABOR COSTS-Electric	CONTRACTOR COSTS-Electric	OVERHEAD & OTHER COSTS-Electric
1	2022	Enhancements-Security-Capital	Enhancements	Software	This initiative will use Capital funding to make enhancements to existing technology and to address requests generated by changing business requirements. O&M is included within this project to complete expense activities associated with Capital enhancements in accordance with accounting rules. As business conditions improve and change, compliance requirements evolve, and new capabilities are needed, new requirements surface that call for smaller effort software application changes (enhancements). Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, limit the Company's ability to consistently meet objectives, and increase security risk. The value of technology enhancements in the Security Portfolio lies in: (1) enhancing security protections by funding emerging or unplanned cyber security activities resulting from audits, incidents, or a changing threat landscape; (2) reducing the number of incidents associated with outdated software; (3) increasing application stability, leading to fewer incidents due to outdated software; and (4) allowing the Company to leverage additional functionality available in the technology. The scope of technology applications encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy, and compliance. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board that routinely evaluates and prioritizes the work. Security enhancements fortify the Company's ability to make software technology changes as part of process improvements and regulatory changes, and to meet legally required system changes in a fast and nimble manner. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2022-12-31	(1.00)	2,848,804	819,885	7,001	278,446	1,625,659	117,813	141,707	0	0	55,135	86,214	358
2	2022	Enhancements-Security-O&M	Enhancements	Software	This initiative will use O&M funding to make enhancements to existing technology and to address requests generated by changing business requirements. As business conditions improve and change, compliance requirements evolve, and new capabilities are needed, new requirements surface that call for smaller effort software application changes (enhancements). Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, limit the Company's ability to consistently meet objectives, and increase security risk. The value of technology enhancements in the Security Portfolio lies in: (1) enhancing security protections by funding emerging or unplanned cyber security activities resulting from audits, incidents, or a changing threat landscape; (2) reducing the number of incidents associated with outdated software; (3) increasing application stability, leading to fewer incidents due to outdated software; and (4) allowing the Company to leverage additional functionality available in the technology. While these small-work technology efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvement to existing technology investments for Security. The scope of technology applications encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy and compliance. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and assesses requests for value using established cost-to-benefit ratio acceptance criteria. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software technology changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2022-12-31	(1.00)	0	0	0	0	0	0	263,371	0	0	186,504	75,051	1,816
3	**SUBTOTAL**	**2022 Enhancements**						**2,848,804**	**819,885**	**7,001**	**278,446**	**1,625,659**	**117,813**	**405,078**	**0**	**0**	**241,639**	**161,265**	**2,174**
4	2022	Badge Reader/Lock and Key Management System	Security	Hardware	This project will implement a physical smart lock and key management system throughout the Company's Electric service territories. Lack of key control makes facilities, specifically in Electric operations, vulnerable to accidental or intentional disruption to power supply which could cause large scale outages. Install badge readers, smart locks, and credentials on smart devices to grant access to electric assets. Current estimates show there are approximately 12,000 locks throughout the state, and the Company does not have a system to properly manage ownership of the associated physical keys or control over who uses the keys. Locks are not unique in nature and can be easily duplicated. Today's lock and key system allows for 24-hour site access without having the ability to limit outside contractor access. Lack of key control makes facilities, specifically in Electric operations, vulnerable to accidental or intentional disruption which could cause large scale outages. Completion of this project will provide value to the Company by: (1) providing an extra layer of protection which is our first defense against criminal acts; (2) determining core functionalities needed to ensure proper lock and key management state-wide for electric operations; (3) implementing a smart lock and key solution that will provide the physical security team remote deactivation capabilities and is easily audited; (4) Installing a smart lock system; and (5) Leveraging credentials on mobile device and badge readers that can read both physical cards and digital. The scope of this project includes: (1) a determination of the different levels and functions of different smart lock systems available for electric facilities; and (2) purchase and implementation against a site plan of a lock and key management system specific for needs of Electric Operations.	2027-11-01	(1.00)	0	0	0	0	0	0	6,482	0	0	6,482	0	0
5	2022	Passive Vulnerability Assessment	Security	Hardware	The Passive Vulnerability Assessment project will evaluate, procure, and deploy a tool to passively provide vulnerability assessment services to operational technology (OT) Control Networks. Currently insufficient information exists to make security judgements within critical control networks. This project will obtain asset and vulnerability data from networks that may suffer negative impacts to reliability from active vulnerability scanning. A pilot will identify capabilities and determine approach between on-site deployment vs. off-site deployment. The project creates value for the Company by: (1) obtaining a more accurate and timely lists of assets; (2) improving the ability to make data-driven operational and security decisions; (3) completing an assessment of existing vulnerabilities in the environment without the risk of negatively impacting the reliability of the Company's electric generation and energy delivery systems; and (4) increasing incident response capability, speed, and effectiveness. The scope of this project encompasses evaluating a zero-cost proof-of-concept to determine capabilities and drive the decision to implement an on-site or off-site deployment strategy. As part of the review process the alternative considered was to implement a traditional vulnerability scanner to interrogate all systems on the network. However, this was determined not to be the best solution to fit the Company's requirements.	2020-12-01	(1.00)	(8,749)	(17,350)	10,083	(2,336)	447	406	8,838	0	128	2,169	6,206	335
6	2022	Physical Security Asset Refresh	Security	Hardware	This project will enhance or replace physical security assets to provide improved visibility and incident resolution related to security concerns. The Company has several thousand physical security asset devices currently in use including security cameras, motion detectors, intrusion detection systems, and card access systems. Current limitations include the lack of integrated solutions for centralized management, situational awareness, real time monitoring, compliance with regulations and guidelines, and faster responses to emergencies and incidents. This could result in the increase of potential security vulnerabilities, associated penalties, and reputational damage. The value provided by completing the project is to: (1) maintain compliance with State and Federal Regulations; (2) reduce redundancies by decreasing multiple cameras dependencies and reducing gaps in functionality; and (3) optimize overall system performance. Included in the project is the enhancement or replacement of assets including: (1) advanced door systems at Company buildings; (2) security cameras for monitoring capabilities; and (3) gate and lock systems, which include security cameras, motion detectors, intrusion detection systems, and card access systems. Alternatives considered include: (1) not refreshing physical security assets, and (2) defer a portion of the refresh of physical security assets per an asset refresh cycle industry standard. Alternatives 1 and 2 were not selected due to the risk of security concerns, incident resolution, and the inability to meet Federal Energy Regulatory commission (FERC) requirements. Alternative 2 was selected as it maintains compliance, reduces redundancies and gaps in functionality, and optimizes overall performance of physical security systems.	2022-12-31	(1.00)	869,992	0	1,717,521	(99,118)	(722,560)	(25,851)	110,095	0	2,574	104,252	1,253	2,015

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7	2022	Radar Intrusion Detection	Security	Hardware	This project will deploy new radar detection technology to enable the detection and tracking of individuals at Company sites. The radar will alert in real time and automatically dispatch Company security or law enforcement to investigate. The Company currently lacks the ability to detect potential intruders at Company sites across the state, including critical infrastructure sites such as city gates, compressor stations, sub stations, generation plants, and hydro sites. Currently, three sites have flawed fence intrusion detection technology that result in the recurrence of multiple false alarms that require an employee to investigate. Additionally, the current detection technology is unable to identify the difference between animals and humans, cannot set different boundaries, and prohibits the expansion of intrusion detection at many other critical sites. Any Investigation that has to be done is hampered by the limitations of the current system, requiring manual frame by frame review of video playback is manually intensive and time consuming. Completion of this project will provide value to the Company through evaluating and selecting a more reliable intrusion detection solution that reduces the number of false alarms and prevents resources from being sent to a site for unnecessary investigations. Additionally, the project will improve the efficiency of investigations by reducing the amount of time it takes to review playback to develop a suspect or investigative leads. In most cases this will be eliminated completely. This added layer of security benefits both the Company through waste elimination, as well as the Company's customers through the safety and security of assets necessary to continue to serve. The scope of this project encompasses: (1) implementing radar intrusion detection options; (2) establishing a priority list of sites where the solution will be rolled out; and (3) installing updated radar intrusion at physical sites in the Company's service territory with a focus on critical infrastructure sites, including but not limited to gas compressor stations, electric substations, and hydro-electric sites. Alternative solutions considered included: (1) keeping the current fence intrusion detection solution; or (2) implementing a new intrusion detection solution. The preferred option is to implement a new solution, given the above limitations with the current solution.	2022-12-22	(1.00)	1,083,552	0	171,613	56,422	837,533	17,983	2,832	0	0	2,832	0	0
8	2022	Asset Refresh Program - Cyber Security	Security	Network	This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions. When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates. This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These components are used to ensure the stability of technology for business operations. The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a 3-5 year hardware lifecycle; and (2) performing application upgrades. As part of the review process, the alternative solutions considered were to: (1) upgrade or replace only those assets identified in the plan; (2) upgrade or replace a portion of the assets identified in the plan. Option 1 was not chosen based on a continued refresh cycle for cyber security assets to avoid security risks, system vulnerabilities, and out-of-warranty repair costs. Options 2 was not chosen due to the security risk inherent with not replacing assets as per established standard refresh cycles enabling increased system vulnerabilities, and out-of-warranty repair costs.	2022-12-31	(1.00)	31,070	2,041	24,531	2,229	1,555	713	55,420	1,782	0	6,717	46,921	0
9	2022	Security Island Protocol	Security	Network	This project will implement a mutual distrust between all Operational Technology (OT) and Information Technology (IT) networks. Recent cyber-attacks have shown the criticality of ensuring that OT systems are fully separate and can operate even while the corporate network is under attack. The Company currently does not have standard procedures for separating the OT systems from the corporate systems if they were under a cyber-attack , and has never tested the capability. This project provides value by ensuring network traffic destined for the corporate core routers, must first pass through a corporate, security managed firewall and come from an OT managed firewall. Additionally, any network traffic destined towards OT networks must first pass through an OT managed firewall and come from a corporate, security managed firewall. This project scope will include: (1) Create a playbook to perform severing procedure at mutual distrust locations and document all impacts (business or otherwise), (2) Evaluate additional sever points to best protect energy delivery operations, (3) Creation of mutual distrust architecture standard and documentation of all mutual distrust points in the environment, (4) Evaluate and implement an internet proxy solution within the operational technology network with specific allow lists, (5) Perform an exercise to test severing procedure and document impacts, (6) All OT systems and connectivity in the Utility regardless of electric or gas are in scope. CMS Enterprises is out of scope. As part of the review process alternative solutions having this capability was considered a must have and due to recent cyber-attacks, the effort was prioritized against other planned investments.	2021-10-13	(1.00)	0	0	0	0	0	0	5,858	0	0	4,949	565	344
10	2022	AccessNOW	Security	Software	The AccessNOW project will implement configurable identity, Access Management functionality and best practices, and will enable compliance enforcement. This project will add value by: (1) reducing waste and failure points through automation, (2) improving and standardizing the business partner experience, (3) centralizing access management, (4) ensuring regulatory compliance, and (5) ensuring system stability and continuous improvement. The project scope includes implementing additional integrations to Active Directory domains that are not currently connected to the AccessNOW application and integration to the Company's SAP system(s) to allow for automation of SAP role access provisioning. In addition, the project scope includes: (1) design, configuration and testing of technical connections; (2) completion of application support pack upgrades to the next version(s) to maintain system stability and to stay current with vendor releases; and (3) review and implement enhancements to improve and standardize the business partner experience. As part of the review process the alternative solution considered was the use of manual processes. This option was not chosen because it was deemed too costly and inefficient.	2021-12-31	(0.95)	255,742	141,718	0	5,046	97,880	11,097	186,628	0	0	83,834	101,534	1,259
11	2022	Application Currency-Security-Capital	Security	Software	This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyber threats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Security portfolio adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; (4) addressing version interdependencies and compatibility between systems; and (5) allowing the Company to leverage new functionality available in the upgrades; (6) provides customer value through closing the gaps on vulnerabilities that can impact reliability; (7) provides a mechanism for proactive actions to stay ahead of evolving cyber threats. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Security portfolio are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for the listed applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2022-12-31	(1.00)	258,399	223,153	0	23,818	0	11,428	1,505	1,122	0	383	0	0

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12	2022	Application Currency-Security-O&M	Security	Software	This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrade The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyber threats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Security portfolio adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality; (4) addressing version interdependencies and compatibility between systems; and (5) allowing the Company to leverage additional functionality available in the upgrades. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Security portfolio are routinely evaluated to determine if upgrade efforts are necessary to maintain an appropriate level of currency and then prioritized accordingly. During that evaluation process, the alternative of delaying the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure; (2) an increase in the number of incidents; (3) paying increased support costs; and (4) prevention of employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of security applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2022-12-31	(1.00)	0	0	0	0	0	0	107,671	32,093	0	64,185	11,393	0
13	2022	Business Continuity - Disaster Recovery Planning Tool	Security	Software	Prior period adjustment.	N/A	N/A	(8,599)	0	0	(5,463)	(1,159)	(1,976)	6,603	0	0	5,074	1,076	453
14	2022	Mass Notification	Security	Software	The Mass Notification project will interact with the current Siemens fire panels to take advantage of communications protocols in existence at Consumers Energy physical sites. Similar to current capabilities used to announce fire events, the mass notification tool will allow for other event notifications to building participants. In addition, mass notification has capabilities to invoke personal device notification via texting, email alerts, and social media updates. Included in the project is implementing communications software to tap into current fire panels in physical locations, allowing for remote connectivity to sites for access to software, allowing for personal device communications, tapping into current building security software, allowing for emailing of key threats/events, and allowing for social media interfacing. The value of completing the project is directly tied to employee safety, which is increased by allowing better communication to employees during emergency situations. As part of our review process the alternative solution considered was not to implement the capability and to continue notifying individual Consumers Energy site managers of life safety situations through emails, phone calls, and/or text messages.	2020-10-01	(1.06)	0	0	(901)	0	901	0	0	0	0	0	0	0
15	2022	Operational Security Assesment	Security	Software	The Operational Security Assessment project is for the implementation of an automate tracking tool to plan audits and inspections, monitor progress in real-time and track corrective actions in one central and secure location. The implementation of the identified product will help to decrease vulnerabilities that could threaten Company assets. This project will establish: (1) a centralized location to securely manage and store assessments; (2) implement an automated tracking system; (3) prioritize deficiencies; and (4) track completion with an interface to the SAP work order system. This will decrease the manual effort needed by the physical assessors to complete their day to day work. With the automation of tracking audits and inspections the physical security team can: (1) increase their audits by 20%; (2) reduce the likelihood of impactful security events to customers; and (3) increase efficiency, which in turn reduces potential operating costs for the Company. An additional feature of the identified solution is the ability for executive leadership to track the assessment scores in real-time and identify long trends enabling proactive prevention. As part of the review process the alternative solution considered was to continue using the manual process of tracking in an Excel spreadsheet and entering tickets in the Request Management Center (RMC) SharePoint site but this strategy was deemed too costly and inefficient.	2021-06-30	(1.00)	(24,629)	0	0	0	(24,629)	0	0	0	0	0	0	0
16	2022	Privacy Management Platform	Security	Software	The project will implement a solution for the management of a range of privacy functions including: data inventory, risk assessments, consent management, individual rights management, and request tracking. Additionally, the platform will support compliance monitoring and reporting as well as industry changes impacting the Privacy Program. The Company lacks a platform to manage an ever-changing regulatory environment and legislative changes that impact the Privacy Management Program. At current, the Privacy Management Program is managed using disparate systems, spreadsheets, and manual analysis. New requirements are expected in all phases of the privacy program management, including; privacy laws and regulation compliance, facilitated compliance program decision making, intake and fulfillment of data subject rights and requests, increased risk discovery and mitigation, and data subject access request. Without a common platform to manage program requirements, the Company risks timely compliance with regulatory commitment and successful overall program management. The project will add value by: (1) Implementing a solution for privacy management to manage sensitive data, data locations, data management processes, and data sharing controls; (2) providing new functionality for the collection documentation of data subject consent for data usage and management of internal and external data subject access requests; (3) provisioning a dashboard for privacy incidents; and (4) enabling compliance management for regulatory and legislative requirements for customer privacy and information security. This project encompasses the implementation of a new privacy management platform that includes: (1) data management, (2) process assessment, (3) customer consent management, (4) Artificial Intelligence, (5) data subject access and request management, (6) regulatory insights, and (7) dashboards and reporting capabilities. Alternative solutions considered include: (1) continue existing practices of manual oversight, (2) build a solution to meet our needs, or (3) buy a platform to perform these services. Alternative 1 was not selected because it does not mitigate the risk associated with manual management of increasing levels of regulatory and legislative privacy management oversight. Alternative 2 is not currently preferred as the team foresee a significant amount of customization, resource expertise and future system maintenance being needed. Alternative 3 is preferred because buying platform will allow us to keep current with the changing environment and meet requirements quicker.	2022-06-30	(1.00)	350,297	125,106	(87,941)	134,380	77,978	100,774	(31,830)	(34,515)	0	2,685	0	0
17	2022	Security Analytics	Security	Software	Prior period adjustment.	N/A	N/A	0	0	0	0	0	0	53,158	0	0	961	48,450	3,747
18	**SUBTOTAL**	**2022 Security**						**2,807,074**	**474,668**	**1,834,906**	**118,978**	**267,949**	**114,575**	**513,258**	**482**	**2,702**	**284,522**	**217,399**	**8,157**
19	**TOTAL**	**2022**						**5,655,879**	**1,294,553**	**1,841,907**	**393,424**	**1,893,607**	**232,387**	**918,336**	**482**	**2,702**	**526,162**	**376,664**	**18,927**
20	2023	Enhancements-Security-Capital	Enhancements	Software	This initiative will use Capital funding to make enhancements to existing technology and to address requests generated by changing business requirements. O&M is included within this project to complete expense activities associated with Capital enhancements in accordance with accounting rules. As business conditions improve and change, compliance requirements evolve, and new capabilities are needed, new requirements surface that call for smaller effort software application changes (enhancements). Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, limit the Company's ability to consistently meet objectives, and increase security risk. The value of technology enhancements in the Security Portfolio lies in: (1) enhancing security protections by funding emerging or unplanned cyber security activities resulting from audits, incidents, or a changing threat landscape; (2) reducing the number of incidents associated with outdated software; (3) increasing application stability, leading to fewer incidents due to outdated software; and (4) allowing the Company to leverage additional functionality available in the technology. The scope of technology applications encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy, and compliance. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board that routinely evaluates and prioritizes the work. Security enhancements fortify the Company's ability to make software technology changes as part of process improvements and regulatory changes, and to meet legally required system changes in a fast and nimble manner. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2023-12-31	(1.00)	509,400	0	0	400,728	0	108,672	48,750	0	0	39,000	0	9,750

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21	2023	Enhancements-Security-O&M	Enhancements	Software	This initiative will use O&M funding to make enhancements to existing technology and to address requests generated by changing business requirements. As business conditions improve and change, compliance requirements evolve, and new capabilities are needed, new requirements surface that call for smaller effort software application changes (enhancements). Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, limit the Company's ability to consistently meet objectives, and increase security risk. The value of technology enhancements in the Security Portfolio lies in: (1) enhancing security protections by funding emerging or unplanned cyber security activities resulting from audits, incidents, or a changing threat landscape; (2) reducing the number of incidents associated with outdated software; (3) increasing application stability, leading to fewer incidents due to outdated software; and (4) allowing the Company to leverage additional functionality available in the technology. While these small-work technology efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvement to existing technology investments for Security. The scope of technology applications encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy and compliance. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and assesses requests for value using established cost-to-benefit ratio acceptance criteria. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software technology changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2023-12-31	(1.00)	0	0	0	0	0	0	349,692	0	0	279,753	0	69,938
22	**SUBTOTAL**	**2023 Enhancements**						**509,400**	**0**	**0**	**400,728**	**0**	**108,672**	**398,442**	**0**	**0**	**318,753**	**0**	**79,688**
23	2023	Physical Security Asset Refresh	Security	Hardware	This project will enhance or replace physical security assets to provide improved visibility and incident resolution related to security concerns. The Company has several thousand physical security asset devices currently in use including security cameras, motion detectors, intrusion detection systems, and card access systems. Current limitations include the lack of integrated solutions for centralized management, situational awareness, real time monitoring, compliance with regulations and guidelines, and faster responses to emergencies and incidents. This could result in the increase of potential security vulnerabilities, associated penalties, and reputational damage. The value provided by completing the project is to: (1) maintain compliance with State and Federal Regulations; (2) reduce redundancies by decreasing multiple cameras dependencies and reducing gaps in functionality; and (3) optimize overall system performance. Included in the project is the enhancement or replacement of assets including: (1) advanced door systems at Company buildings; (2) security cameras for monitoring capabilities; and (3) gate and lock systems, which include security cameras, motion detectors, intrusion detection systems, and card access systems. Alternatives considered include: (1) not refreshing physical security assets, and (2) defer a portion of the refresh of physical security assets per an asset refresh cycle industry standard. Alternatives 1 and 2 were not selected due to the risk of security concerns, incident resolution, and the inability to meet Federal Energy Regulatory commission (FERC) requirements. Alternative 2 was selected as it maintains compliance, reduces redundancies and gaps in functionality, and optimizes overall performance of physical security systems.	2023-12-31	(1.00)	1,086,720	0	984,840	81,504	0	20,376	3,900	0	0	3,120	0	780
24	2023	Application Currency-Security-Capital	Security	Software	This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyber threats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Security portfolio adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; (4) addressing version interdependencies and compatibility between systems; and (5) allowing the Company to leverage new functionality available in the upgrades; (6) provides customer value through closing the gaps on vulnerabilities that can impact reliability; (7) provides a mechanism for proactive actions to stay ahead of evolving cyber threats. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Security portfolio are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for the listed applications possible and fortifies the Company's ability to keep the large number of applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2023-12-31	(1.00)	67,920	0	0	54,336	0	13,584	6,500	0	0	5,200	0	1,300
25	2023	Application Currency-Security-O&M	Security	Software	This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrade The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyber threats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Security portfolio adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality; (4) addressing version interdependencies and compatibility between systems; and (5) allowing the Company to leverage additional functionality available in the upgrades. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Security portfolio are routinely evaluated to determine if upgrade efforts are necessary to maintain an appropriate level of currency and then prioritized accordingly. During that evaluation process, the alternative of delaying the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure; (2) an increase in the number of incidents; (3) paying increased support costs; and (4) prevention of employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of security applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2023-12-31	(1.00)	0	0	0	0	0	0	37,805	0	0	30,244	0	7,561
26	**SUBTOTAL**	**2023 Security**						**1,154,640**	**0**	**984,840**	**135,840**	**0**	**33,960**	**48,205**	**0**	**0**	**38,564**	**0**	**9,641**
27	**TOTAL**	**2023**						**1,664,040**	**0**	**984,840**	**536,568**	**0**	**142,632**	**446,646**	**0**	**0**	**357,317**	**0**	**89,329**

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Security Department

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	SPEND YEAR	PROJECT NAME	PROGRAM	FERC CATEGORY	PROJECT SYNOPSES	IMPLEMENTATION DATE	COST/ BENEFIT RATIO	ELECTRIC PORTION CAPITAL SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-Electric	MATERIAL COSTS-Electric	LABOR COSTS-Electric	CONTRACTOR COSTS-Electric	OVERHEAD & OTHER COSTS-Electric	ELECTRIC PORTION O&M SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-Electric	MATERIAL COSTS-Electric	LABOR COSTS-Electric	CONTRACTOR COSTS-Electric	OVERHEAD & OTHER COSTS-Electric
28	2024	Enhancements-Security-Capital	Enhancements	Software	This initiative will use Capital funding to make enhancements to existing technology and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements in accordance with accounting rules. As business conditions improve and change, compliance requirements evolve, and new capabilities are needed, new requirements surface that call for smaller effort software application changes (enhancements). Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, limit the Company's ability to consistently meet objectives, and increase security risk. The value of technology enhancements in the Security Portfolio lies in: (1) enhancing security protections by funding emerging or unplanned cyber security activities resulting from audits, incidents, or a changing threat landscape; (2) lessening the number of incidents associated with outdated software; (3) increasing application stability, leading to fewer incidents due to outdated software; and (4) allowing the Company to leverage additional functionality available in the technology. The scope of technology applications encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy, and compliance. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board that routinely evaluates and prioritizes the work. Security enhancements fortify the Company's ability to make software technology changes as part of process improvements and regulatory changes, and to meet legally required system changes in a fast and nimble manner. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-12-31	(1.00)	543,360	0	0	434,688	0	108,672	26,000	0	0	20,800	0	5,200
29	2024	Enhancements-Security-O&M	Enhancements	Software	This initiative will use O&M funding to make enhancements to existing technology and to address requests generated by changing business requirements. As business conditions improve and change, compliance requirements evolve, and new capabilities are needed, new requirements surface that call for smaller effort software application changes (enhancements). Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, limit the Company's ability to consistently meet objectives, and increase security risk. The value of technology enhancements in the Security Portfolio lies in: (1) enhancing security protections by funding emerging or unplanned cyber security activities resulting from audits, incidents, or a changing threat landscape; (2) reducing the number of incidents associated with outdated software; (3) increasing application stability, leading to fewer incidents due to outdated software; and (4) allowing the Company to leverage additional functionality available in the technology. While these small-work technology efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvement to existing technology investments for Security. The scope of technology applications encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy and compliance. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and assesses requests for value using established cost-to-benefit ratio acceptance criteria. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software technology changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2024-12-31	(1.00)	0	0	0	0	0	0	378,045	0	0	302,436	0	75,609
30	**SUBTOTAL**	**2024 Enhancements**						**543,360**	**0**	**0**	**434,688**	**0**	**108,672**	**404,045**	**0**	**0**	**323,236**	**0**	**80,809**
31	2024	Badge Reader/Lock and Key Management System	Security	Hardware	This project will implement a physical smart lock and key management system throughout the Company's Electric service territories. Lack of key control makes facilities, specifically in Electric operations, vulnerable to accidental or intentional disruption to power supply which could cause large scale outages. Install badge readers, smart locks, and credentials on smart devices to grant access to electric assets. Current estimates show there are approximately 12,000 locks throughout the state, and the Company does not have a system to properly manage ownership of the associated physical keys or control over who uses the keys. Locks are not unique in nature and can be easily duplicated. Today's lock and key system allows for 24-hour site access without having the ability to limit outside contractor access. Lack of key control makes facilities, specifically in Electric operations, vulnerable to accidental or intentional disruption which could cause large scale outages. Completion of this project will provide value to the Company by: (1) providing an extra layer of protection which is our first defense against criminal acts; (2) determining core functionalities needed to ensure proper lock and key management state-wide for electric operations; (3) implementing a smart lock and key solution that will provide the physical security team remote deactivation capabilities and is easily audited; (4) Installing a smart lock system; and (5) Leveraging credentials on mobile device and badge readers that can read both physical cards and digital. The scope of this project includes: (1) a determination of the different levels and functions of different smart lock systems available for electric facilities; and (2) purchase and implementation against a site plan of a lock and key management system specific for needs of Electric Operations.	2027-11-01	(1.00)	1,698,000	0	169,800	339,600	1,103,700	84,900	92,950	0	28,600	52,000	0	12,350
32	2024	Physical Security Asset Refresh	Security	Hardware	This project will enhance or replace physical security assets to provide improved visibility and incident resolution related to security concerns. The Company has several thousand physical security asset devices currently in use including security cameras, motion detectors, intrusion detection systems, and card access systems. Current limitations include the lack of integrated solutions for centralized management, situational awareness, real time monitoring, compliance with regulations and guidelines, and faster responses to emergencies and incidents. This could result in the increase of potential security vulnerabilities, associated penalties, and reputational damage. The value provided by completing the project is to: (1) maintain compliance with State and Federal Regulations; (2) reduce redundancies with less of a need for multiple cameras and reducing gaps in functionality; and (3) optimize overall system performance. Included in the project is the enhancement or replacement of assets including: (1) advanced door systems at Company buildings; (2) security cameras for monitoring capabilities; and (3) gate and lock systems, which include security cameras, motion detectors, intrusion detection systems, and card access systems. Alternatives considered include: (1) not refreshing physical security assets, and (2) defer a portion of the refresh of physical security assets per an asset refresh cycle industry standard. Alternatives 1 and 2 were not selected due to the risk of security concerns, incident resolution, and the inability to meet FERC requirements. The alternative selected maintains compliance, reduces redundancies and gaps in functionality, and optimizes overall performance of physical security systems.	2024-12-31	(1.00)	2,105,520	0	1,494,240	81,504	509,400	20,376	6,500	0	0	3,120	2,600	780
33	2024	Asset Refresh Program - Cyber Security	Security	Network	This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions. When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates. This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These are used to ensure the stability of technology for business operations. The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a 3-5 year hardware lifecycle; and (2) performing application upgrades. As part of the review process, the alternatives considered were to: (1) upgrade or replace only those assets identified in the plan; (2) upgrade or replace a portion of the assets identified in the plan. Option 1 was not chosen based on continued refresh cycle for cyber security assets to avoid security risks, system vulnerabilities, and out-of-warranty repair costs. Options 2 was not chosen due to the security risk inherent with not replacing assets as per standard refresh cycles increased system vulnerabilities, and out-of-warranty repair costs.	2024-12-31	(1.00)	252,360	0	168,240	67,296	0	16,824	16,250	0	0	16,250	0	0

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	SPEND YEAR	PROJECT NAME	PROGRAM	FERC CATEGORY	PROJECT SYNOPSES	IMPLEMENTATION DATE	COST/ BENEFIT RATIO	ELECTRIC PORTION CAPITAL SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-Electric	MATERIAL COSTS-Electric	LABOR COSTS-Electric	CONTRACTOR COSTS-Electric	OVERHEAD & OTHER COSTS-Electric	ELECTRIC PORTION O&M SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-Electric	MATERIAL COSTS-Electric	LABOR COSTS-Electric	CONTRACTOR COSTS-Electric	OVERHEAD & OTHER COSTS-Electric
34	2024	Network Packet Capture and Storage	Security	Network	Network Packet Capture and Storage is a key component of a mature Cyber Security threat and incident response program. Decrypting Internet Boundary network traffic and holding this data for a period of time, allows this data to be utilized for identifying security threats, identification of network behavior, and forensic cyber analysis. This data can be utilized in both real time and investigative analysis. Consumers Energy does not have the capability to capture, store and analyze full content network traffic at its Internet connection. This limits the organization's ability to detect, respond and forensically analyze attacks from a network perspective. The Company will gain value from this project through; (1) Decrypting and recording all internet communication to and from the company; (2) storing this data for historic use; (3) Allow a cyber analyst to leverage this information when investigating questionable activity or an incident; (4) Enable us to further enhance our security posture and program (following the Center for Internet Security Controls Framework). This project will: (1) develop evaluation criteria to assess solutions that provide the ability to collect decrypted traffic from Internet Boundary Devices (i.e. Firewall), securely store this data for the retention period determined, and provide tools to utilize this data for search capabilities and analysis. This criteria will be based on industry best practices, such as NIST 800-86 Guide to Integrating Forensic Techniques into Incident Response and SANS research papers on Full Packet Capture, (2) Evaluate technical solutions and complete a design validation based on established criteria, (3) select and implement the best fit solution, (4) design new processes, standards, audits and metrics for consistent implementation and maintenance, (5) Training key stakeholders, systems administrators, and operations on how to properly use the system. Alternatives considered include; (1) continue utilization of existing network firewall real time information and storage, (2) capture less effective data, such as network NetFlow information. These alternatives provide limited benefit in the ability to decrypt all internet network traffic and the ability to retain this information for an extended period of time.	2024-12-31	(1.00)	841,200	0	785,120	44,864	0	11,216	32,500	0	0	26,000	0	6,500
35	2024	Access Now Upgrade 2024	Security	Software	The project will upgrade the AccessNow Application and Web Portal to modern Identity Manager Version. Upgrade AccessNow Application to modern version to be compliant with One Identity support agreement, upgrade Web Portal to standardized architecture, implement new functionality and features. Current AccessNow version will be end of life by December 2022 and will lose support from One Identity. Additionally, the application contains numerous customized workflows and integrations to support CE business and IT processes. This customization requires One Identity professional services to support ongoing use of the application and when changes are required. Current version of AccessNow is lacking proper data analytics and reporting for end users in order to identity waste elimination opportunities. Since AccessNow is an enterprise wide platform that supports access provisioning, access controls, and processes that support regulatory compliance including SOX, NERC CIP, TSA, and MPSC requirements, the risk of operating without vendor support includes the following: Inability to perform critical defect fixes due to lack of vendor support, impacting ability to perform critical business functions; Software incompatibility with integrated systems such as Active Roles Server, upgrade other dependent software or hardware assets; Compliance issues, including non-compliance with regulatory standards, and the risk of fines that may result from non-compliance; Increased operations and maintenance costs; Degraded or poor performance, or application reliability risk (downtime risk). Upgrade AccessNow application and web portal to current versioning to obtain at least 3 years of in support compliance as well as introduce new functionality including: 1) Simplifying processes through standardization of the web portal from customized to standard Angular code. Will reduce the dependency of professional services through reduction in complexity by transforming customized portal design into standardized Angular code 2) New and improved portal design for more intuitive end user experience and reduce human struggle in access request processes. 3) More responsive portal and better performance reducing user wait time in requesting access. 4) Implement analytic capabilities for real time analysis of processes and workflows to identify waste elimination opportunities. The project scope includes upgrading AccessNow Application and Web Portal to current Identity Manager Version. Remove customized code in web portal and transform into Out of The Box (OOTB) functionality in new version to standardize support of the web portal. Upgrade AccessNow Application to current version to implement new functionality including transforming customized code to standard OOTB functionality, new and improved front end user interface design, implement analytic capabilities for real time analysis of workflows and processes. Alternatives considered include: (1) Implement hot fixes to version 8.1.5 to ensure support through summer of 2023 - 150-250k (3 months of professional services); (2) Upgrade only the application to current supported version. Will not include the new web portal, but will include new application functionality. 400k; (3) Migrate AccessNow functionality to existing Savivnt platform to manage access requests, including Active Directory, SAP, and disconnected systems as well as existing API integrations. Estimated cost: $1.25 million; (4) Remain on current version that will be unsupported as of Jan 2023. Any break / fix will require One Identity professional services. Patches and enhancements may introduce additional risk of version instability. The option selected was to proceed with the Access Now 2024 upgrade which would provide stream lined One Identity architecture and operations, onboarding processes, and a better end user experience.	2024-11-15	(1.00)	679,200	0	33,960	61,128	577,320	6,792	65,000	0	0	58,500	0	6,500
36	2024	Application Currency-Security-Capital	Security	Software	This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyber threats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Security portfolio adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; (4) addressing version interdependencies and compatibility between systems; and (5) allowing the Company to leverage new functionality available in the upgrades; (6) provides customer value through closing the gaps on vulnerabilities that can impact reliability; (7) provides a mechanism for proactive actions to stay ahead of evolving cyber threats. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Security portfolio are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for the listed applications possible and fortifies the Company	2024-12-31	(1.00)	67,920	0	0	54,336	0	13,584	6,500	0	0	5,200	0	1,300

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Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) PROGRAM	(d) FERC CATEGORY	(e) PROJECT SYNOPSES	(f) IMPLEMENTATION DATE	(g) COST/ BENEFIT RATIO	(h) ELECTRIC PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(i) SOFTWARE COSTS-Electric	(j) MATERIAL COSTS-Electric	(k) LABOR COSTS-Electric	(l) CONTRACTOR COSTS-Electric	(m) OVERHEAD & OTHER COSTS-Electric	(n) ELECTRIC PORTION O&M SPEND FOR APPLICABLE YEAR	(o) SOFTWARE COSTS-Electric	(p) MATERIAL COSTS-Electric	(q) LABOR COSTS-Electric	(r) CONTRACTOR COSTS-Electric	(s) OVERHEAD & OTHER COSTS-Electric
37	2024	Application Currency-Security-O&M	Security	Software	This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrade The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyber threats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Security portfolio adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality; (4) addressing version interdependencies and compatibility between systems; and (5) allowing the Company to leverage additional functionality available in the upgrades. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Security portfolio are routinely evaluated to determine if upgrade efforts are necessary to maintain an appropriate level of currency and then prioritized accordingly. During that evaluation process, the alternative of delaying the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure; (2) an increase in the number of incidents; (3) paying increased support costs; and (4) prevention of employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of security applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2024-12-31	(1.00)	0	0	0	0	0	0	37,805	0	0	30,244	0	7,561
38	**SUBTOTAL**	**2024 Security**						**5,644,200**	**0**	**2,651,360**	**648,728**	**2,190,420**	**153,692**	**257,505**	**0**	**28,600**	**191,314**	**2,600**	**34,991**
39	**TOTAL**	**2024**						**6,187,560**	**0**	**2,651,360**	**1,083,416**	**2,190,420**	**262,364**	**661,550**	**0**	**28,600**	**514,550**	**2,600**	**115,800**
40	2025	Enhancements-Security-Capital	Enhancements	Software	This initiative will use Capital funding to make enhancements to existing technology and to address requests generated by changing business requirements. O&M is included in this project to complete expense activities associated with Capital enhancements in accordance with accounting rules. As business conditions improve and change, compliance requirements evolve, and new capabilities are needed, new requirements surface that call for smaller effort software application changes (enhancements). Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, limit the Company's ability to consistently meet objectives, and increase security risk. The value of technology enhancements in the Security Portfolio lies in: (1) enhancing security protections by funding emerging or unplanned cyber security activities resulting from audits, incidents, or a changing threat landscape; (2) lessening the number of incidents associated with outdated software; (3) increasing application stability, leading to fewer incidents due to outdated software; and (4) allowing the Company to leverage additional functionality available in the technology. The scope of technology applications encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy, and compliance. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board that routinely evaluates and prioritizes the work. Security enhancements fortify the Company's ability to make software technology changes as part of process improvements and regulatory changes, and to meet legally required system changes in a fast and nimble manner. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-12-31	(1.00)	543,360	0	0	434,688	0	108,672	26,000	0	0	20,800	0	5,200
41	2025	Enhancements-Security-O&M	Enhancements	Software	This initiative will use O&M funding to make enhancements to existing technology and to address requests generated by changing business requirements. As business conditions improve and change, compliance requirements evolve, and new capabilities are needed, new requirements surface that call for smaller effort software application changes (enhancements). Enhancing applications requires a short timeframe between inception and implementation and cannot and should not wait for rate case approval at an individual line-item level. Failure to make these changes to applications can have a direct negative impact on key customer and business processes, increase support costs, limit the Company's ability to consistently meet objectives, and increase security risk. The value of technology enhancements in the Security Portfolio lies in: (1) enhancing security protections by funding emerging or unplanned cyber security activities resulting from audits, incidents, or a changing threat landscape; (2) reducing the number of incidents associated with outdated software; (3) increasing application stability, leading to fewer incidents due to outdated software; and (4) allowing the Company to leverage additional functionality available in the technology. While these small-work technology efforts are neither projects nor operational work, funding for resources is still required to maintain business agility in the digital environment. Included in the implementation are small changes and functionality improvement to existing technology investments for Security. The scope of technology applications encompasses: (1) making necessary system changes, and (2) updating documentation related to the changes. Additionally, enhancement requests are fulfilled to provide functionality for areas such as cyber security related platforms, cyber security incident response, physical security, security awareness, risk management, privacy and compliance. Prior to implementing an enhancement, a review is completed to identify the best solution. During that review, requests for this funding are governed by a cross-functional board comprised of representatives from each area that routinely evaluates and prioritizes the work and assesses requests for value using established cost-to-benefit ratio acceptance criteria. In addition, the overall enhancements budget is reviewed annually, and the alternative of a zero-budget allocation for enhancements is considered. This project fortifies the Company's ability to make software technology changes as part of process improvements and regulatory changes, and to meet legally required system changes. Without funding for enhancements, the Company will be limited in its ability to quickly provide needed capabilities and improvements.	2025-12-31	(1.00)	0	0	0	0	0	0	378,045	0	0	302,436	0	75,609
42	**SUBTOTAL**	**2025 Enhancements**						**543,360**	**0**	**0**	**434,688**	**0**	**108,672**	**404,045**	**0**	**0**	**323,236**	**0**	**80,809**
43	2025	Badge Reader/Lock and Key Management System	Security	Hardware	This project will implement a physical smart lock and key management system throughout the Company's Electric service territories. Lack of key control makes facilities, specifically in Electric operations, vulnerable to accidental or intentional disruption to power supply which could cause large scale outages. Install badge readers, smart locks, and credentials on smart devices to grant access to electric assets. Current estimates show there are approximately 12,000 locks throughout the state, and the Company does not have a system to properly manage ownership of the associated physical keys or control over who uses the keys. Locks are not unique in nature and can be easily duplicated. Today's lock and key system allows for 24-hour site access without having the ability to limit outside contractor access. Lack of key control makes facilities, specifically in Electric operations, vulnerable to accidental or intentional disruption which could cause large scale outages. Completion of this project will provide value to the Company by: (1) providing an extra layer of protection which is our first defense against criminal acts; (2) determining core functionalities needed to ensure proper lock and key management state-wide for electric operations; (3) implementing a smart lock and key solution that will provide the physical security team remote deactivation capabilities and is easily audited; (4) Installing a smart lock system; and (5) Leveraging credentials on mobile device and badge readers that can read both physical cards and digital The scope of this project includes: (1) a determination of the different levels and functions of different smart lock systems available for electric facilities; and (2) purchase and implementation against a site plan of a lock and key management system specific for needs of Electric Operations. Alternatives considered include: (1) Continue to use current Corbin locks with no key control.	2027-11-01	(1.00)	1,698,000	0	169,800	339,600	1,103,700	84,900	27,950	0	9,750	5,850	0	12,350

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Consumers Energy Company
Synopses Containing Descriptions, Scope, Benefits, Implementation Dates, and Detailed Costs of Actual and Projected Electric & Common Capital Expenditures and O&M Expenses
For the years 2022, 2023, 2024 and 2025
Security Department

Line No.	(a) SPEND YEAR	(b) PROJECT NAME	(c) PROGRAM	(d) FERC CATEGORY	(e) PROJECT SYNOPSES	(f) IMPLEMENTATION DATE	(g) COST/ BENEFIT RATIO	(h) ELECTRIC PORTION CAPITAL SPEND FOR APPLICABLE YEAR	(i) SOFTWARE COSTS-Electric	(j) MATERIAL COSTS-Electric	(k) LABOR COSTS-Electric	(l) CONTRACTOR COSTS-Electric	(m) OVERHEAD & OTHER COSTS-Electric	(n) ELECTRIC PORTION O&M SPEND FOR APPLICABLE YEAR	(o) SOFTWARE COSTS-Electric	(p) MATERIAL COSTS-Electric	(q) LABOR COSTS-Electric	(r) CONTRACTOR COSTS-Electric	(s) OVERHEAD & OTHER COSTS-Electric
44	2025	Physical Security Asset Refresh	Security	Hardware	This project will enhance or replace physical security assets to provide improved visibility and incident resolution related to security concerns. The Company has several thousand physical security asset devices currently in use including security cameras, motion detectors, intrusion detection systems, and card access systems. Current limitations include the lack of integrated solutions for centralized management, situational awareness, real time monitoring, compliance with regulations and guidelines, and faster responses to emergencies and incidents. This could result in the increase of potential security vulnerabilities, associated penalties, and reputational damage. The value provided by completing the project is to: (1) maintain compliance with State and Federal Regulations; (2) reduce redundancies with less of a need for multiple cameras and reducing gaps in functionality; and (3) optimize overall system performance. Included in the project is the enhancement or replacement of assets including: (1) advanced door systems at Company buildings; (2) security cameras for monitoring capabilities; and (3) gate and lock systems, which include security cameras, motion detectors, intrusion detection systems, and card access systems. Alternatives considered include: (1) not refreshing physical security assets, and (2) defer a portion of the refresh of physical security assets per an asset refresh cycle industry standard. Alternatives 1 and 2 were not selected due to the risk of security concerns, incident resolution, and the inability to meet FERC requirements. The alternative selected maintains compliance, reduces redundancies and gaps in functionality, and optimizes overall performance of physical security systems.	2025-12-31	(1.00)	2,105,520	0	1,494,240	81,504	509,400	20,376	6,500	0	0	3,120	2,600	780
45	2025	Asset Refresh Program - Cyber Security	Security	Network	This project will replace cyber security infrastructure to support increasing system and application demands and to prevent system failures and service interruptions. When enterprise software or cyber security infrastructure used to support and enhance customer interactions is obsolete, these assets are more expensive to support and can be more difficult to keep current with security updates. This project will create value by maintaining the currency of the cyber security infrastructure for core enterprise software. These are used to ensure the stability of technology for business operations. The scope of this project consists of: (1) annually replacing a subset of cyber security firewalls and servers in keeping with a 3-5 year hardware lifecycle; and (2) performing application upgrades. As part of the review process, the alternatives considered were to: (1) upgrade or replace only those assets identified in the plan; (2) upgrade or replace a portion of the assets identified in the plan. Option 1 was not chosen based on continued refresh cycle for cyber security assets to avoid security risks, system vulnerabilities, and out-of-warranty repair costs. Options 2 was not chosen due to the security risk inherent with not replacing assets as per standard refresh cycles increased system vulnerabilities, and out-of-warranty repair costs.	2025-12-31	(1.00)	252,360	0	168,240	67,296	0	16,824	16,250	0	0	16,250	0	0
46	2025	Critical Substation Upgrade	Security	Network	This project will implement enhanced security measures at our most critical substations in order to prevent unauthorized access, deter criminal activity, and respond to threats in real-time. With the enhanced security posture, Consumers Energy will be better positioned to mitigate malicious activity and increase the reliability of electric delivery to our customers. Today, Consumers Energy currently deems 16 substations as business critical to our electric system while an additional 34 substations fall under NERC-CIP compliance. Recent attacks to critical infrastructure have increased the likelihood of an adversary exploiting vulnerabilities at our critical substation increasing the risk for large scale outages and customer impact. Our current security measures do not allow us to detect, deter or monitor potential threats on site. Without the ability to monitor these assets in real-time, we are vulnerable to an adversary causing destruction without knowledge of when or how the event took place. Consumers Energy would take a phased implementation approach to further mitigate risk to assets deemed most vulnerable. The objective of this project is to implement enhanced security measures to better detect, deter and respond to threats to our electric substations in real-time. This enhanced security posture will align with other utilities that own and operate substations and mitigate disruption to the electric system while improving reliability. Enhanced Security measures that will need to be implemented include but are not limited to: (1) access controls; (2) access readers; (3) cameras; (4) video and audio programming; (5) fence intrusion (which will be accomplished through camera systems); (6) subcontractor work of trenching poles, installing equipment etc.; (7) Additional facility lighting; (8) security equipment maintenance. These activities will be performed at the following company locations: Acme (Acme), Algoma (Sparta), Alma (Alma), Amber (Ludington), Barry (Hastings), Beals Road (Wyoming), Beecher (Adrian), Beveridge (Flint), Blackstone (Jackson), Boardman (Traverse City), Brickyard (Holton), Broadmoor (Grand Rapids), Campbell (West Olive), Cannon (Rockford), Cement City (Cement City), Churchill (Leslie), Clearwater (Kalkaska), Cleveland (Spring Lake), Cole Creek (Flushing), Crescent (Hillsdale), Croton Dam (Newaygo), David (Pewamo), Deja (Edmore), Dort (Mt. Morris), Dowling (Hudson), Edenville Dam (Hope), Edwards (Kalamazoo), Ellsworth (Grand Rapids), Elm Street (Battle Creek), Eureka (Greenville), Farr Road (Onekama), Gleaner (Freeland), Gratiot Farms (Middleton), Grodi Road (Erie), Grout (Gladwin), Hazelwood (Plainwell), Hemphill (Flint), Hile Road (Muskegon), Hodenpyl Dam (Wexford), Holland Road (Saginaw), HSC Hemlock Semiconductor (Hemlock), Hughes Road (Marshall), Island Road (Charlotte), Jackson Plymouth (Jackson), Lafayette (Battle Creek), Layton (Chesaning), Lindbergh (Kalamazoo), Looking Glass (Lansing), Manlius (New Richmond), McNally (Charlevoix), Miles Road (East Jordan), Monitor (Bay City), Moore Road (Hillsdale), Morrow (Comstock), Muskegon Heights (Muskegon), Oceana (Hart), Ogemaw (West Branch), Page Avenue (Jackson), Pasadena (Flint), Pingree (Allendale), Raisin (Tecumseh), Rice Creek (Albion), Riverview (Kalamazoo), Silicon Hemlock Semiconductor (Hemlock), Simpson (Mendon), Sonoma (Battle Creek), Spartan (East Lansing), Thompson Road (Clarksville), Trowbridge (Allegan), Twining (Twining), Vernon (Clare), VeVay (Mason), Vrooman (Jackson), Washtenaw (Chelsea), Wealthy (Grand Rapids), and Willard (Birch Run). Maintain our current security perimeter fencing and conduct routine inspections of the site. Without funding for monitoring equipment, we are unable to prevent, detect or respond to threats in real-time.	2027-11-01	0.00	6,250,000	0	312,500	1,000,000	4,062,500	875,000	500,000	0	0	375,000	0	125,000
47	2025	Application Currency-Security-Capital	Security	Software	This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrades. The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyber threats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Security portfolio adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality, leading to fewer incidents due to outdated software; (4) addressing version interdependencies and compatibility between systems; and (5) allowing the Company to leverage new functionality available in the upgrades; (6) provides customer value through closing the gaps on vulnerabilities that can impact reliability; (7) provides a mechanism for proactive actions to stay ahead of evolving cyber threats. This is essential to delivering safe, reliable, and affordable service to the Company's customers. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Security portfolio are routinely evaluated to determine if and what upgrade efforts are necessary to maintain an appropriate level of currency, as well as the priority of those efforts. During that review, the alternative of delaying the timing of the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure, (2) an increased number of incidents, (3) paying increased support costs, and (4) preventing employees from performing their daily tasks. This project makes ongoing upgrades and support for the listed applications possible and fortifies the Company	2025-12-31	(1.00)	67,920	0	0	54,336	0	13,584	6,500	0	0	5,200	0	1,300

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For the years 2022, 2023, 2024 and 2025
Security Department

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)
	SPEND YEAR	PROJECT NAME	PROGRAM	FERC CATEGORY	PROJECT SYNOPSES	IMPLEMENTATION DATE	COST/ BENEFIT RATIO	ELECTRIC PORTION CAPITAL SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-Electric	MATERIAL COSTS-Electric	LABOR COSTS-Electric	CONTRACTOR COSTS-Electric	OVERHEAD & OTHER COSTS-Electric	ELECTRIC PORTION O&M SPEND FOR APPLICABLE YEAR	SOFTWARE COSTS-Electric	MATERIAL COSTS-Electric	LABOR COSTS-Electric	CONTRACTOR COSTS-Electric	OVERHEAD & OTHER COSTS-Electric
48	2025	Application Currency-Security-O&M	Security	Software	This project will utilize both Capital and O&M funding to keep applications current for security and reliability. O&M is included in this project to complete expense activities associated with Capital upgrade The Company manages a large number of applications in the technology landscape that require regular version upgrades to maintain vendor-supported software versions. Without vendor supported versions, the Company loses the ability to receive version updates and upgrades to address defects, patch security vulnerabilities, protect against cyber threats, protect data, and add new features. Failure to upgrade these applications can have a direct negative impact on key customer and business processes, increase support costs, increase unplanned outages, and increase cyber security vulnerabilities. Maintaining the appropriate versions of applications through application currency upgrades in the Security portfolio adds value by: (1) enabling the Company to maintain vendor support; (2) remediating vendor security vulnerabilities and enhancing security protections; (3) addressing vendor defects that impair stability and functionality; (4) addressing version interdependencies and compatibility between systems; and (5) allowing the Company to leverage additional functionality available in the upgrades. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The application upgrades in scope are regularly prioritized based on considerations that include application criticality; number of versions behind the current available version; security and operational risk; operational impacts of performing the upgrade; ability to defer; and cost. The scope of upgrading these applications encompasses: (1) upgrading the application software, (2) assessing any new functionality for value to the Company, (3) making necessary configuration changes, (4) testing the upgraded software, and (5) updating documentation related to the integration changes. Applications within the Security portfolio are routinely evaluated to determine if upgrade efforts are necessary to maintain an appropriate level of currency and then prioritized accordingly. During that evaluation process, the alternative of delaying the individual upgrades is considered based on: (1) maintaining an optimal balance between keeping the application current and risking failure; (2) an increase in the number of incidents; (3) paying increased support costs; and (4) prevention of employees from performing their daily tasks. This project makes ongoing upgrades and support for these applications possible and fortifies the Company's ability to keep the large number of security applications in the technology landscape secure and operational through upgrades. Without these upgrades, the Company will fall further behind in maintaining vendor-supported software versions, increasing the cost and complexity of the upgrade in the future.	2025-12-31	(1.00)	0	0	0	0	0	0	37,805	0	0	30,244	0	7,561
49	2025	HR Process Integration	Security	Software	HR (Human Resources) Process Integration is a project to Automate HR joiner, mover, leaver actions from the SAP HR system to the Identity and Access Management tool (IAM). Modernize, consolidate, and eliminate redundant integrations and systems that require numerous hand offs and are highly customized requiring numerous teams to support. Automation from SAP HR to the IAM tool's SAP HR module would greatly improve the real time transmission of employee HR actions without multiple hand offs of processing which include highly customized scripts prone to failure due to the number of required time sensitive steps to process. Additionally, this automation project would eliminate the need for the IT Security Database (ITSDB) by consolidating functionality. SAP HR batch file processes introduce failure points, delays, and data integrity issues because of time based batching processes from SAP (Employee Central), Redwood (Batch Job Orchestration System), Biztalk (File Mover System), and custom scripts (logic processing scripts) over a decade old. When and if processes do not execute or complete on a specified timeline, failures occur in the end-to-end process. When these failures occur, employee action data such as new or transferred employees do not get updated in Active Roles Server, Active Directory, and subsequently CE's IAM tool. An example of a failure outcome is not allowing new employees to log in to their computer or request access since their user ID would not be available or populate in AccessNow. These failures apply to both the HR Daily processes and the resulting IT Security Database that consumes the same data. Currently in the IT Security Database, an SAP Access transfer control does not exist to ensure SAP access is appropriate for employees who transfer to a different job position (for exampel from a Regulated role to a Non-Regulated role). This introduces SOX and MPSC Code of Conduct Compliance risk as employees potentially retain access not commensurate with their job responsibilities for extended periods of time. 1) Automate current HR Daily chronological batch file jobs and customized scripts into API direct processing of employee joiner, mover, leaver actions from SAP HR to CE's Identity and Access Management tool. 2) Allow for real time processing of employee actions and associated access requirements. 3) Eliminate failures in the process that have resulted in major IT incidents and compliance deficiencies due to access issues related to employee job changes. 4) Retire the custom built ITSDB by modernizing the functionality within the CE's IAM tool allowing for the elimination of labor support and infrastructure of the ITSDB. 5) Reduce SOX risk through creation of a SOX Control for SAP Access attestations upon transfer of an employee to a new job function. Automate employee joiner, mover, leaver actions from SAP Human Resources to CE's IAM tool via API. Remove aged batch processing system, file mover system, and custom scripts managing the existing HR Daily Processes. Retire ITSDB and implement a new attestation control for SAP access upon employee job transfer. 1) As part of the review process of current HR Daily processing, it's possible to continue to utilize and maintain existing HR Daily processing systems and infrastructure. However, it would require the continuation of support of multiple connected systems and custom scripting. These systems are managed by sensitive chronologically based jobs that are required to execute in a very specific order to not produce failures. Multiple teams support a different tool in the process. It is more risk to manage numerous hand offs in the process and support multiple teams and infrastructure to manage the employee HR actions. By automating these actions via the IAM HR module instead, CE is able to eliminate numerous hands offs and reduce risk and ongoing expense as a result.	2025-11-01	0.00	370,164	0	0	336,204	0	33,960	29,250	0	0	23,400	0	5,850
50	**SUBTOTAL**	**2025 Security**						**10,743,964**	**0**	**2,144,780**	**1,878,940**	**5,675,600**	**1,044,644**	**624,255**	**0**	**9,750**	**459,064**	**2,600**	**152,841**
51	**TOTAL**	**2025**						**11,287,324**	**0**	**2,144,780**	**2,313,628**	**5,675,600**	**1,153,316**	**1,028,300**	**0**	**9,750**	**782,300**	**2,600**	**233,650**

MICHIGAN PUBLIC SERVICE COMMISSION

Consumers Energy Company

Summary of Actual and Projected Security Operations O&M Expense

For the Years 2022, 2023, 2024 and Test Year 12 Months Ending February 28, 2025

($000)

Case No.: U-21389
Exhibit No.: A-77 (ALC-3)
Page: 1 of 2
Witness: ALCumberworth
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
		Historical		**Projected**		**Test Year**
Line No.	**Description**	**12 Mos Ended 12/31/2022**	**12 Mos Ending 12/31/2023**	**12 Mos Ending 12/31/2024**	**2 Mos Ending 2/28/2025**	**12 Mos Ending 2/28/2025**
1	Labor	2,682	3,274	3,274	535	3,274
2	Contracts	5,867	5,484	5,484	922	5,484
3	Business Expense	209	248	248	41	248
4	Material	26	-	-	-	-
5	**Total Operations Expense**	**$ 8,784**	**$ 9,006**	**$ 9,006**	**$ 1,498**	**$ 9,006**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of O&M Expenses Projected Using Merit and Inflation
For the Years 2022, 2023, 2024 and Test Year 12 Months Ending February 28, 2025
($000)

Case No.: U-21389
Exhibit No.: A-77 (ALC-3)
Page: 2 of 2
Witness: ALCumberworth
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No.	Description	2022 Actual	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2022	Merit & Inflation 12 Mos Ending Dec 31, 2023	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2023	Merit & Inflation 12 Mos Ending Dec 31, 2024	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2024	Merit & Inflation 2 Mos Ending 2/28/2025	Other Adjustments	Projected O&M 12 Mos Ending Dec 31, 2023
				(c) * Inflation Rate		(e) * Inflation Rate		(g) * Inflation Rate		(b) + (d) + (f) + (h) + (i)
1	**Operations O&M**	**8,784**	**2,682**	**105**	**2,786**	**61**	**2,848**	**10**	**46**	**9,006**
	Labor	2,682	2,682	105	2,786	61	2,848	10	416	3,274
	Contracts	5,867		0		0		0	-384	5,484
	Business Expense	209		0		0		0	39	248
	Material	26		0		0		0	-26	0
3	**Total Operations O&M Expenses**	**$ 8,784**	**$ 2,682**	**$ 105**	**$ 2,786**	**$ 61**	**$ 2,848**	**$ 10**	**$ 46**	**$ 9,006**
	Labor	2,682	2,682	105	2,786	61	2,848	10	416	3,274
	Contracts	5,867	0	0	0	0	0	0	-384	5,484
	Business Expense	209	0	0	0	0	0	0	39	248
	Material	26	0	0	0	0	0	0	-26	0

Notes

		2023	2024	2025
4	Annual merit increase			
	Annual merit increase	3.9%	2.2%	2.1%
	Number of months in the period	12	12	2
	Pro-rated merit increase	3.9%	2.2%	0.4%
5	Annual inflation rates per WP-JCA-51			
	Annual inflation rates	3.9%	2.2%	2.1%
	Number of months in the period	12	12	2
	Pro-rated inflation rate	3.9%	2.2%	0.4%

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual and Projected Security Investments O&M Expenses
For the Years 2022, 2023, 2024 and Test Year 12 Months Ending February 28, 2025
($000)

Case No.: U-21389
Exhibit No.: A-78 (ALC-4)
Page: 1 of 2
Witness: ALCumberworth
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
		Historical		**Projected**		**Test Year**
Line No.	**Description**	**12 Mos Ended 12/31/2022**	**12 Mos Ending 12/31/2023**	**12 Mos Ending 12/31/2024**	**2 Mos Ending 2/28/2025**	**12 Mos Ending 2/28/2025**
1	**Investments Planning**	**$ 2**	**$ 13**	**$ 13**	**$ 2**	**$ 13**
2	Labor	2	0	0	0	0
3	Contracts	0	13	13	2	13
4	Business Expense	0	0	0	0	0
5	Material	0	0	0	0	0
6	**Investments O&M**	**$ 918**	**$ 447**	**$ 662**	**$ 171**	**$ 723**
7	Labor	526	357	515	130	559
8	Software	0	0	0	0	0
9	Material	3	0	29	2	25
10	Contractor Costs	379	0	3	0	3
11	Overhead & Others	10	89	116	39	135
12	**Total Investments Expense**	**$ 921**	**$ 459**	**$ 674**	**$ 173**	**$ 735**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of O&M Expenses Projected Using Merit and Inflation
For the Years 2022, 2023, 2024 and Test Year 12 Months Ending February 28, 2025
($000)

Case No.: U-21389
Exhibit No.: A-78 (ALC-4)
Page: 2 of 2
Witness: ALCumberworth
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No.	Description	2022 Actual	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2022	Merit & Inflation 12 Mos Ending Dec 31, 2023	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2023	Merit & Inflation 12 Mos Ending Dec 31, 2024	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2024	Merit & Inflation 2 Mos Ending 2/28/2025	Other Adjustments	Projected O&M 12 Mos Ending 2/28/2025
				(c) * Inflation Rate		(e) * Inflation Rate		(g) * Inflation Rate		(b) + (d) + (f) + (h) + (i)
1	**Investments Planning**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**13**
	Labor	2		0		0		0	-2	0
	Contracts	0		0		0		0	13	13
	Business Expense	0		0		0		0	0	0
	Material	0		0		0		0	0	0
2	**Investments O&M**	**918**	**0**	**0**	**0**	**0**	**0**	**0**	**-196**	**723**
	Labor	526		0		0		0	33	559
	Software	0		0		0		0	0	0
	Material	3		0		0		0	23	25
	Contractor Costs	379		0		0		0	-376	3
	Overhead & Others	10		0		0		0	125	135
3	**Total Investments O&M Expenses**	**$ 921**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (185)**	**$ 735**

Notes

		2023	2024	2025
4	Annual merit increase			
	Annual merit increase	3.9%	2.2%	2.1%
	Number of months in the period	12	12	2
	Pro-rated merit increase	3.9%	2.2%	0.4%
5	Annual inflation rates per WP-JCA-51			
	Annual inflation rates	3.9%	2.2%	2.1%
	Number of months in the period	12	12	2
	Pro-rated inflation rate	3.9%	2.2%	0.4%

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	))))))	Case No. U-21389

EXHIBITS

OF

EMILY A. DAVIS

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

Projected 12-Month Period Ending February 28, 2025
Version 1
4CP 75/0/25 Production and 12CP Transmission
(thousands of dollars)

Summary
RETURN (SUMMARY)

Line No.	(a) Description	(b)	(c) Total Electric	(d) Total Jurisdictional Electric	(e) Total Residential	(f) Total Commercial Secondary	(g) Total Primary	(h) Total Lighting & Unmetered	(i) Rate GSG	(j) Total Non Jurisdictional
1	**Rate Base**		14,404,493	14,353,301	8,064,222	3,609,948	2,432,603	203,087	43,441	51,192
2	**Revenue**									
3	Total Rate Revenue		4,283,187	4,258,970	2,212,572	998,917	1,006,592	38,997	1,893	24,217
4	Total Revenue Credits		819,090	817,953	373,681	191,920	237,636	3,161	11,555	1,137
5	Total Revenue		5,102,277	5,076,923	2,586,253	1,190,837	1,244,228	42,158	13,448	25,354
6	**Expenses:**									
7	Fuel and P&I Expense		2,045,668	2,025,198	871,305	478,151	659,442	10,441	5,859	20,470
8	Transmission Expense		543,730	538,999	248,150	126,951	160,721	1,997	1,179	4,731
9	Other O & M Expense		705,078	702,679	421,199	164,015	108,490	7,454	1,523	2,399
10	Depreciation & Amortization Expense		733,075	730,035	410,534	181,959	124,853	11,117	1,573	3,039
11	Other Taxes		325,611	324,927	185,718	78,928	54,485	4,799	997	684
12	Federal Income Taxes		57,601	58,060	34,551	12,367	10,476	488	178	(459)
13	Total Expenses		4,410,762	4,379,898	2,171,458	1,042,370	1,118,466	36,296	11,309	30,864
14	Net Operating Income		691,515	697,025	414,796	148,467	125,762	5,862	2,139	(5,510)
15	Other Income Adjustments		25,823	25,641	13,035	6,216	6,164	170	55	182
16	Adjusted Net Operating Income		717,339	722,666	427,831	154,683	131,926	6,032	2,194	(5,327)
17	Rate of Return on Rate Base		4.98%	5.03%	5.31%	4.28%	5.42%	2.97%	5.05%	-10.41%
18	Index of Return (Jurisdictional)			100	105	85	108	59	100	
17	Return on Rate Base @ 6.11%		880,283	877,155	492,818	220,610	148,661	12,411	2,655	3,128
18	Income Deficiency (Sufficiency)		162,945	154,489	64,987	65,927	16,735	6,379	461	8,456
19	Revenue Deficiency (Sufficiency)		218,194	206,871	87,023	88,281	22,409	8,542	617	11,323
	Additional Rev Requirement		0	0	0	0	0	0	0	0
20	Total Revenue Deficiency (Sufficiency)		218,194	206,871	87,023	88,281	22,409	8,542	617	11,323
21	Revenue Requirement/Total Cost of Service		5,320,472	5,283,795	2,673,276	1,279,118	1,266,637	50,699	14,065	36,677
22	Less: Revenue Credits		819,090	817,953	373,681	191,920	237,636	3,161	11,555	1,137
23	**Proposed Rate Design Revenue**		**4,501,381**	**4,465,842**	**2,299,594**	**1,087,198**	**1,029,001**	**47,539**	**2,510**	**35,540**
24	Production: Net Capacity Cost		203,104	201,304	98,945	48,968	52,746	376	269	1,800
25	Production: Capacity Related Cost Offset		1,092,719	1,081,287	501,065	262,946	312,315	3,423	1,538	11,432
26	Production: Non-Capacity Related Cost		1,446,700	1,425,605	593,946	335,404	492,640	8,612	(4,997)	21,094
27	Distribution: Demand Related Cost		1,519,102	1,517,930	925,628	393,246	159,920	33,570	5,567	1,173
28	Distribution: Customer Related Cost		239,757	239,716	180,011	46,634	11,379	1,558	134	41
29	Full Service MWH Sales		30,656,265	30,328,039	12,559,141	6,973,697	10,516,047	177,460	101,694	328,226
30	ROA MWH Sales		3,713,915	3,713,915	-	195,488	3,518,427	-	-	-
31	MWH Sales		34,370,180	34,041,954	12,559,141	7,169,185	14,034,473	177,460	101,694	328,226
32	Customers		1,890,850	1,890,848	1,662,850	218,379	4,052	5,551	15	2

Projected 12-Month Period Ending February 28, 2025
Version 1
4CP 75/0/25 Production and 12CP Transmission
(thousands of dollars)

Residential/Secondary
RETURN (SUMMARY)

Line No.	(a) Description	(b) Rate RS	(c) Total Residential	(d) Rate GS	(e) Rate GSD	(f) Total Commercial Secondary
1	**Rate Base**	8,064,222	8,064,222	2,274,904	1,335,044	3,609,948
	Revenue					
3	Total Rate Revenue	2,212,572	2,212,572	614,759	384,158	998,917
4	Total Revenue Credits	373,681	373,681	114,543	77,377	191,920
5	Total Revenue	2,586,253	2,586,253	729,302	461,535	1,190,837
6	**Expenses:**					
7	Fuel and P&I Expense	871,305	871,305	279,217	198,934	478,151
8	Transmission Expense	248,150	248,150	76,014	50,938	126,951
9	Other O & M Expense	421,199	421,199	104,283	59,732	164,015
10	Depreciation & Amortization Expense	410,534	410,534	114,872	67,086	181,959
11	Other Taxes	185,718	185,718	49,765	29,163	78,928
12	Federal Income Taxes	34,551	34,551	8,085	4,281	12,367
13	Total Expenses	2,171,458	2,171,458	632,235	410,135	1,042,370
14	Net Operating Income	414,796	414,796	97,067	51,400	148,467
15	Other Income Adjustments	13,035	13,035	3,809	2,407	6,216
16	Adjusted Net Operating Income	427,831	427,831	100,876	53,807	154,683
17	Rate of Return on Rate Base	5.31%	5.31%	4.43%	4.03%	4.28%
18	Index of Return (Jurisdictional)	105	105	88	80	85
17	Return on Rate Base @ 6.11%	492,818	492,818	139,023	81,587	220,610
18	Income Deficiency (Sufficiency)	64,987	64,987	38,147	27,780	65,927
19	Revenue Deficiency (Sufficiency)	87,023	87,023	51,082	37,199	88,281
	Additional Rev Requirement	0	0	0	0	0
20	Total Revenue Deficiency (Sufficiency)	87,023	87,023	51,082	37,199	88,281
21	Revenue Requirement/Total Cost of Service	2,673,276	2,673,276	780,384	498,734	1,279,118
22	Less: Revenue Credits	373,681	373,681	114,543	77,377	191,920
23	**Proposed Rate Design Revenue**	**2,299,594**	**2,299,594**	**665,841**	**421,357**	**1,087,198**
24	Production: Net Capacity Cost	98,945	98,945	30,018	18,950	48,968
25	Production: Capacity Related Cost Offset	501,065	501,065	157,380	105,566	262,946
26	Production: Non-Capacity Related Cost	593,946	593,946	193,424	141,980	335,404
27	Distribution: Demand Related Cost	925,628	925,628	247,696	145,550	393,246
28	Distribution: Customer Related Cost	180,011	180,011	37,322	9,311	46,634
29	Full Service MWH Sales	12,559,141	12,559,141	4,024,187	2,949,510	6,973,697
30	ROA MWH Sales	-	-	23,026	172,462	195,488
31	MWH Sales	12,559,141	12,559,141	4,047,213	3,121,972	7,169,185
32	Customers	1,662,850	1,662,850	197,136	21,244	218,379

Projected 12-Month Period Ending February 28, 2025
Version 1
4CP 75/0/25 Production and 12CP Transmission
(thousands of dollars)

Primary & Lighting
RETURN (SUMMARY)

Line No.	(a) Description	(b) Rate GP	(c) Rate GPTU Vlt 1	(d) Rate GPTU Vlt 2	(e) Rate GPTU Vlt 3	(f) Rate GPD Vlt 1	(g) Rate GPD Vlt 2	(h) Rate GPD Vlt 3	(i) Rate EIP Vlt 1	(j) Rate EIP Vlt 2	(k) Rate EIP Vlt 3	(l) Total Primary	(m) Rate GML	(n) Rate UUL	(o) Rate GU	(p) Total Lighting & Unmetered
1	**Rate Base**	250,769	55,851	102,146	948,047	133,346	311,725	595,595	22,657	9,850	2,618	2,432,603	6,318	171,707	25,062	203,087
	Revenue															
3	Total Rate Revenue	91,875	33,312	51,637	375,888	78,990	131,069	214,317	23,615	5,006	884	1,006,592	1,472	28,187	9,338	38,997
4	Total Revenue Credits	20,535	8,483	12,564	89,729	19,545	31,665	49,512	4,670	815	119	237,636	170	1,032	1,959	3,161
5	Total Revenue	112,409	41,796	64,202	465,616	98,535	162,734	263,828	28,285	5,821	1,002	1,244,228	1,642	29,219	11,296	42,158
6	**Expenses:**															
7	Fuel and P&I Expense	53,035	24,225	35,594	239,709	60,344	89,051	133,217	20,272	3,469	526	659,442	661	3,894	5,885	10,441
8	Transmission Expense	14,154	5,590	8,393	60,614	12,948	20,674	31,975	5,432	799	142	160,721	118	653	1,226	1,997
9	Other O & M Expense	10,615	2,735	4,753	42,413	6,225	13,559	26,185	1,448	442	115	108,490	284	5,957	1,212	7,454
10	Depreciation & Amortization Expense	12,847	3,326	5,513	49,370	7,336	15,279	29,583	1,130	367	102	124,853	302	9,533	1,282	11,117
11	Other Taxes	5,549	1,287	2,324	20,690	3,373	7,281	13,224	472	229	56	54,485	141	4,103	556	4,799
12	Federal Income Taxes	1,246	356	586	4,061	639	1,299	2,279	(36)	40	5	10,476	10	390	87	488
13	Total Expenses	97,446	37,518	57,163	416,857	90,866	147,144	236,463	28,718	5,346	945	1,118,466	1,516	24,531	10,248	36,296
14	Net Operating Income	14,963	4,277	7,039	48,759	7,669	15,590	27,365	(433)	476	57	125,762	126	4,688	1,048	5,862
15	Other Income Adjustments	581	201	310	2,426	422	797	1,347	63	14	3	6,164	5	113	52	170
16	Adjusted Net Operating Income	15,544	4,478	7,349	51,185	8,091	16,387	28,712	(370)	490	60	131,926	131	4,801	1,100	6,032
17	Rate of Return on Rate Base	6.20%	8.02%	7.19%	5.40%	6.07%	5.26%	4.82%	-1.63%	4.97%	2.28%	5.42%	2.08%	2.80%	4.39%	2.97%
18	Index of Return (Jurisdictional)	123	159	143	107	121	104	96	(32)	99	45	108	41	56	87	59
17	Return on Rate Base @ 6.11%	15,325	3,413	6,242	57,937	8,149	19,050	36,398	1,385	602	160	148,661	386	10,493	1,532	12,411
18	Income Deficiency (Sufficiency)	(219)	(1,065)	(1,107)	6,752	58	2,663	7,686	1,755	112	100	16,735	255	5,693	431	6,379
19	Revenue Deficiency (Sufficiency)	(294)	(1,426)	(1,482)	9,041	77	3,567	10,292	2,350	150	134	22,409	341	7,623	578	8,542
	Additional Rev Requirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	Total Revenue Deficiency (Sufficiency)	(294)	(1,426)	(1,482)	9,041	77	3,567	10,292	2,350	150	134	22,409	341	7,623	578	8,542
21	Revenue Requirement/Total Cost of Service	112,115	40,370	62,720	474,658	98,612	166,300	274,120	30,634	5,972	1,137	1,266,637	1,984	36,842	11,874	50,699
22	Less: Revenue Credits	20,535	8,483	12,564	89,729	19,545	31,665	49,512	4,670	815	119	237,636	170	1,032	1,959	3,161
23	**Proposed Rate Design Revenue**	**91,581**	**31,886**	**50,155**	**384,929**	**79,067**	**134,636**	**224,608**	**25,964**	**5,157**	**1,018**	**1,029,001**	**1,813**	**35,810**	**9,915**	**47,539**
24	Production: Net Capacity Cost	5,165	1,805	2,720	21,518	3,491	6,753	11,295	-	-	-	52,746	1	-	375	376
25	Production: Capacity Related Cost Offset	28,970	10,796	16,181	122,244	22,870	40,273	65,867	4,289	714	111	312,315	151	784	2,487	3,423
26	Production: Non-Capacity Related Cost	38,080	18,126	26,641	174,201	47,641	66,618	96,801	20,604	3,387	542	492,640	602	3,515	4,495	8,612
27	Distribution: Demand Related Cost	16,710	1,045	4,362	63,062	4,615	20,067	47,705	987	1,014	351	159,920	1,005	30,077	2,487	33,570
28	Distribution: Customer Related Cost	2,656	114	251	3,904	450	925	2,940	84	42	14	11,379	54	1,433	71	1,558
29	Full Service MWH Sales	805,656	397,758	574,708	3,709,392	1,033,644	1,448,667	2,098,603	374,401	64,003	9,214	10,516,047	12,195	71,839	93,426	177,460
30	ROA MWH Sales	75,604	-	-	-	1,130,638	1,351,423	960,761	-	-	-	3,518,427	-	-	-	-
31	MWH Sales	881,260	397,758	574,708	3,709,392	2,164,283	2,800,090	3,059,364	374,401	64,003	9,214	14,034,473	12,195	71,839	93,426	177,460
32	Customers	1,537	19	41	1,305	36	96	1,002	6	7	4	4,052	404	4,686	461	5,551

Projected 12-Month Period Ending February 28, 2025
Version 1
4CP 75/0/25 Production and 12CP Transmission
(thousands of dollars)

Summary
RATE BASE (SUMMARY)

Line No.	(a) Description	(b)	(c) Total Electric	(d) Total Jurisdictional Electric	(e) Total Residential	(f) Total Commercial Secondary	(g) Total Primary	(h) Total Lighting & Unmetered	(i) Rate GSG	(j) Total Non Jurisdictional
1	**Net Plant**									
2	Production		2,617,318	2,594,124	1,230,699	625,616	725,603	7,506	4,700	23,194
3	Transmission		-	-	-	-	-	-	-	-
4	Distribution		8,113,300	8,106,810	4,847,430	2,124,473	929,416	173,164	32,327	6,490
5	General/Common/Intangible		686,368	684,060	408,835	161,413	105,208	7,166	1,437	2,309
6	Plant Purchased/Sold		0	0	0	0	0	0	0	0
7	Total Net Plant		11,416,986	11,384,994	6,486,964	2,911,503	1,760,227	187,836	38,465	31,992
8	**Working Capital**									
9	Total Current Assets		4,117,364	4,095,109	2,237,437	979,531	835,150	34,881	8,111	22,255
10	Total Current Liabilities		1,072,461	1,069,447	624,897	266,382	156,963	18,261	2,943	3,015
11	Total Working Capital		3,044,903	3,025,663	1,612,540	713,149	678,187	16,620	5,167	19,240
	Adjustments to Rate Base									
13	Additions to Rate Base		0	0	0	0	0	0	0	0
14	Deductions from Rate Base		57,395	57,356	35,281	14,704	5,811	1,368	191	40
15	Total Adjustments to Rate Base		(57,395)	(57,356)	(35,281)	(14,704)	(5,811)	(1,368)	(191)	(40)
16	**Total Rate Base**		14,404,493	14,353,301	8,064,222	3,609,948	2,432,603	203,087	43,441	51,192

Projected 12-Month Period Ending February 28, 2025
Version 1
4CP 75/0/25 Production and 12CP Transmission
(thousands of dollars)

Residential/Secondary
RATE BASE (SUMMARY)

Line No.	(a) Description	(b) Rate RS	(c) Total Residential	(d) Rate GS	(e) Rate GSD	(h) Commercial Secondary
1	**Net Plant**					
2	Production	1,230,699	1,230,699	378,039	247,577	625,616
3	Transmission	-	-	-	-	-
4	Distribution	4,847,430	4,847,430	1,363,738	760,735	2,124,473
5	General/Common/Intangible	408,835	408,835	102,247	59,166	161,413
6	Plant Purchased/Sold	0	0	0	0	0
7	Total Net Plant	6,486,964	6,486,964	1,844,025	1,067,478	2,911,503
8	**Working Capital**					
9	Total Current Assets	2,237,437	2,237,437	608,512	371,019	979,531
10	Total Current Liabilities	624,897	624,897	168,233	98,148	266,382
11	Total Working Capital	1,612,540	1,612,540	440,278	272,871	713,149
	Adjustments to Rate Base					
13	Additions to Rate Base	0	0	0	0	0
14	Deductions from Rate Base	35,281	35,281	9,399	5,305	14,704
15	Total Adjustments to Rate Base	(35,281)	(35,281)	(9,399)	(5,305)	(14,704)
16	**Total Rate Base**	8,064,222	8,064,222	2,274,904	1,335,044	3,609,948

Projected 12-Month Period Ending February 28, 2025
Version 1
4CP 75/0/25 Production and 12CP Transmission
(thousands of dollars)

Primary & Lighting
RATE BASE (SUMMARY)

Line No.	(a) Description	(b) Rate GP	(c) - Rate GPTU Vlt 1	(d) - Rate GPTU Vlt 2	(e) - Rate GPTU Vlt 3	(f) Rate GPD Vlt 1	(g) Rate GPD Vlt 2	(h) Rate GPD Vlt 3	(j) Rate EIP Vlt 1	(k) Rate EIP Vlt 2	(l) Rate EIP Vlt 3	(q) Total Primary	(r) Rate GML	(t) - Rate UUL	(u) Rate GU	(v) Total Lighting & Unmetered
1	**Net Plant**															
2	Production	66,848	25,610	38,238	285,989	52,640	93,998	153,076	7,682	1,329	194	725,603	272	1,568	5,666	7,506
3	Transmission	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Distribution	110,530	5,784	25,502	356,150	28,876	118,522	269,588	6,024	6,455	1,984	929,416	5,136	155,694	12,334	173,164
5	General/Common/Intangible	10,563	2,569	4,529	41,780	5,686	13,063	25,648	919	350	101	105,208	259	5,759	1,147	7,166
6	Plant Purchased/Sold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Total Net Plant	187,941	33,963	68,269	683,919	87,202	225,583	448,312	14,626	8,134	2,279	1,760,227	5,667	163,021	19,148	187,836
8	**Working Capital**															
9	Total Current Assets	79,934	25,198	40,228	327,956	54,395	106,388	188,645	9,453	2,410	543	835,150	1,215	25,864	7,802	34,881
10	Total Current Liabilities	16,419	3,275	6,201	61,565	8,073	19,548	39,649	1,385	657	192	156,963	527	15,933	1,801	18,261
11	Total Working Capital	63,515	21,923	34,027	266,391	46,322	86,839	148,996	8,068	1,754	351	678,187	688	9,930	6,001	16,620
	Adjustments to Rate Base															
13	Additions to Rate Base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Deductions from Rate Base	687	35	150	2,263	177	698	1,713	37	38	13	5,811	37	1,244	87	1,368
15	Total Adjustments to Rate Base	(687)	(35)	(150)	(2,263)	(177)	(698)	(1,713)	(37)	(38)	(13)	(5,811)	(37)	(1,244)	(87)	(1,368)
16	**Total Rate Base**	250,769	55,851	102,146	948,047	133,346	311,725	595,595	22,657	9,850	2,618	2,432,603	6,318	171,707	25,062	203,087

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Summary
O&M (SUMMARY)

Line No.	(a) Description	(b)	(c) Total Electric	(d) Total Jurisdictional Electric	(e) Total Residential	(f) Total Commercial Secondary	(g) Total Primary	(h) Total Lighting & Unmetered	(i) Rate GSG	(j) Total Non Jurisdictional
1	**Production Expense**									
2	Fuel Expense		1,039,289	1,028,589	431,039	241,533	346,869	5,891	3,257	10,700
3	Purchased & Interchange Power Expense		1,006,379	996,609	440,267	236,618	312,573	4,550	2,602	9,770
4	Total Fuel and P&I Expense		2,045,668	2,025,198	871,305	478,151	659,442	10,441	5,859	20,470
5	Fossil O&M Exp		99,427	98,471	44,079	23,426	30,271	443	252	955
6	Nuclear O&M Exp		0	-	-	-	-	-	-	-
7	Hydro O&M Exp		19,168	18,987	8,612	4,531	5,720	79	45	181
8	Other Power Gen O&M Exp		72,922	72,276	34,289	17,431	20,216	209	131	646
9	Other Power Supply O&M Exp		8,579	8,503	4,034	2,051	2,378	25	15	76
10	Total Production O&M Expense		200,095	198,236	91,014	47,438	58,585	756	444	1,859
11	Total Production (Inc. Fuel and P&I) O&M Expense		2,245,763	2,223,435	962,320	525,589	718,027	11,196	6,303	22,329
12	**Transmission & Distribution Expense**									
13	Trans O&M Exp		543,730	538,999	248,150	126,951	160,721	1,997	1,179	4,731
14	Other O&M Adjustments		0	0	0	0	0	0	0	0
15	Distr Oper Exp		113,332	113,309	73,359	27,391	8,123	4,225	212	22
16	Distr Maint Exp		215,272	215,217	138,773	53,891	20,816	1,089	647	55
17	Total Transmission & Distribution O&M Expense		872,333	867,525	460,282	208,233	189,660	7,311	2,039	4,808
18	**Customer Related Expense**									
19	Customer Accounts Exp		57,278	57,173	43,340	8,884	4,677	264	8	104
20	Customer Service Exp		5,151	5,113	2,468	968	1,641	24	12	38
21	Other Customer Exp		18,882	18,882	15,616	3,085	76	104	0	0
22	Total Customer O&M Expense		81,310	81,168	61,425	12,937	6,393	392	21	143
23	**Admin & General Expense**		95,069	94,749	56,628	22,357	14,572	993	199	320
24	**Total O&M Expense**		3,294,476	3,266,876	1,540,654	769,116	928,652	19,891	8,561	27,600

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Residential/Secondary
O&M (SUMMARY)

Line No.	(a) Description	(b) Rate RS	(c) Total Residential	(d) Rate GS	(e) Rate GSD	(h) Commercial Secondary
1	**Production Expense**					
2	Fuel Expense	431,039	431,039	139,769	101,764	241,533
3	Purchased & Interchange Power Expense	440,267	440,267	139,448	97,170	236,618
4	Total Fuel and P&I Expense	871,305	871,305	279,217	198,934	478,151
5	Fossil O&M Exp	44,079	44,079	13,828	9,599	23,426
6	Nuclear O&M Exp	-	-	-	-	-
7	Hydro O&M Exp	8,612	8,612	2,689	1,842	4,531
8	Other Power Gen O&M Exp	34,289	34,289	10,533	6,898	17,431
9	Other Power Supply O&M Exp	4,034	4,034	1,239	811	2,051
10	Total Production O&M Expense	91,014	91,014	28,288	19,150	47,438
11	Total Production (Inc. Fuel and P&I) O&M Expense	962,320	962,320	307,505	218,084	525,589
12	**Transmission & Distribution Expense**					
13	Trans O&M Exp	248,150	248,150	76,014	50,938	126,951
14	Other O&M Adjustments	0	0	0	0	0
15	Distr Oper Exp	73,359	73,359	17,739	9,652	27,391
16	Distr Maint Exp	138,773	138,773	34,081	19,810	53,891
17	Total Transmission & Distribution O&M Expense	460,282	460,282	127,834	80,399	208,233
18	**Customer Related Expense**					
19	Customer Accounts Exp	43,340	43,340	6,723	2,160	8,884
20	Customer Service Exp	2,468	2,468	591	377	968
21	Other Customer Exp	15,616	15,616	2,697	388	3,085
22	Total Customer O&M Expense	61,425	61,425	10,012	2,925	12,937
23	**Admin & General Expense**	56,628	56,628	14,162	8,195	22,357
24	**Total O&M Expense**	1,540,654	1,540,654	459,513	309,604	769,116

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Primary & Lighting
O&M (SUMMARY)

Line No.	(a) Description	(b) Rate GP	(c) - Rate GPTU Vlt 1	(d) - Rate GPTU Vlt 2	(e) - Rate GPTU Vlt 3	(f) Rate GPD Vlt 1	(g) Rate GPD Vlt 2	(h) Rate GPD Vlt 3	(j) Rate EIP Vlt 1	(k) Rate EIP Vlt 2	(l) Rate EIP Vlt 3	(q) Total Primary	(r) Rate GML	(t) Rate UUL	(u) Rate GU	(v) Lighting & Unmetered
1	**Production Expense**															
2	Fuel Expense	27,045	12,848	18,815	123,859	33,121	47,241	69,421	12,130	2,074	315	346,869	394	2,321	3,177	5,891
3	Purchased & Interchange Power Expense	25,990	11,378	16,778	115,850	27,223	41,810	63,795	8,143	1,395	211	312,573	268	1,573	2,708	4,550
4	Total Fuel and P&I Expense	53,035	24,225	35,594	239,709	60,344	89,051	133,217	20,272	3,469	526	659,442	661	3,894	5,885	10,441
5	Fossil O&M Exp	2,555	1,112	1,641	11,373	2,453	3,983	6,258	748	129	19	30,271	26	153	264	443
6	Nuclear O&M Exp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Hydro O&M Exp	492	208	308	2,171	454	750	1,187	125	22	3	5,720	4	25	49	79
8	Other Power Gen O&M Exp	1,862	714	1,065	7,968	1,467	2,619	4,265	214	37	5	20,216	8	44	158	209
9	Other Power Supply O&M Exp	219	84	125	937	173	308	502	25	4	1	2,378	1	5	19	25
10	Total Production O&M Expense	5,128	2,118	3,139	22,449	4,546	7,660	12,212	1,112	192	28	58,585	39	227	490	756
11	Total Production (Inc. Fuel and P&I) O&M Expense	58,163	26,343	38,733	262,158	64,890	96,711	145,429	21,384	3,662	554	718,027	700	4,121	6,375	11,196
12	**Transmission & Distribution Expense**															
13	Trans O&M Exp	14,154	5,590	8,393	60,614	12,948	20,674	31,975	5,432	799	142	160,721	118	653	1,226	1,997
14	Other O&M Adjustments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Distr Oper Exp	1,029	15	169	3,410	68	778	2,579	14	42	19	8,123	91	3,974	160	4,225
16	Distr Maint Exp	2,421	45	512	8,571	202	2,379	6,471	39	128	48	20,816	95	661	334	1,089
17	Total Transmission & Distribution O&M Expens	17,603	5,649	9,073	72,595	13,219	23,832	41,025	5,485	969	209	189,660	304	5,288	1,719	7,311
18	**Customer Related Expense**															
19	Customer Accounts Exp	442	154	238	1,738	368	604	994	112	23	4	4,677	15	199	50	264
20	Customer Service Exp	104	46	67	434	253	327	358	44	7	1	1,641	2	11	11	24
21	Other Customer Exp	29	0	1	24	1	2	19	0	0	0	76	8	88	9	104
22	Total Customer O&M Expense	574	201	306	2,196	621	933	1,371	155	31	5	6,393	24	298	70	392
23	**Admin & General Expense**	1,463	356	627	5,787	788	1,809	3,552	127	49	14	14,572	36	798	159	993
24	**Total O&M Expense**	77,804	32,550	48,740	342,735	79,518	123,285	191,377	27,152	4,710	782	928,652	1,064	10,504	8,323	19,891

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Summary
ALLOCATORS 1

Line No.	(a) Description	(b) Alloc	(c) Total Electric	(d) Total Jurisdictional Electric	(e) Total Residential	(f) Total Commercial Secondary	(g) Total Primary	(h) Total Lighting & Unmetered	(i) Rate GSG	(j) Total Non Jurisdictional
	Input Allocation Schedules									
	Energy @ Generation	100	100.000	98.970	41.868	23.248	32.942	0.592	0.321	1.030
	Energy On-Peak @ Generation	101	100.000	98.970	39.804	24.342	34.120	0.422	0.282	1.030
	Energy Off-Peak @ Generation	102	100.000	98.970	43.604	21.754	32.483	0.770	0.360	1.030
	Energy On-Peak @ Generation Summer	103	100.000	98.970	40.944	24.619	32.842	0.331	0.234	1.030
	Energy Off-Peak @ Generation Summer	104	100.000	98.970	43.786	21.985	32.216	0.672	0.312	1.030
	Energy On-Peak @ Generation Non-Summer	105	100.000	98.970	39.117	24.175	34.891	0.477	0.310	1.030
	Energy Off-Peak @ Generation Non-Summer	106	100.000	98.970	43.500	21.622	32.635	0.826	0.387	1.030
	Energy Critical On-Peak @ Gen	107	100.000	98.970	44.276	23.898	30.355	0.237	0.204	1.030
	Energy Summer Mid-Peak @ Gen	108	100.000	98.970	39.708	24.886	33.765	0.366	0.246	1.030
	12CP Dmd @ Generation	120	100.000	99.130	45.639	23.348	29.559	0.367	0.217	0.870
	4CP Dmd @ Generation	121	100.000	99.114	48.716	24.110	25.970	0.185	0.132	0.886
	Classpeak @ Transmission	127	100.000	99.152	45.551	21.276	30.497	0.384	1.444	0.848
	Production Revenue	141	100.000	99.208	45.172	23.040	30.567	0.422	0.007	0.792
	Distribution Revenue	142	100.000	99.963	63.537	23.861	10.591	1.859	0.114	0.037
	Total Rate Revenue	143	100.000	99.457	51.249	23.312	23.957	0.897	0.042	0.543
	Billed Sales	150	100.000	99.045	36.541	20.859	40.833	0.516	0.296	0.955
	Number Of Customers	160	100.000	100.000	87.942	11.549	0.214	0.294	0.001	0.000
	Weighted Customer	170	100.000	99.994	60.629	31.913	7.403	0.022	0.027	0.006
	*Calculated Allocation Schedules									
	4CP 75/0/25	220	100.000	99.114	47.021	23.903	27.723	0.287	0.180	0.886
	4CP 75/0/25 Exc WFR	222	100.000	99.975	47.429	24.111	27.965	0.289	0.181	0.025
	4CP Dmd @ Gen Jurisdictional	224	100.000	100.000	49.152	24.325	26.202	0.187	0.134	-
	12CP Demand @ Subtrans	226	100.000	100.000	48.256	24.687	26.544	0.388	0.124	-
	Class Peak @ Subtransmission	122	100.000	99.952	48.878	22.830	26.283	0.412	1.549	0.048
	Classpeak @ Primary	230	100.000	100.000	53.663	25.065	20.809	0.453	0.010	-
	Classpeak @ Secondary	231	100.000	100.000	67.772	31.656	-	0.572	-	-
	Classpeak for Streetlighting	233	100.000	99.021	-	-	-	99.021	-	0.979
	Classpeak @ Single Phase	235	100.000	100.000	67.772	31.656	-	0.572	-	-
	Billed Sales - Primary	253	100.000	100.000	45.644	26.055	27.654	0.645	0.002	-
	Customers - Residential	260	100.000	100.000	100.000	-	-	-	-	-
	Customers - Drops	261	100.000	100.000	-	100.000	-	-	-	-
	Customers - NonPID	263	100.000	100.000	88.373	11.606	-	0.021	-	-
	Customers - NonMunicipal	264	100.000	100.000	88.201	11.583	0.215	-	0.001	0.000
	Customers - Commercial & Primary	267	100.000	100.000	-	98.172	1.822	-	0.007	-
	Customer Count (CCC)	161	100.000	100.000	93.927	6.073	-	-	-	-
	Customer Count (BCC)	162	100.000	100.000	-	92.017	3.363	4.608	0.012	-
	PIS - HVD (Voltage 1)	301	100.000	99.152	45.551	21.276	30.497	0.384	1.444	0.848
	PIS - HVD (Voltage 2)	302	100.000	99.952	48.878	22.830	26.283	0.412	1.549	0.048
	PIS - HVD (Voltage 1) Subs (FERC 361/362)	303	100.000	99.152	45.551	21.276	30.497	0.384	1.444	0.848
	PIS - HVD (Voltage 2) Subs (FERC 361/362)	304	100.000	99.952	48.878	22.830	26.283	0.412	1.549	0.048

*Calculated allocation schedules may vary between production and distribution functions. Combined production and distribution shown.

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Residential/Secondary
ALLOCATORS 1

Line No.	(a) Description	Alloc	(b) Rate RS	(c) Total Residential	(d) Rate GS	(e) Rate GSD	(h) Commercial Secondary
	Input Allocation Schedules						
	Energy @ Generation	100	41.868	41.868	13.415	9.833	23.248
	Energy On-Peak @ Generation	101	39.804	39.804	14.389	9.954	24.342
	Energy Off-Peak @ Generation	102	43.604	43.604	12.178	9.576	21.754
	Energy On-Peak @ Generation Summer	103	40.944	40.944	14.636	9.982	24.619
	Energy Off-Peak @ Generation Summer	104	43.786	43.786	12.353	9.632	21.985
	Energy On-Peak @ Generation Non-Summer	105	39.117	39.117	14.239	9.936	24.175
	Energy Off-Peak @ Generation Non-Summer	106	43.500	43.500	12.078	9.544	21.622
	Energy Critical On-Peak @ Gen	107	44.276	44.276	14.141	9.757	23.898
	Energy Summer Mid-Peak @ Gen	108	39.708	39.708	14.820	10.066	24.886
	12CP Dmd @ Generation	120	45.639	45.639	13.980	9.368	23.348
	4CP Dmd @ Generation	121	48.716	48.716	14.780	9.330	24.110
	Classpeak @ Transmission	127	45.551	45.551	13.185	8.092	21.276
	Production Revenue	141	45.172	45.172	13.750	9.290	23.040
	Distribution Revenue	142	63.537	63.537	15.445	8.416	23.861
	Total Rate Revenue	143	51.249	51.249	14.311	9.001	23.312
	Billed Sales	150	36.541	36.541	11.775	9.083	20.859
	Number Of Customers	160	87.942	87.942	10.426	1.123	11.549
	Weighted Customer	170	60.629	60.629	25.838	6.075	31.913
	*Calculated Allocation Schedules						
	4CP 75/0/25	220	47.021	47.021	14.444	9.459	23.903
	4CP 75/0/25 Exc WFR	222	47.429	47.429	14.569	9.541	24.111
	4CP Dmd @ Gen Jurisdictional	224	49.152	49.152	14.912	9.414	24.325
	12CP Demand @ Subtrans	226	48.256	48.256	14.782	9.905	24.687
	Class Peak @ Subtransmission	122	48.878	48.878	14.148	8.682	22.830
	Classpeak @ Primary	230	53.663	53.663	15.533	9.532	25.065
	Classpeak @ Secondary	231	67.772	67.772	19.617	12.039	31.656
	Classpeak for Streetlighting	233	-	-	-	-	-
	Classpeak @ Single Phase	235	67.772	67.772	19.617	12.039	31.656
	Billed Sales - Primary	253	45.644	45.644	14.709	11.346	26.055
	Customers - Residential	260	100.000	100.000	-	-	-
	Customers - Drops	261	-	-	90.272	9.728	100.000
	Customers - NonPID	263	88.373	88.373	10.477	1.129	11.606
	Customers - NonMunicipal	264	88.201	88.201	10.456	1.127	11.583
	Customers - Commercial & Primary	267	-	-	88.622	9.550	98.172
	Customer Count (CCC)	161	93.927	93.927	6.013	0.060	6.073
	Customer Count (BCC)	162	-	-	75.266	16.750	92.017
	PIS - HVD (Voltage 1)	301	45.551	45.551	13.185	8.092	21.276
	PIS - HVD (Voltage 2)	302	48.878	48.878	14.148	8.682	22.830
	PIS - HVD (Voltage 1) Subs (FERC 361/362)	303	45.551	45.551	13.185	8.092	21.276
	PIS - HVD (Voltage 2) Subs (FERC 361/362)	304	48.878	48.878	14.148	8.682	22.830

*Calculated allocation schedules may vary between production and distribution functions. Combined production and distribution shown.

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Primary & Lighting
ALLOCATORS 1

Line No.	(a) Description	Alloc	(b) Rate GP	(c) - Rate GPTU Vlt 1	(d) - Rate GPTU Vlt 2	(e) - Rate GPTU Vlt 3	(f) Rate GPD Vlt 1	(g) Rate GPD Vlt 2	(h) Rate GPD Vlt 3	(j) Rate EIP Vlt 1	(k) Rate EIP Vlt 2	(l) Rate EIP Vlt 3	(q) Total Primary	(r) Rate GML	(t) Rate UUL	(u) Rate GU	(v) Lighting & Unmetered
	Input Allocation Schedules																
	Energy @ Generation	100	2.584	1.247	1.823	11.908	2.886	4.386	6.702	1.174	0.203	0.030	32.942	0.041	0.239	0.311	0.592
	Energy On-Peak @ Generation	101	2.925	1.233	1.834	12.711	2.998	4.402	6.589	1.198	0.189	0.040	34.120	0.020	0.120	0.282	0.422
	Energy Off-Peak @ Generation	102	2.177	1.246	1.788	10.876	3.465	4.751	6.814	1.132	0.216	0.018	32.483	0.063	0.368	0.339	0.770
	Energy On-Peak @ Generation Summer	103	2.822	1.171	1.703	12.388	2.739	4.282	6.437	1.100	0.165	0.035	32.842	0.011	0.068	0.252	0.331
	Energy Off-Peak @ Generation Summer	104	2.126	1.204	1.714	10.941	3.327	4.752	6.824	1.111	0.199	0.017	32.216	0.052	0.310	0.309	0.672
	Energy On-Peak @ Generation Non-Summer	105	2.988	1.271	1.914	12.906	3.155	4.475	6.681	1.257	0.203	0.043	34.891	0.026	0.150	0.301	0.477
	Energy Off-Peak @ Generation Non-Summer	106	2.205	1.269	1.831	10.839	3.543	4.750	6.809	1.145	0.226	0.018	32.635	0.069	0.401	0.356	0.826
	Energy Critical On-Peak @ Gen	107	2.604	1.057	1.557	11.604	2.285	3.945	6.152	0.996	0.136	0.019	30.355	0.001	0.004	0.233	0.237
	Energy Summer Mid-Peak @ Gen	108	2.903	1.214	1.757	12.679	2.907	4.407	6.542	1.139	0.176	0.041	33.765	0.015	0.092	0.259	0.366
	12CP Dmd @ Generation	120	2.603	1.028	1.544	11.148	2.381	3.802	5.881	0.999	0.147	0.026	29.559	0.022	0.120	0.225	0.367
	4CP Dmd @ Generation	121	2.543	0.889	1.339	10.595	1.719	3.325	5.561	-	-	-	25.970	0.000	-	0.185	0.185
	Classpeak @ Transmission	127	2.507	0.826	1.121	8.702	4.242	5.283	6.589	0.890	0.287	0.050	30.497	0.038	0.207	0.139	0.384
	Production Revenue	141	2.420	1.168	1.705	11.256	2.737	4.144	6.138	0.836	0.143	0.021	30.567	0.024	0.138	0.260	0.422
	Distribution Revenue	142	1.652	0.055	0.281	4.188	0.232	1.080	2.947	0.059	0.076	0.021	10.591	0.056	1.659	0.144	1.859
	Total Rate Revenue	143	2.166	0.800	1.234	8.917	1.908	3.130	5.082	0.579	0.121	0.021	23.957	0.035	0.641	0.222	0.897
	Billed Sales	150	2.564	1.157	1.672	10.792	6.297	8.147	8.901	1.089	0.186	0.027	40.833	0.035	0.209	0.272	0.516
	Number Of Customers	160	0.081	0.001	0.002	0.069	0.002	0.005	0.053	0.000	0.000	0.000	0.214	0.021	0.248	0.024	0.294
	Weighted Customer	170	2.482	0.040	0.096	2.546	0.084	0.208	1.912	0.013	0.015	0.007	7.403	0.022	-	-	0.022
	*Calculated Allocation Schedules																
	4CP 75/0/25	220	2.554	0.978	1.461	10.927	2.011	3.591	5.849	0.294	0.051	0.007	27.723	0.010	0.060	0.216	0.287
	4CP 75/0/25 Exc WFR	222	2.576	0.987	1.474	11.022	2.029	3.623	5.900	0.296	0.051	0.007	27.965	0.010	0.060	0.218	0.289
	4CP Dmd @ Gen Jurisdictional	224	2.566	0.896	1.351	10.689	1.734	3.355	5.611	-	-	-	26.202	0.000	-	0.186	0.187
	12CP Demand @ Subtrans	226	2.703	-	1.632	11.787	-	4.020	6.218	-	0.155	0.028	26.544	0.023	0.127	0.238	0.388
	Class Peak @ Subtransmission	122	2.642	-	1.203	9.337	-	5.669	7.071	-	0.308	0.053	26.283	0.041	0.222	0.149	0.412
	Classpeak @ Primary	230	2.736	-	-	10.251	-	-	7.763	-	-	0.059	20.809	0.045	0.244	0.164	0.453
	Classpeak @ Secondary	231	-	-	-	-	-	-	-	-	-	-	-	0.057	0.308	0.207	0.572
	Classpeak for Streetlighting	233	-	-	-	-	-	-	-	-	-	-	-	15.504	83.517	-	99.021
	Classpeak @ Single Phase	235	-	-	-	-	-	-	-	-	-	-	-	0.057	0.308	0.207	0.572
	Billed Sales - Primary	253	3.021	-	-	13.481	-	-	11.119	-	-	0.033	27.654	0.044	0.261	0.340	0.645
	Customers - Residential	260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Customers - Drops	261	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Customers - NonPID	263	-	-	-	-	-	-	-	-	-	-	-	0.021	-	-	0.021
	Customers - NonMunicipal	264	0.082	0.001	0.002	0.069	0.002	0.005	0.053	0.000	0.000	0.000	0.215	-	-	-	-
	Customers - Commercial & Primary	267	0.691	0.008	0.018	0.586	0.016	0.043	0.450	0.002	0.003	0.002	1.822	-	-	-	-
	Customer Count (CCC)	161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Customer Count (BCC)	162	1.276	0.016	0.034	1.083	0.030	0.080	0.831	0.005	0.006	0.004	3.363	0.335	3.889	0.383	4.608
	PIS - HVD (Voltage 1)	301	2.507	0.826	1.121	8.702	4.242	5.283	6.589	0.890	0.287	0.050	30.497	0.038	0.207	0.139	0.384
	PIS - HVD (Voltage 2)	302	2.642	-	1.203	9.337	-	5.669	7.071	-	0.308	0.053	26.283	0.041	0.222	0.149	0.412
	PIS - HVD (Voltage 1) Subs (FERC 361/362)	303	2.507	0.826	1.121	8.702	4.242	5.283	6.589	0.890	0.287	0.050	30.497	0.038	0.207	0.139	0.384
	PIS - HVD (Voltage 2) Subs (FERC 361/362)	304	2.642	-	1.203	9.337	-	5.669	7.071	-	0.308	0.053	26.283	0.041	0.222	0.149	0.412

*Calculated allocation schedules may vary between production and distribution functions. Combined production and distribution shown.

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Summary
ALLOCATORS 2

Line No.	(a) Description	(b) Alloc	(c) Total Electric	(d) Total Jurisdictional Electric	(e) Total Residential	(f) Total Commercial Secondary	(g) Total Primary	(h) Total Lighting & Unmetered	(i) Rate GSG	(j) Total Non Jurisdictional
	*Calculated Allocation Schedules									
	PIS - OH LVD System	305	100.000	100.000	63.810	29.805	5.843	0.538	0.003	-
	PIS - LVD Distribution	306	100.000	99.998	65.270	26.535	5.255	2.934	0.004	0.002
	PIS- OH (LVD & HVD) & Services	307	100.000	99.987	66.525	25.068	7.746	0.437	0.211	0.013
	PIS- UG LVD Distribution	308	100.000	100.000	64.901	30.314	4.235	0.548	0.002	(0.000)
	PIS- Total Distribution	309	100.000	99.931	61.471	25.619	10.125	2.384	0.332	0.069
	PIS- Distribution Services	310	100.000	100.000	94.495	5.505	-	-	-	(0.000)
	PIS- Streetlighting Equipment	311	100.000	99.925	-	-	-	99.925	-	0.075
	PIS- Line Equipment	312	100.000	100.000	66.239	30.939	2.262	0.559	0.001	(0.000)
	PIS- Meters	313	100.000	99.994	60.629	31.913	7.403	0.022	0.027	0.006
	PIS - General	315	100.000	99.664	59.565	23.517	15.328	1.044	0.209	0.336
	Total PIS	316	100.000	99.738	58.308	25.076	14.233	1.830	0.290	0.262
	Distribution Depreciation	317	100.000	99.954	65.304	24.343	7.180	2.939	0.187	0.046
	CWIP	330	100.000	99.294	50.480	24.072	23.869	0.659	0.214	0.706
	Rate Base- Total	390	100.000	99.645	55.984	25.061	16.888	1.410	0.302	0.355
	Dist Op Expense (LVD) excl Sup & Eng	400	100.000	99.985	65.103	24.205	6.717	3.803	0.158	0.015
	Dist Maint Expense (LVD) excl Sup & Eng	401	100.000	99.987	65.880	25.244	8.150	0.515	0.198	0.013
	Dist Op Expense (HVD Voltage 1) excl Sup & Eng	402	100.000	99.145	46.131	21.795	29.668	0.348	1.204	0.855
	Dist Maint Expense (HVD Voltage 1) excl Sup & Eng	403	100.000	99.336	46.329	21.935	29.569	0.342	1.161	0.664
	Dist Op Expense (HVD Voltage 2) excl Sup & Eng	404	100.000	99.952	48.878	22.830	26.283	0.412	1.549	0.048
	Dist Maint Expense (HVD Voltage 2) excl Sup & Eng	405	100.000	99.952	48.878	22.830	26.283	0.412	1.549	0.048
	Total HVD Distribution O&M Expense	406	100.000	99.817	48.338	22.639	26.973	0.398	1.469	0.183
	Total Distribution O&M Expense (excl. HVD)	407	100.000	99.987	65.633	24.865	7.617	1.690	0.183	0.013
	Total Customer Accounts Expense (excl. Supv)	408	100.000	99.818	75.667	15.510	8.166	0.460	0.015	0.182
	Total Customer Accounts & Service Expense	409	100.000	99.771	73.377	15.782	10.120	0.461	0.032	0.229
	Jurisdictional Distribution O&M	414	100.000	100.000	64.571	24.741	8.809	1.617	0.262	-
	Pre Tax NOI	439	100.000	100.797	59.984	21.470	18.186	0.848	0.309	(0.797)
	Depreciation & Amortization Expense	442	100.000	99.585	56.002	24.821	17.031	1.516	0.215	0.415
	Non PSCR O&M Expense	443	100.000	99.660	59.738	23.262	15.387	1.057	0.216	0.340
	Distribution Depreciation Expense	444	100.000	99.950	62.431	25.900	8.736	2.639	0.244	0.050
	Gen/Comm/Int Depreciation Expense	445	100.000	99.664	59.565	23.517	15.328	1.044	0.209	0.336
	Production Labor	500	100.000	99.114	47.021	23.903	27.723	0.287	0.180	0.886
	Total Labor	502	100.000	99.664	59.565	23.517	15.328	1.044	0.209	0.336
	50% O&M, 50% Net Plant	600	100.000	99.595	54.567	25.019	18.277	1.412	0.320	0.405
	50/50 PIS & Labor	601	100.000	99.701	58.937	24.297	14.781	1.437	0.250	0.299

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Residential/Secondary
ALLOCATORS 2

Line No.	(a) Description	Alloc	(b) Rate RS	(c) Total Residential	(d) Rate GS	(e) Rate GSD	(h) Commercial Secondary
	*Calculated Allocation Schedules						
	PIS - OH LVD System	305	63.810	63.810	18.470	11.335	29.805
	PIS - LVD Distribution	306	65.270	65.270	17.082	9.453	26.535
	PIS- OH (LVD & HVD) & Services	307	66.525	66.525	15.776	9.291	25.068
	PIS- UG LVD Distribution	308	64.901	64.901	18.786	11.529	30.314
	PIS- Total Distribution	309	61.471	61.471	16.376	9.243	25.619
	PIS- Distribution Services	310	94.495	94.495	4.969	0.536	5.505
	PIS- Streetlighting Equipment	311	-	-	-	-	-
	PIS- Line Equipment	312	66.239	66.239	19.173	11.766	30.939
	PIS- Meters	313	60.629	60.629	25.838	6.075	31.913
	PIS - General	315	59.565	59.565	14.897	8.620	23.517
	Total PIS	316	58.308	58.308	15.844	9.232	25.076
	Distribution Depreciation	317	65.304	65.304	15.401	8.942	24.343
	CWIP	330	50.480	50.480	14.751	9.321	24.072
	Rate Base- Total	390	55.984	55.984	15.793	9.268	25.061
	Dist Op Expense (LVD) excl Sup & Eng	400	65.103	65.103	15.690	8.514	24.205
	Dist Maint Expense (LVD) excl Sup & Eng	401	65.880	65.880	15.990	9.253	25.244
	Dist Op Expense (HVD Voltage 1) excl Sup & Eng	402	46.131	46.131	13.477	8.318	21.795
	Dist Maint Expense (HVD Voltage 1) excl Sup & Eng	403	46.329	46.329	13.558	8.377	21.935
	Dist Op Expense (HVD Voltage 2) excl Sup & Eng	404	48.878	48.878	14.148	8.682	22.830
	Dist Maint Expense (HVD Voltage 2) excl Sup & Eng	405	48.878	48.878	14.148	8.682	22.830
	Total HVD Distribution O&M Expense	406	48.338	48.338	14.022	8.617	22.639
	Total Distribution O&M Expense (excl. HVD)	407	65.633	65.633	15.879	8.986	24.865
	Total Customer Accounts Expense (excl. Supv)	408	75.667	75.667	11.738	3.772	15.510
	Total Customer Accounts & Service Expense	409	73.377	73.377	11.717	4.065	15.782
	Jurisdictional Distribution O&M	414	64.571	64.571	15.774	8.968	24.741
	Pre Tax NOI	439	59.984	59.984	14.037	7.433	21.470
	Depreciation & Amortization Expense	442	56.002	56.002	15.670	9.151	24.821
	Non PSCR O&M Expense	443	59.738	59.738	14.790	8.472	23.262
	Distribution Depreciation Expense	444	62.431	62.431	16.866	9.034	25.900
	Gen/Comm/Int Depreciation Expense	445	59.565	59.565	14.897	8.620	23.517
	Production Labor	500	47.021	47.021	14.444	9.459	23.903
	Total Labor	502	59.565	59.565	14.897	8.620	23.517
	50% O&M, 50% Net Plant	600	54.567	54.567	15.658	9.361	25.019
	50/50 PIS & Labor	601	58.937	58.937	15.370	8.926	24.297

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Primary & Lighting
ALLOCATORS 2

Line No.	(a) Description	Alloc	(b) Rate GP	(c) - Rate GPTU Vlt 1	(d) - Rate GPTU Vlt 2	(e) - Rate GPTU Vlt 3	(f) Rate GPD Vlt 1	(g) Rate GPD Vlt 2	(h) Rate GPD Vlt 3	(j) Rate EIP Vlt 1	(k) Rate EIP Vlt 2	(l) Rate EIP Vlt 3	(q) Total Primary	(r) Rate GML	(t) Rate UUL	(u) Rate GU	(v) Lighting & Unmetered
	*Calculated Allocation Schedules																
	PIS - OH LVD System	305	0.768	-	-	2.879	-	-	2.180	-	-	0.016	5.843	0.054	0.290	0.195	0.538
	PIS - LVD Distribution	306	0.807	0.003	0.007	2.504	0.006	0.016	1.895	0.001	0.001	0.014	5.255	0.072	2.708	0.153	2.934
	PIS- OH (LVD & HVD) & Services	307	0.902	0.007	0.163	3.302	0.037	0.766	2.501	0.008	0.042	0.019	7.746	0.044	0.235	0.158	0.437
	PIS- UG LVD Distribution	308	0.557	-	-	2.086	-	-	1.580	-	-	0.012	4.235	0.055	0.295	0.198	0.548
	PIS- Total Distribution	309	1.196	0.062	0.261	3.943	0.309	1.216	2.985	0.064	0.066	0.022	10.125	0.065	2.167	0.152	2.384
	PIS- Distribution Services	310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	PIS- Streetlighting Equipment	311	-	-	-	-	-	-	-	-	-	-	-	1.183	98.742	-	99.925
	PIS- Line Equipment	312	0.297	-	-	1.114	-	-	0.844	-	-	0.006	2.262	0.056	0.301	0.202	0.559
	PIS- Meters	313	2.482	0.040	0.096	2.546	0.084	0.208	1.912	0.013	0.015	0.007	7.403	0.022	-	-	0.022
	PIS - General	315	1.539	0.374	0.660	6.087	0.828	1.903	3.737	0.134	0.051	0.015	15.328	0.038	0.839	0.167	1.044
	Total PIS	316	1.508	0.279	0.545	5.580	0.708	1.769	3.645	0.118	0.062	0.018	14.233	0.051	1.612	0.167	1.830
	Distribution Depreciation	317	0.827	0.040	0.144	2.952	0.207	0.677	2.235	0.043	0.037	0.017	7.180	0.070	2.719	0.151	2.939
	CWIP	330	2.250	0.777	1.201	9.393	1.636	3.085	5.218	0.244	0.055	0.011	23.869	0.021	0.437	0.201	0.659
	Rate Base- Total	390	1.741	0.388	0.709	6.582	0.926	2.164	4.135	0.157	0.068	0.018	16.888	0.044	1.192	0.174	1.410
	Dist Op Expense (LVD) excl Sup & Eng	400	0.869	0.009	0.125	2.868	0.041	0.578	2.171	0.008	0.032	0.016	6.717	0.081	3.581	0.141	3.803
	Dist Maint Expense (LVD) excl Sup & Eng	401	0.993	0.007	0.154	3.514	0.036	0.719	2.661	0.007	0.039	0.020	8.150	0.044	0.315	0.156	0.515
	Dist Op Expense (HVD Voltage 1) excl Sup & I	402	2.514	0.837	1.161	9.048	3.780	4.925	6.401	0.727	0.234	0.041	29.668	0.031	0.169	0.147	0.348
	Dist Maint Expense (HVD Voltage 1) excl Sup	403	2.520	0.841	1.171	9.131	3.700	4.866	6.378	0.697	0.225	0.039	29.569	0.030	0.162	0.149	0.342
	Dist Op Expense (HVD Voltage 2) excl Sup & I	404	2.642	-	1.203	9.337	-	5.669	7.071	-	0.308	0.053	26.283	0.041	0.222	0.149	0.412
	Dist Maint Expense (HVD Voltage 2) excl Sup	405	2.642	-	1.203	9.337	-	5.669	7.071	-	0.308	0.053	26.283	0.041	0.222	0.149	0.412
	Total HVD Distribution O&M Expense	406	2.616	0.176	1.196	9.291	0.776	5.503	6.926	0.147	0.291	0.050	26.973	0.039	0.210	0.149	0.398
	Total Distribution O&M Expense (excl. HVD)	407	0.947	0.008	0.142	3.277	0.035	0.664	2.481	0.007	0.036	0.019	7.617	0.058	1.483	0.150	1.690
	Total Customer Accounts Expense (excl. Supv	408	0.771	0.269	0.416	3.034	0.642	1.055	1.736	0.195	0.041	0.007	8.166	0.026	0.347	0.087	0.460
	Total Customer Accounts & Service Expense	409	0.874	0.321	0.489	3.478	0.994	1.491	2.166	0.249	0.049	0.008	10.120	0.026	0.336	0.098	0.461
	Jurisdictional Distribution O&M	414	1.050	0.018	0.207	3.647	0.082	0.961	2.755	0.016	0.052	0.020	8.809	0.056	1.411	0.150	1.617
	Pre Tax NOI	439	2.164	0.619	1.018	7.051	1.109	2.254	3.957	(0.063)	0.069	0.008	18.186	0.018	0.678	0.152	0.848
	Depreciation & Amortization Expense	442	1.752	0.454	0.752	6.735	1.001	2.084	4.035	0.154	0.050	0.014	17.031	0.041	1.300	0.175	1.516
	Non PSCR O&M Expense	443	1.506	0.388	0.674	6.015	0.883	1.923	3.714	0.205	0.063	0.016	15.387	0.040	0.845	0.172	1.057
	Distribution Depreciation Expense	444	1.152	0.045	0.197	3.477	0.220	0.900	2.631	0.046	0.049	0.019	8.736	0.067	2.429	0.143	2.639
	Gen/Comm/Int Depreciation Expense	445	1.539	0.374	0.660	6.087	0.828	1.903	3.737	0.134	0.051	0.015	15.328	0.038	0.839	0.167	1.044
	Production Labor	500	2.554	0.978	1.461	10.927	2.011	3.591	5.849	0.294	0.051	0.007	27.723	0.010	0.060	0.216	0.287
	Total Labor	502	1.539	0.374	0.660	6.087	0.828	1.903	3.737	0.134	0.051	0.015	15.328	0.038	0.839	0.167	1.044
	50% O&M, 50% Net Plant	600	1.806	0.452	0.795	6.979	1.133	2.371	4.348	0.284	0.087	0.021	18.277	0.046	1.180	0.187	1.412
	50/50 PIS & Labor	601	1.523	0.327	0.603	5.834	0.768	1.836	3.691	0.126	0.056	0.017	14.781	0.045	1.226	0.167	1.437

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Summary
RETURN (SUMMARY)

Line No.	(a) Description	(b)	(c) Total Electric	(d) Total Jurisdictional Electric	(e) Total Residential	(f) Total Commercial Secondary	(g) Total Primary	(h) Total Lighting & Unmetered	(i) Rate GSG	(j) Total Non Jurisdictional
1	**Rate Base**		14,404,493	14,354,217	8,063,705	3,595,591	2,448,185	203,126	43,609	50,276
2	**Revenue**									
3	Total Rate Revenue		4,283,187	4,258,970	2,212,572	998,917	1,006,592	38,997	1,893	24,217
4	Total Revenue Credits		819,090	817,956	371,907	191,014	240,331	3,154	11,551	1,134
5	Total Revenue		5,102,277	5,076,926	2,584,478	1,189,931	1,246,923	42,151	13,443	25,351
6	**Expenses:**									
7	Fuel and P&I Expense		2,045,668	2,025,232	869,901	477,456	661,585	10,436	5,855	20,436
8	Transmission Expense		543,730	538,999	248,150	126,951	160,721	1,997	1,179	4,731
9	Other O & M Expense		705,078	702,708	421,139	163,414	109,171	7,457	1,527	2,370
10	Depreciation & Amortization Expense		733,075	730,079	410,405	180,973	126,082	11,050	1,569	2,996
11	Other Taxes		325,611	324,939	185,739	78,732	54,662	4,805	1,001	672
12	Federal Income Taxes		57,601	58,051	34,536	12,488	10,357	493	178	(450)
13	Total Expenses		4,410,762	4,380,007	2,169,869	1,040,013	1,122,578	36,237	11,310	30,755
14	Net Operating Income		691,515	696,919	414,609	149,918	124,345	5,914	2,134	(5,404)
15	Other Income Adjustments		25,823	25,643	12,976	6,178	6,264	170	55	180
16	Adjusted Net Operating Income		717,339	722,562	427,585	156,096	130,608	6,084	2,189	(5,224)
17	Rate of Return on Rate Base		4.98%	5.03%	5.30%	4.34%	5.33%	3.00%	5.02%	-10.39%
18	Index of Return (Jurisdictional)			100	105	86	106	60	100	
17	Return on Rate Base @ 6.11%		880,283	877,211	492,787	219,733	149,613	12,413	2,665	3,072
18	Income Deficiency (Sufficiency)		162,945	154,649	65,202	63,636	19,005	6,329	476	8,296
19	Revenue Deficiency (Sufficiency)		218,194	207,085	87,310	85,214	25,448	8,475	638	11,109
	Additional Rev Requirement		0	0	0	0	0	0	0	0
20	Total Revenue Deficiency (Sufficiency)		218,194	207,085	87,310	85,214	25,448	8,475	638	11,109
21	Revenue Requirement/Total Cost of Service		5,320,472	5,284,012	2,671,789	1,275,145	1,272,371	50,626	14,081	36,460
22	Less: Revenue Credits		819,090	817,956	371,907	191,014	240,331	3,154	11,551	1,134
23	**Proposed Rate Design Revenue**		**4,501,381**	**4,466,056**	**2,299,882**	**1,084,131**	**1,032,040**	**47,472**	**2,530**	**35,326**
24	Production: Net Capacity Cost		202,916	201,135	97,930	48,465	54,101	372	266	1,781
25	Production: Capacity Related Cost Offset		1,092,719	1,081,396	497,109	260,998	318,353	3,408	1,527	11,323
26	Production: Non-Capacity Related Cost		1,446,700	1,425,603	595,745	336,295	489,936	8,619	(4,992)	21,097
27	Distribution: Demand Related Cost		1,519,429	1,518,346	929,150	391,784	158,300	33,515	5,596	1,083
28	Distribution: Customer Related Cost		239,617	239,577	179,947	46,588	11,349	1,558	134	41
29	Full Service MWH Sales		30,656,265	30,328,039	12,559,141	6,973,697	10,516,047	177,460	101,694	328,226
30	ROA MWH Sales		3,713,915	3,713,915	-	195,488	3,518,427	-	-	-
31	MWH Sales		34,370,180	34,041,954	12,559,141	7,169,185	14,034,473	177,460	101,694	328,226
32	Customers		1,890,850	1,890,848	1,662,850	218,379	4,052	5,551	15	2

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Residential/Secondary
RETURN (SUMMARY)

Line No.	(a) Description	(b) Rate RS	(c) Total Residential	(d) Rate GS	(e) Rate GSD	(f) Total Commercial Secondary
1	**Rate Base**	8,063,705	8,063,705	2,267,110	1,328,481	3,595,591
	Revenue					
3	Total Rate Revenue	2,212,572	2,212,572	614,759	384,158	998,917
4	Total Revenue Credits	371,907	371,907	113,989	77,025	191,014
5	Total Revenue	2,584,478	2,584,478	728,748	461,183	1,189,931
6	**Expenses:**					
7	Fuel and P&I Expense	869,901	869,901	278,790	198,665	477,456
8	Transmission Expense	248,150	248,150	76,014	50,938	126,951
9	Other O & M Expense	421,139	421,139	103,939	59,475	163,414
10	Depreciation & Amortization Expense	410,405	410,405	114,422	66,551	180,973
11	Other Taxes	185,739	185,739	49,647	29,084	78,732
12	Federal Income Taxes	34,536	34,536	8,146	4,342	12,488
13	Total Expenses	2,169,869	2,169,869	630,958	409,055	1,040,013
14	Net Operating Income	414,609	414,609	97,790	52,128	149,918
15	Other Income Adjustments	12,976	12,976	3,786	2,392	6,178
16	Adjusted Net Operating Income	427,585	427,585	101,577	54,520	156,096
17	Rate of Return on Rate Base	5.30%	5.30%	4.48%	4.10%	4.34%
18	Index of Return (Jurisdictional)	105	105	89	82	86
17	Return on Rate Base @ 6.11%	492,787	492,787	138,547	81,186	219,733
18	Income Deficiency (Sufficiency)	65,202	65,202	36,970	26,666	63,636
19	Revenue Deficiency (Sufficiency)	87,310	87,310	49,506	35,708	85,214
	Additional Rev Requirement	0	0	0	0	0
20	Total Revenue Deficiency (Sufficiency)	87,310	87,310	49,506	35,708	85,214
21	Revenue Requirement/Total Cost of Service	2,671,789	2,671,789	778,254	496,891	1,275,145
22	Less: Revenue Credits	371,907	371,907	113,989	77,025	191,014
23	**Proposed Rate Design Revenue**	**2,299,882**	**2,299,882**	**664,265**	**419,866**	**1,084,131**
24	Production: Net Capacity Cost	97,930	97,930	29,710	18,755	48,465
25	Production: Capacity Related Cost Offset	497,109	497,109	156,186	104,813	260,998
26	Production: Non-Capacity Related Cost	595,745	595,745	193,970	142,325	336,295
27	Distribution: Demand Related Cost	929,150	929,150	247,109	144,676	391,784
28	Distribution: Customer Related Cost	179,947	179,947	37,291	9,297	46,588
29	Full Service MWH Sales	12,559,141	12,559,141	4,024,187	2,949,510	6,973,697
30	ROA MWH Sales	-	-	23,026	172,462	195,488
31	MWH Sales	12,559,141	12,559,141	4,047,213	3,121,972	7,169,185
32	Customers	1,662,850	1,662,850	197,136	21,244	218,379

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Primary & Lighting
RETURN (SUMMARY)

Line No.	(a) Description	(b) Rate GP	(c) Rate GPTU Vlt 1	(d) Rate GPTU Vlt 2	(e) Rate GPTU Vlt 3	(f) Rate GPD Vlt 1	(g) Rate GPD Vlt 2	(h) Rate GPD Vlt 3	(i) Rate EIP Vlt 1	(j) Rate EIP Vlt 2	(k) Rate EIP Vlt 3	(l) Total Primary	(m) Rate GML	(n) Rate UUL	(o) Rate GU	(p) Total Lighting & Unmetered
1	**Rate Base**	251,674	54,909	101,542	945,875	131,084	308,773	591,222	50,214	10,330	2,562	2,448,185	6,336	171,754	25,036	203,126
	Revenue															
3	Total Rate Revenue	91,875	33,312	51,637	375,888	78,990	131,069	214,317	23,615	5,006	884	1,006,592	1,472	28,187	9,338	38,997
4	Total Revenue Credits	20,443	8,450	12,515	89,339	19,481	31,540	49,302	7,779	1,289	194	240,331	170	1,032	1,952	3,154
5	Total Revenue	112,318	41,763	64,152	465,227	98,471	162,609	263,618	31,393	6,295	1,077	1,246,923	1,642	29,219	11,290	42,151
6	**Expenses:**															
7	Fuel and P&I Expense	52,961	24,200	35,555	239,404	60,295	88,955	133,057	22,726	3,847	586	661,585	661	3,894	5,880	10,436
8	Transmission Expense	14,154	5,590	8,393	60,614	12,948	20,674	31,975	5,432	799	142	160,721	118	653	1,226	1,997
9	Other O & M Expense	10,645	2,717	4,733	42,325	6,188	13,468	26,017	2,475	489	113	109,171	285	5,960	1,212	7,457
10	Depreciation & Amortization Expense	12,829	3,287	5,474	49,116	7,246	15,131	29,319	3,009	548	122	126,082	301	9,473	1,276	11,050
11	Other Taxes	5,569	1,272	2,316	20,677	3,335	7,239	13,166	816	219	53	54,662	141	4,108	556	4,805
12	Federal Income Taxes	1,243	361	591	4,082	650	1,318	2,313	(236)	30	5	10,357	10	394	88	493
13	Total Expenses	97,401	37,427	57,062	416,217	90,663	146,785	235,848	34,222	5,932	1,020	1,122,578	1,517	24,483	10,237	36,237
14	Net Operating Income	14,917	4,336	7,090	49,010	7,808	15,824	27,770	(2,829)	363	57	124,345	125	4,736	1,053	5,914
15	Other Income Adjustments	578	199	308	2,412	419	791	1,338	182	30	5	6,264	6	113	52	170
16	Adjusted Net Operating Income	15,495	4,535	7,398	51,421	8,227	16,615	29,109	(2,647)	393	62	130,608	131	4,849	1,105	6,084
17	Rate of Return on Rate Base	6.16%	8.26%	7.29%	5.44%	6.28%	5.38%	4.92%	-5.27%	3.81%	2.44%	5.33%	2.07%	2.82%	4.41%	3.00%
18	Index of Return (Jurisdictional)	122	164	145	108	125	107	98	(105)	76	48	106	41	56	88	60
17	Return on Rate Base @ 6.11%	15,380	3,356	6,205	57,804	8,011	18,870	36,131	3,069	631	157	149,613	387	10,496	1,530	12,413
18	Income Deficiency (Sufficiency)	(115)	(1,179)	(1,192)	6,383	(216)	2,255	7,022	5,716	238	94	19,005	256	5,648	425	6,329
19	Revenue Deficiency (Sufficiency)	(154)	(1,579)	(1,597)	8,547	(289)	3,020	9,403	7,654	319	126	25,448	343	7,562	569	8,475
	Additional Rev Requirement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	Total Revenue Deficiency (Sufficiency)	(154)	(1,579)	(1,597)	8,547	(289)	3,020	9,403	7,654	319	126	25,448	343	7,562	569	8,475
21	Revenue Requirement/Total Cost of Service	112,164	40,184	62,555	473,774	98,181	165,629	273,021	39,047	6,614	1,203	1,272,371	1,985	36,782	11,859	50,626
22	Less: Revenue Credits	20,443	8,450	12,515	89,339	19,481	31,540	49,302	7,779	1,289	194	240,331	170	1,032	1,952	3,154
23	**Proposed Rate Design Revenue**	**91,720**	**31,733**	**50,040**	**384,435**	**78,701**	**134,089**	**223,719**	**31,268**	**5,325**	**1,010**	**1,032,040**	**1,815**	**35,750**	**9,907**	**47,472**
24	Production: Net Capacity Cost	5,112	1,786	2,693	21,297	3,455	6,684	11,179	1,609	248	39	54,101	1	-	371	372
25	Production: Capacity Related Cost Offset	28,763	10,724	16,072	121,384	22,732	40,005	65,418	11,196	1,780	281	318,353	151	784	2,472	3,408
26	Production: Non-Capacity Related Cost	38,174	18,159	26,690	174,593	47,704	66,741	97,006	17,495	2,909	466	489,936	602	3,515	4,502	8,619
27	Distribution: Demand Related Cost	17,013	952	4,335	63,255	4,365	19,740	47,184	887	358	212	158,300	1,007	30,017	2,491	33,515
28	Distribution: Customer Related Cost	2,659	112	250	3,906	445	920	2,932	82	31	12	11,349	54	1,433	71	1,558
29	Full Service MWH Sales	805,656	397,758	574,708	3,709,392	1,033,644	1,448,667	2,098,603	374,401	64,003	9,214	10,516,047	12,195	71,839	93,426	177,460
30	ROA MWH Sales	75,604	-	-	-	1,130,638	1,351,423	960,761	-	-	-	3,518,427	-	-	-	-
31	MWH Sales	881,260	397,758	574,708	3,709,392	2,164,283	2,800,090	3,059,364	374,401	64,003	9,214	14,034,473	12,195	71,839	93,426	177,460
32	Customers	1,537	19	41	1,305	36	96	1,002	6	7	4	4,052	404	4,686	461	5,551

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Summary
RATE BASE (SUMMARY)

Line No.	(a) Description	(b)	(c) Total Electric	(d) Total Jurisdictional Electric	(e) Total Residential	(f) Total Commercial Secondary	(g) Total Primary	(h) Total Lighting & Unmetered	(i) Rate GSG	(j) Total Non Jurisdictional
1	**Net Plant**									
2	Production		2,617,301	2,594,325	1,221,778	621,202	739,197	7,472	4,676	22,977
3	Transmission		-	-	-	-	-	-	-	-
4	Distribution		8,113,317	8,107,296	4,860,915	2,118,837	921,685	173,319	32,540	6,020
5	General/Common/Intangible		686,368	684,093	408,574	160,712	106,198	7,168	1,441	2,275
6	Plant Purchased/Sold		0	0	0	0	0	0	0	0
7	Total Net Plant		11,416,986	11,385,714	6,491,266	2,900,750	1,767,081	187,960	38,657	31,272
8	**Working Capital**									
9	Total Current Assets		4,117,364	4,095,367	2,232,956	974,859	844,644	34,807	8,101	21,997
10	Total Current Liabilities		1,072,461	1,069,506	625,146	265,356	157,775	18,271	2,957	2,956
11	Total Working Capital		3,044,903	3,025,861	1,607,810	709,503	686,869	16,535	5,144	19,041
	Adjustments to Rate Base									
13	Additions to Rate Base		0	0	0	0	0	0	0	0
14	Deductions from Rate Base		57,395	57,358	35,371	14,662	5,764	1,369	192	37
15	Total Adjustments to Rate Base		(57,395)	(57,358)	(35,371)	(14,662)	(5,764)	(1,369)	(192)	(37)
16	**Total Rate Base**		14,404,493	14,354,217	8,063,705	3,595,591	2,448,185	203,126	43,609	50,276

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Residential/Secondary
RATE BASE (SUMMARY)

Line No.	(a) Description	(b) Rate RS	(c) Total Residential	(d) Rate GS	(e) Rate GSD	(h) Commercial Secondary
1	**Net Plant**					
2	Production	1,221,778	1,221,778	375,333	245,868	621,202
3	Transmission	-	-	-	-	-
4	Distribution	4,860,915	4,860,915	1,360,788	758,049	2,118,837
5	General/Common/Intangible	408,574	408,574	101,841	58,871	160,712
6	Plant Purchased/Sold	0	0	0	0	0
7	Total Net Plant	6,491,266	6,491,266	1,837,962	1,062,788	2,900,750
8	**Working Capital**					
9	Total Current Assets	2,232,956	2,232,956	606,178	368,682	974,859
10	Total Current Liabilities	625,146	625,146	167,653	97,704	265,356
11	Total Working Capital	1,607,810	1,607,810	438,525	270,978	709,503
	Adjustments to Rate Base					
13	Additions to Rate Base	0	0	0	0	0
14	Deductions from Rate Base	35,371	35,371	9,377	5,285	14,662
15	Total Adjustments to Rate Base	(35,371)	(35,371)	(9,377)	(5,285)	(14,662)
16	**Total Rate Base**	8,063,705	8,063,705	2,267,110	1,328,481	3,595,591

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Primary & Lighting
RATE BASE (SUMMARY)

Line No.	(a) Description	(b) Rate GP	(c) - Rate GPTU Vlt 1	(d) - Rate GPTU Vlt 2	(e) - Rate GPTU Vlt 3	(f) Rate GPD Vlt 1	(g) Rate GPD Vlt 2	(h) Rate GPD Vlt 3	(j) Rate EIP Vlt 1	(k) Rate EIP Vlt 2	(l) Rate EIP Vlt 3	(q) Total Primary	(r) Rate GML	(t) - Rate UUL	(u) Rate GU	(v) Total Lighting & Unmetered
1	**Net Plant**															
2	Production	66,382	25,447	37,993	284,049	52,325	93,389	152,058	23,254	3,726	575	739,197	272	1,568	5,633	7,472
3	Transmission	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Distribution	112,230	5,158	25,395	357,816	27,226	116,916	267,564	5,254	2,825	1,302	921,685	5,155	155,787	12,377	173,319
5	General/Common/Intangible	10,582	2,548	4,504	41,648	5,641	12,958	25,457	2,300	452	108	106,198	260	5,763	1,146	7,168
6	Plant Purchased/Sold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Total Net Plant	189,194	33,153	67,891	683,513	85,192	223,263	445,079	30,808	7,003	1,985	1,767,081	5,687	163,118	19,155	187,960
8	**Working Capital**															
9	Total Current Assets	79,687	25,001	39,968	326,127	53,982	105,564	187,207	22,377	3,974	759	844,644	1,215	25,823	7,769	34,807
10	Total Current Liabilities	16,510	3,213	6,168	61,492	7,923	19,365	39,363	2,939	630	174	157,775	529	15,942	1,801	18,271
11	Total Working Capital	63,177	21,788	33,800	264,635	46,059	86,199	147,843	19,439	3,344	585	686,869	686	9,881	5,968	16,535
	Adjustments to Rate Base															
13	Additions to Rate Base	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Deductions from Rate Base	697	31	149	2,273	167	689	1,700	32	17	8	5,764	38	1,244	87	1,369
15	Total Adjustments to Rate Base	(697)	(31)	(149)	(2,273)	(167)	(689)	(1,700)	(32)	(17)	(8)	(5,764)	(38)	(1,244)	(87)	(1,369)
16	**Total Rate Base**	251,674	54,909	101,542	945,875	131,084	308,773	591,222	50,214	10,330	2,562	2,448,185	6,336	171,754	25,036	203,126

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Summary
O&M (SUMMARY)

Line No.	(a) Description	(b)	(c) Total Electric	(d) Total Jurisdictional Electric	(e) Total Residential	(f) Total Commercial Secondary	(g) Total Primary	(h) Total Lighting & Unmetered	(i) Rate GSG	(j) Total Non Jurisdictional
1	**Production Expense**									
2	Fuel Expense		1,039,289	1,028,589	431,039	241,533	346,869	5,891	3,257	10,700
3	Purchased & Interchange Power Expense		1,006,379	996,644	438,862	235,923	314,716	4,544	2,598	9,736
4	Total Fuel and P&I Expense		2,045,668	2,025,232	869,901	477,456	661,585	10,436	5,855	20,436
5	Fossil O&M Exp		99,427	98,475	43,917	23,346	30,518	443	251	952
6	Nuclear O&M Exp		0	-	-	-	-	-	-	-
7	Hydro O&M Exp		19,168	18,988	8,573	4,512	5,779	79	45	180
8	Other Power Gen O&M Exp		72,922	72,282	34,041	17,308	20,595	208	130	640
9	Other Power Supply O&M Exp		8,579	8,503	4,005	2,036	2,423	24	15	75
10	Total Production O&M Expense		200,095	198,248	90,536	47,201	59,315	754	442	1,847
11	Total Production (Inc. Fuel and P&I) O&M Expense		2,245,763	2,223,480	960,437	524,657	720,899	11,189	6,298	22,283
12	**Transmission & Distribution Expense**									
13	Trans O&M Exp		543,730	538,999	248,150	126,951	160,721	1,997	1,179	4,731
14	Other O&M Adjustments		0	0	0	0	0	0	0	0
15	Distr Oper Exp		113,332	113,313	73,497	27,302	8,075	4,227	213	18
16	Distr Maint Exp		215,272	215,225	139,090	53,714	20,679	1,092	651	47
17	Total Transmission & Distribution O&M Expense		872,333	867,537	460,737	207,966	189,474	7,316	2,044	4,796
18	**Customer Related Expense**									
19	Customer Accounts Exp		57,278	57,173	43,340	8,884	4,677	264	8	104
20	Customer Service Exp		5,151	5,113	2,468	968	1,641	24	12	38
21	Other Customer Exp		18,882	18,882	15,616	3,085	76	104	0	0
22	Total Customer O&M Expense		81,310	81,168	61,425	12,937	6,393	392	21	143
23	**Admin & General Expense**		95,069	94,753	56,591	22,260	14,709	993	200	315
24	**Total O&M Expense**		3,294,476	3,266,939	1,539,190	767,821	931,476	19,890	8,562	27,537

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Residential/Secondary
O&M (SUMMARY)

	(a)	(b)	(c)	(d)	(e)	(h)
Line No.	**Description**	**Rate RS**	**Total Residential**	**Rate GS**	**Rate GSD**	**Commercial Secondary**
1	**Production Expense**					
2	Fuel Expense	431,039	431,039	139,769	101,764	241,533
3	Purchased & Interchange Power Expense	438,862	438,862	139,022	96,901	235,923
4	Total Fuel and P&I Expense	869,901	869,901	278,790	198,665	477,456
5	Fossil O&M Exp	43,917	43,917	13,778	9,568	23,346
6	Nuclear O&M Exp	-	-	-	-	-
7	Hydro O&M Exp	8,573	8,573	2,677	1,835	4,512
8	Other Power Gen O&M Exp	34,041	34,041	10,457	6,850	17,308
9	Other Power Supply O&M Exp	4,005	4,005	1,230	806	2,036
10	Total Production O&M Expense	90,536	90,536	28,143	19,059	47,201
11	Total Production (Inc. Fuel and P&I) O&M Expense	960,437	960,437	306,933	217,724	524,657
12	**Transmission & Distribution Expense**					
13	Trans O&M Exp	248,150	248,150	76,014	50,938	126,951
14	Other O&M Adjustments	0	0	0	0	0
15	Distr Oper Exp	73,497	73,497	17,691	9,610	27,302
16	Distr Maint Exp	139,090	139,090	33,987	19,727	53,714
17	Total Transmission & Distribution O&M Expense	460,737	460,737	127,691	80,275	207,966
18	**Customer Related Expense**					
19	Customer Accounts Exp	43,340	43,340	6,723	2,160	8,884
20	Customer Service Exp	2,468	2,468	591	377	968
21	Other Customer Exp	15,616	15,616	2,697	388	3,085
22	Total Customer O&M Expense	61,425	61,425	10,012	2,925	12,937
23	**Admin & General Expense**	56,591	56,591	14,106	8,154	22,260
24	**Total O&M Expense**	1,539,190	1,539,190	458,743	309,078	767,821

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Primary & Lighting
O&M (SUMMARY)

Line No.	(a) Description	(b) Rate GP	(c) - Rate GPTU Vlt 1	(d) - Rate GPTU Vlt 2	(e) - Rate GPTU Vlt 3	(f) Rate GPD Vlt 1	(g) Rate GPD Vlt 2	(h) Rate GPD Vlt 3	(j) Rate EIP Vlt 1	(k) Rate EIP Vlt 2	(l) Rate EIP Vlt 3	(q) Total Primary	(r) Rate GML	(t) Rate UUL	(u) Rate GU	(v) Lighting & Unmetered
1	**Production Expense**															
2	Fuel Expense	27,045	12,848	18,815	123,859	33,121	47,241	69,421	12,130	2,074	315	346,869	394	2,321	3,177	5,891
3	Purchased & Interchange Power Expense	25,916	11,352	16,740	115,545	27,174	41,714	63,635	10,596	1,773	271	314,716	268	1,573	2,703	4,544
4	Total Fuel and P&I Expense	52,961	24,200	35,555	239,404	60,295	88,955	133,057	22,726	3,847	586	661,585	661	3,894	5,880	10,436
5	Fossil O&M Exp	2,546	1,109	1,636	11,338	2,448	3,972	6,239	1,031	173	26	30,518	26	153	264	443
6	Nuclear O&M Exp	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Hydro O&M Exp	490	208	307	2,162	452	748	1,183	192	32	5	5,779	4	25	49	79
8	Other Power Gen O&M Exp	1,850	709	1,059	7,914	1,458	2,602	4,237	648	104	16	20,595	8	44	157	208
9	Other Power Supply O&M Exp	218	83	125	931	172	306	498	76	12	2	2,423	1	5	18	24
10	Total Production O&M Expense	5,103	2,109	3,126	22,345	4,529	7,627	12,157	1,948	321	48	59,315	39	227	488	754
11	Total Production (Inc. Fuel and P&I) O&M Expense	58,065	26,309	38,681	261,748	64,824	96,582	145,214	24,674	4,168	634	720,899	700	4,121	6,368	11,189
12	**Transmission & Distribution Expense**															
13	Trans O&M Exp	14,154	5,590	8,393	60,614	12,948	20,674	31,975	5,432	799	142	160,721	118	653	1,226	1,997
14	Other O&M Adjustments	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Distr Oper Exp	1,043	14	168	3,420	65	767	2,554	13	19	12	8,075	91	3,976	160	4,227
16	Distr Maint Exp	2,458	40	509	8,596	191	2,346	6,409	41	56	31	20,679	95	662	335	1,092
17	Total Transmission & Distribution O&M Expens	17,655	5,644	9,070	72,629	13,204	23,788	40,939	5,485	874	186	189,474	304	5,291	1,721	7,316
18	**Customer Related Expense**															
19	Customer Accounts Exp	442	154	238	1,738	368	604	994	112	23	4	4,677	15	199	50	264
20	Customer Service Exp	104	46	67	434	253	327	358	44	7	1	1,641	2	11	11	24
21	Other Customer Exp	29	0	1	24	1	2	19	0	0	0	76	8	88	9	104
22	Total Customer O&M Expense	574	201	306	2,196	621	933	1,371	155	31	5	6,393	24	298	70	392
23	**Admin & General Expense**	1,466	353	624	5,769	781	1,795	3,526	319	63	15	14,709	36	798	159	993
24	**Total O&M Expense**	77,760	32,507	48,681	342,342	79,431	123,098	191,049	30,633	5,135	840	931,476	1,065	10,508	8,317	19,890

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Summary
ALLOCATORS 1

Line No.	(a) Description	(b) Alloc	(c) Total Electric	(d) Total Jurisdictional Electric	(e) Total Residential	(f) Total Commercial Secondary	(g) Total Primary	(h) Total Lighting & Unmetered	(i) Rate GSG	(j) Total Non Jurisdictional
	Input Allocation Schedules									
	Energy @ Generation	100	100.000	98.970	41.868	23.248	32.942	0.592	0.321	1.030
	Energy On-Peak @ Generation	101	100.000	98.970	39.804	24.342	34.120	0.422	0.282	1.030
	Energy Off-Peak @ Generation	102	100.000	98.970	43.604	21.754	32.483	0.770	0.360	1.030
	Energy On-Peak @ Generation Summer	103	100.000	98.970	40.944	24.619	32.842	0.331	0.234	1.030
	Energy Off-Peak @ Generation Summer	104	100.000	98.970	43.786	21.985	32.216	0.672	0.312	1.030
	Energy On-Peak @ Generation Non-Summer	105	100.000	98.970	39.117	24.175	34.891	0.477	0.310	1.030
	Energy Off-Peak @ Generation Non-Summer	106	100.000	98.970	43.500	21.622	32.635	0.826	0.387	1.030
	Energy Critical On-Peak @ Gen	107	100.000	98.970	44.276	23.898	30.355	0.237	0.204	1.030
	Energy Summer Mid-Peak @ Gen	108	100.000	98.970	39.708	24.886	33.765	0.366	0.246	1.030
	12CP Dmd @ Generation	120	100.000	99.130	45.639	23.348	29.559	0.367	0.217	0.870
	4CP Dmd @ Generation	121	100.000	99.122	48.261	23.884	26.662	0.183	0.131	0.878
	Classpeak @ Transmission	127	100.000	99.173	46.035	21.365	29.926	0.388	1.459	0.827
	Production Revenue	141	100.000	99.208	45.172	23.040	30.567	0.422	0.007	0.792
	Distribution Revenue	142	100.000	99.963	63.537	23.861	10.591	1.859	0.114	0.037
	Total Rate Revenue	143	100.000	99.457	51.249	23.312	23.957	0.897	0.042	0.543
	Billed Sales	150	100.000	99.045	36.541	20.859	40.833	0.516	0.296	0.955
	Number Of Customers	160	100.000	100.000	87.942	11.549	0.214	0.294	0.001	0.000
	Weighted Customer	170	100.000	99.994	60.629	31.913	7.403	0.022	0.027	0.006
	*Calculated Allocation Schedules									
	4CP 75/0/25	220	100.000	99.122	46.681	23.734	28.243	0.285	0.179	0.878
	4CP 75/0/25 Exc WFR	222	100.000	99.975	47.081	23.939	28.487	0.288	0.180	0.025
	4CP Dmd @ Gen Jurisdictional	224	100.000	100.000	48.689	24.096	26.898	0.185	0.132	-
	12CP Demand @ Subtrans	226	100.000	100.000	48.256	24.687	26.544	0.388	0.124	-
	Class Peak @ Subtransmission	122	100.000	99.972	49.156	22.814	26.029	0.415	1.558	0.028
	Classpeak @ Primary	230	100.000	100.000	53.808	24.973	20.756	0.454	0.010	-
	Classpeak @ Secondary	231	100.000	100.000	67.909	31.518	-	0.573	-	-
	Classpeak for Streetlighting	233	100.000	99.429	-	-	-	99.429	-	0.571
	Classpeak @ Single Phase	235	100.000	100.000	67.909	31.518	-	0.573	-	-
	Billed Sales - Primary	253	100.000	100.000	45.644	26.055	27.654	0.645	0.002	-
	Customers - Residential	260	100.000	100.000	100.000	-	-	-	-	-
	Customers - Drops	261	100.000	100.000	-	100.000	-	-	-	-
	Customers - NonPID	263	100.000	100.000	88.373	11.606	-	0.021	-	-
	Customers - NonMunicipal	264	100.000	100.000	88.201	11.583	0.215	-	0.001	0.000
	Customers - Commercial & Primary	267	100.000	100.000	-	98.172	1.822	-	0.007	-
	Customer Count (CCC)	161	100.000	100.000	93.927	6.073	-	-	-	-
	Customer Count (BCC)	162	100.000	100.000	-	92.017	3.363	4.608	0.012	-
	PIS - HVD (Voltage 1)	301	100.000	99.173	46.035	21.365	29.926	0.388	1.459	0.827
	PIS - HVD (Voltage 2)	302	100.000	99.972	49.156	22.814	26.029	0.415	1.558	0.028
	PIS - HVD (Voltage 1) Subs (FERC 361/362)	303	100.000	99.173	46.035	21.365	29.926	0.388	1.459	0.827
	PIS - HVD (Voltage 2) Subs (FERC 361/362)	304	100.000	99.972	49.156	22.814	26.029	0.415	1.558	0.028

*Calculated allocation schedules may vary between production and distribution functions. Combined production and distribution shown.

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Residential/Secondary
ALLOCATORS 1

Line No.	(a) Description	Alloc	(b) Rate RS	(c) Total Residential	(d) Rate GS	(e) Rate GSD	(h) Commercial Secondary
	Input Allocation Schedules						
	Energy @ Generation	100	41.868	41.868	13.415	9.833	23.248
	Energy On-Peak @ Generation	101	39.804	39.804	14.389	9.954	24.342
	Energy Off-Peak @ Generation	102	43.604	43.604	12.178	9.576	21.754
	Energy On-Peak @ Generation Summer	103	40.944	40.944	14.636	9.982	24.619
	Energy Off-Peak @ Generation Summer	104	43.786	43.786	12.353	9.632	21.985
	Energy On-Peak @ Generation Non-Summer	105	39.117	39.117	14.239	9.936	24.175
	Energy Off-Peak @ Generation Non-Summer	106	43.500	43.500	12.078	9.544	21.622
	Energy Critical On-Peak @ Gen	107	44.276	44.276	14.141	9.757	23.898
	Energy Summer Mid-Peak @ Gen	108	39.708	39.708	14.820	10.066	24.886
	12CP Dmd @ Generation	120	45.639	45.639	13.980	9.368	23.348
	4CP Dmd @ Generation	121	48.261	48.261	14.642	9.243	23.884
	Classpeak @ Transmission	127	46.035	46.035	13.246	8.119	21.365
	Production Revenue	141	45.172	45.172	13.750	9.290	23.040
	Distribution Revenue	142	63.537	63.537	15.445	8.416	23.861
	Total Rate Revenue	143	51.249	51.249	14.311	9.001	23.312
	Billed Sales	150	36.541	36.541	11.775	9.083	20.859
	Number Of Customers	160	87.942	87.942	10.426	1.123	11.549
	Weighted Customer	170	60.629	60.629	25.838	6.075	31.913
	*Calculated Allocation Schedules						
	4CP 75/0/25	220	46.681	46.681	14.340	9.394	23.734
	4CP 75/0/25 Exc WFR	222	47.081	47.081	14.464	9.475	23.939
	4CP Dmd @ Gen Jurisdictional	224	48.689	48.689	14.771	9.325	24.096
	12CP Demand @ Subtrans	226	48.256	48.256	14.782	9.905	24.687
	Class Peak @ Subtransmission	122	49.156	49.156	14.145	8.669	22.814
	Classpeak @ Primary	230	53.808	53.808	15.483	9.490	24.973
	Classpeak @ Secondary	231	67.909	67.909	19.541	11.977	31.518
	Classpeak for Streetlighting	233	-	-	-	-	-
	Classpeak @ Single Phase	235	67.909	67.909	19.541	11.977	31.518
	Billed Sales - Primary	253	45.644	45.644	14.709	11.346	26.055
	Customers - Residential	260	100.000	100.000	-	-	-
	Customers - Drops	261	-	-	90.272	9.728	100.000
	Customers - NonPID	263	88.373	88.373	10.477	1.129	11.606
	Customers - NonMunicipal	264	88.201	88.201	10.456	1.127	11.583
	Customers - Commercial & Primary	267	-	-	88.622	9.550	98.172
	Customer Count (CCC)	161	93.927	93.927	6.013	0.060	6.073
	Customer Count (BCC)	162	-	-	75.266	16.750	92.017
	PIS - HVD (Voltage 1)	301	46.035	46.035	13.246	8.119	21.365
	PIS - HVD (Voltage 2)	302	49.156	49.156	14.145	8.669	22.814
	PIS - HVD (Voltage 1) Subs (FERC 361/362)	303	46.035	46.035	13.246	8.119	21.365
	PIS - HVD (Voltage 2) Subs (FERC 361/362)	304	49.156	49.156	14.145	8.669	22.814

*Calculated allocation schedules may vary between production and distribution functions. Combined production and distribution shown.

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Version 2
4CP 75/0/25 Production and 12CP Transmission
(thousands of dollars)

Primary & Lighting
ALLOCATORS 1

Line No.	(a) Description	Alloc	(b) Rate GP	(c) - Rate GPTU Vlt 1	(d) - Rate GPTU Vlt 2	(e) - Rate GPTU Vlt 3	(f) Rate GPD Vlt 1	(g) Rate GPD Vlt 2	(h) Rate GPD Vlt 3	(j) Rate EIP Vlt 1	(k) Rate EIP Vlt 2	(l) Rate EIP Vlt 3	(q) Total Primary	(r) Rate GML	(t) Rate UUL	(u) Rate GU	(v) Lighting & Unmetered
	Input Allocation Schedules																
	Energy @ Generation	100	2.584	1.247	1.823	11.908	2.886	4.386	6.702	1.174	0.203	0.030	32.942	0.041	0.239	0.311	0.592
	Energy On-Peak @ Generation	101	2.925	1.233	1.834	12.711	2.998	4.402	6.589	1.198	0.189	0.040	34.120	0.020	0.120	0.282	0.422
	Energy Off-Peak @ Generation	102	2.177	1.246	1.788	10.876	3.465	4.751	6.814	1.132	0.216	0.018	32.483	0.063	0.368	0.339	0.770
	Energy On-Peak @ Generation Summer	103	2.822	1.171	1.703	12.388	2.739	4.282	6.437	1.100	0.165	0.035	32.842	0.011	0.068	0.252	0.331
	Energy Off-Peak @ Generation Summer	104	2.126	1.204	1.714	10.941	3.327	4.752	6.824	1.111	0.199	0.017	32.216	0.052	0.310	0.309	0.672
	Energy On-Peak @ Generation Non-Summer	105	2.988	1.271	1.914	12.906	3.155	4.475	6.681	1.257	0.203	0.043	34.891	0.026	0.150	0.301	0.477
	Energy Off-Peak @ Generation Non-Summer	106	2.205	1.269	1.831	10.839	3.543	4.750	6.809	1.145	0.226	0.018	32.635	0.069	0.401	0.356	0.826
	Energy Critical On-Peak @ Gen	107	2.604	1.057	1.557	11.604	2.285	3.945	6.152	0.996	0.136	0.019	30.355	0.001	0.004	0.233	0.237
	Energy Summer Mid-Peak @ Gen	108	2.903	1.214	1.757	12.679	2.907	4.407	6.542	1.139	0.176	0.041	33.765	0.015	0.092	0.259	0.366
	12CP Dmd @ Generation	120	2.603	1.028	1.544	11.148	2.381	3.802	5.881	0.999	0.147	0.026	29.559	0.022	0.120	0.225	0.367
	4CP Dmd @ Generation	121	2.519	0.880	1.327	10.496	1.703	3.294	5.509	0.793	0.122	0.019	26.662	0.000	-	0.183	0.183
	Classpeak @ Transmission	127	2.564	0.733	1.121	8.783	3.997	5.231	6.567	0.775	0.123	0.032	29.926	0.039	0.209	0.141	0.388
	Production Revenue	141	2.420	1.168	1.705	11.256	2.737	4.144	6.138	0.836	0.143	0.021	30.567	0.024	0.138	0.260	0.422
	Distribution Revenue	142	1.652	0.055	0.281	4.188	0.232	1.080	2.947	0.059	0.076	0.021	10.591	0.056	1.659	0.144	1.859
	Total Rate Revenue	143	2.166	0.800	1.234	8.917	1.908	3.130	5.082	0.579	0.121	0.021	23.957	0.035	0.641	0.222	0.897
	Billed Sales	150	2.564	1.157	1.672	10.792	6.297	8.147	8.901	1.089	0.186	0.027	40.833	0.035	0.209	0.272	0.516
	Number Of Customers	160	0.081	0.001	0.002	0.069	0.002	0.005	0.053	0.000	0.000	0.000	0.214	0.021	0.248	0.024	0.294
	Weighted Customer	170	2.482	0.040	0.096	2.546	0.084	0.208	1.912	0.013	0.015	0.007	7.403	0.022	-	-	0.022
	*Calculated Allocation Schedules																
	4CP 75/0/25	220	2.536	0.972	1.452	10.853	1.999	3.568	5.810	0.888	0.142	0.022	28.243	0.010	0.060	0.215	0.285
	4CP 75/0/25 Exc WFR	222	2.558	0.981	1.464	10.946	2.017	3.599	5.860	0.896	0.144	0.022	28.487	0.010	0.060	0.217	0.288
	4CP Dmd @ Gen Jurisdictional	224	2.541	0.888	1.339	10.588	1.718	3.323	5.558	0.800	0.123	0.020	26.898	0.000	-	0.185	0.185
	12CP Demand @ Subtrans	226	2.703	-	1.632	11.787	-	4.020	6.218	-	0.155	0.028	26.544	0.023	0.127	0.238	0.388
	Class Peak @ Subtransmission	122	2.689	-	1.197	9.379	-	5.586	7.012	-	0.132	0.035	26.029	0.041	0.223	0.150	0.415
	Classpeak @ Primary	230	2.776	-	-	10.266	-	-	7.675	-	-	0.038	20.756	0.045	0.244	0.164	0.454
	Classpeak @ Secondary	231	-	-	-	-	-	-	-	-	-	-	-	0.057	0.308	0.207	0.573
	Classpeak for Streetlighting	233	-	-	-	-	-	-	-	-	-	-	-	15.572	83.857	-	99.429
	Classpeak @ Single Phase	235	-	-	-	-	-	-	-	-	-	-	-	0.057	0.308	0.207	0.573
	Billed Sales - Primary	253	3.021	-	-	13.481	-	-	11.119	-	-	0.033	27.654	0.044	0.261	0.340	0.645
	Customers - Residential	260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Customers - Drops	261	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Customers - NonPID	263	-	-	-	-	-	-	-	-	-	-	-	0.021	-	-	0.021
	Customers - NonMunicipal	264	0.082	0.001	0.002	0.069	0.002	0.005	0.053	0.000	0.000	0.000	0.215	-	-	-	-
	Customers - Commercial & Primary	267	0.691	0.008	0.018	0.586	0.016	0.043	0.450	0.002	0.003	0.002	1.822	-	-	-	-
	Customer Count (CCC)	161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Customer Count (BCC)	162	1.276	0.016	0.034	1.083	0.030	0.080	0.831	0.005	0.006	0.004	3.363	0.335	3.889	0.383	4.608
	PIS - HVD (Voltage 1)	301	2.564	0.733	1.121	8.783	3.997	5.231	6.567	0.775	0.123	0.032	29.926	0.039	0.209	0.141	0.388
	PIS - HVD (Voltage 2)	302	2.689	-	1.197	9.379	-	5.586	7.012	-	0.132	0.035	26.029	0.041	0.223	0.150	0.415
	PIS - HVD (Voltage 1) Subs (FERC 361/362)	303	2.564	0.733	1.121	8.783	3.997	5.231	6.567	0.775	0.123	0.032	29.926	0.039	0.209	0.141	0.388
	PIS - HVD (Voltage 2) Subs (FERC 361/362)	304	2.689	-	1.197	9.379	-	5.586	7.012	-	0.132	0.035	26.029	0.041	0.223	0.150	0.415

*Calculated allocation schedules may vary between production and distribution functions. Combined production and distribution shown.

Projected 12-Month Period Ending February 28, 2025
Version 2
4CP 75/0/25 Production and 12CP Transmission
(thousands of dollars)

Summary
ALLOCATORS 2

Line No.	(a) Description	(b) Alloc	(c) Total Electric	(d) Total Jurisdictional Electric	(e) Total Residential	(f) Total Commercial Secondary	(g) Total Primary	(h) Total Lighting & Unmetered	(i) Rate GSG	(j) Total Non Jurisdictional
	*Calculated Allocation Schedules									
	PIS - OH LVD System	305	100.000	100.000	63.949	29.680	5.828	0.540	0.003	-
	PIS - LVD Distribution	306	100.000	99.998	65.371	26.435	5.254	2.935	0.004	0.002
	PIS- OH (LVD & HVD) & Services	307	100.000	99.989	66.663	24.978	7.698	0.438	0.213	0.011
	PIS- UG LVD Distribution	308	100.000	100.000	65.039	30.186	4.224	0.549	0.002	(0.000)
	PIS- Total Distribution	309	100.000	99.936	61.627	25.545	10.043	2.386	0.335	0.064
	PIS- Distribution Services	310	100.000	100.000	94.495	5.505	-	-	-	(0.000)
	PIS- Streetlighting Equipment	311	100.000	99.956	-	-	-	99.956	-	0.044
	PIS- Line Equipment	312	100.000	100.000	66.376	30.806	2.256	0.560	0.001	(0.000)
	PIS- Meters	313	100.000	99.994	60.629	31.913	7.403	0.022	0.027	0.006
	PIS - General	315	100.000	99.669	59.527	23.415	15.472	1.044	0.210	0.331
	Total PIS	316	100.000	99.743	58.344	24.981	14.296	1.832	0.291	0.257
	Distribution Depreciation	317	100.000	99.957	65.439	24.260	7.129	2.941	0.188	0.043
	CWIP	330	100.000	99.302	50.248	23.926	24.256	0.659	0.214	0.698
	Rate Base- Total	390	100.000	99.651	55.980	24.962	16.996	1.410	0.303	0.349
	Dist Op Expense (LVD) excl Sup & Eng	400	100.000	99.989	65.221	24.124	6.679	3.805	0.159	0.011
	Dist Maint Expense (LVD) excl Sup & Eng	401	100.000	99.990	66.015	25.155	8.104	0.517	0.199	0.010
	Dist Op Expense (HVD Voltage 1) excl Sup & Eng	402	100.000	99.164	46.442	21.826	29.328	0.351	1.216	0.836
	Dist Maint Expense (HVD Voltage 1) excl Sup & Eng	403	100.000	99.352	46.608	21.955	29.272	0.344	1.172	0.648
	Dist Op Expense (HVD Voltage 2) excl Sup & Eng	404	100.000	99.972	49.156	22.814	26.029	0.415	1.558	0.028
	Dist Maint Expense (HVD Voltage 2) excl Sup & Eng	405	100.000	99.972	49.156	22.814	26.029	0.415	1.558	0.028
	Total HVD Distribution O&M Expense	406	100.000	99.836	48.618	22.630	26.709	0.400	1.479	0.164
	Total Distribution O&M Expense (excl. HVD)	407	100.000	99.990	65.762	24.779	7.574	1.692	0.184	0.010
	Total Customer Accounts Expense (excl. Supv)	408	100.000	99.818	75.667	15.510	8.166	0.460	0.015	0.182
	Total Customer Accounts & Service Expense	409	100.000	99.771	73.377	15.782	10.120	0.461	0.032	0.229
	Jurisdictional Distribution O&M	414	100.000	100.000	64.707	24.659	8.752	1.619	0.263	-
	Pre Tax NOI	439	100.000	100.781	59.957	21.680	17.981	0.855	0.309	(0.781)
	Depreciation & Amortization Expense	442	100.000	99.591	55.984	24.687	17.199	1.507	0.214	0.409
	Non PSCR O&M Expense	443	100.000	99.664	59.729	23.177	15.483	1.058	0.217	0.336
	Distribution Depreciation Expense	444	100.000	99.954	62.559	25.824	8.685	2.641	0.246	0.046
	Gen/Comm/Int Depreciation Expense	445	100.000	99.669	59.527	23.415	15.472	1.044	0.210	0.331
	Production Labor	500	100.000	99.122	46.681	23.734	28.243	0.285	0.179	0.878
	Total Labor	502	100.000	99.669	59.527	23.415	15.472	1.044	0.210	0.331
	50% O&M, 50% Net Plant	600	100.000	99.600	54.586	24.937	18.343	1.413	0.321	0.400
	50/50 PIS & Labor	601	100.000	99.706	58.936	24.198	14.884	1.438	0.251	0.294

*Calculated allocation schedules may vary between production and distribution functions. Combined production and distribution shown.

Projected 12-Month Period Ending February 28, 2025
Version 2
4CP 75/0/25 Production and 12CP Transmission
(thousands of dollars)

Residential/Secondary
ALLOCATORS 2

Line No.	(a) Description	Alloc	(b) Rate RS	(c) Total Residential	(d) Rate GS	(e) Rate GSD	(h) Commercial Secondary
	*Calculated Allocation Schedules						
	PIS - OH LVD System	305	63.949	63.949	18.401	11.278	29.680
	PIS - LVD Distribution	306	65.371	65.371	17.027	9.408	26.435
	PIS- OH (LVD & HVD) & Services	307	66.663	66.663	15.728	9.250	24.978
	PIS- UG LVD Distribution	308	65.039	65.039	18.715	11.471	30.186
	PIS- Total Distribution	309	61.627	61.627	16.337	9.208	25.545
	PIS- Distribution Services	310	94.495	94.495	4.969	0.536	5.505
	PIS- Streetlighting Equipment	311	-	-	-	-	-
	PIS- Line Equipment	312	66.376	66.376	19.100	11.706	30.806
	PIS- Meters	313	60.629	60.629	25.838	6.075	31.913
	PIS - General	315	59.527	59.527	14.838	8.577	23.415
	Total PIS	316	58.344	58.344	15.790	9.191	24.981
	Distribution Depreciation	317	65.439	65.439	15.356	8.904	24.260
	CWIP	330	50.248	50.248	14.663	9.263	23.926
	Rate Base- Total	390	55.980	55.980	15.739	9.223	24.962
	Dist Op Expense (LVD) excl Sup & Eng	400	65.221	65.221	15.647	8.477	24.124
	Dist Maint Expense (LVD) excl Sup & Eng	401	66.015	66.015	15.942	9.212	25.155
	Dist Op Expense (HVD Voltage 1) excl Sup & Eng	402	46.442	46.442	13.502	8.325	21.826
	Dist Maint Expense (HVD Voltage 1) excl Sup & Eng	403	46.608	46.608	13.576	8.379	21.955
	Dist Op Expense (HVD Voltage 2) excl Sup & Eng	404	49.156	49.156	14.145	8.669	22.814
	Dist Maint Expense (HVD Voltage 2) excl Sup & Eng	405	49.156	49.156	14.145	8.669	22.814
	Total HVD Distribution O&M Expense	406	48.618	48.618	14.023	8.607	22.630
	Total Distribution O&M Expense (excl. HVD)	407	65.762	65.762	15.832	8.947	24.779
	Total Customer Accounts Expense (excl. Supv)	408	75.667	75.667	11.738	3.772	15.510
	Total Customer Accounts & Service Expense	409	73.377	73.377	11.717	4.065	15.782
	Jurisdictional Distribution O&M	414	64.707	64.707	15.730	8.930	24.659
	Pre Tax NOI	439	59.957	59.957	14.141	7.538	21.680
	Depreciation & Amortization Expense	442	55.984	55.984	15.609	9.078	24.687
	Non PSCR O&M Expense	443	59.729	59.729	14.741	8.435	23.177
	Distribution Depreciation Expense	444	62.559	62.559	16.824	9.000	25.824
	Gen/Comm/Int Depreciation Expense	445	59.527	59.527	14.838	8.577	23.415
	Production Labor	500	46.681	46.681	14.340	9.394	23.734
	Total Labor	502	59.527	59.527	14.838	8.577	23.415
	50% O&M, 50% Net Plant	600	54.586	54.586	15.612	9.325	24.937
	50/50 PIS & Labor	601	58.936	58.936	15.314	8.884	24.198

*Calculated allocation schedules may vary between production and distribution functions. Combined production and distribution shown.

Projected 12-Month Period Ending February 28, 2025
Version 2
4CP 75/0/25 Production and 12CP Transmission
(thousands of dollars)

Primary & Lighting
ALLOCATORS 2

Line No.	(a) Description	Alloc	(b) Rate GP	(c) - Rate GPTU Vlt 1	(d) - Rate GPTU Vlt 2	(e) - Rate GPTU Vlt 3	(f) Rate GPD Vlt 1	(g) Rate GPD Vlt 2	(h) Rate GPD Vlt 3	(j) Rate EIP Vlt 1	(k) Rate EIP Vlt 2	(l) Rate EIP Vlt 3	(q) Total Primary	(r) Rate GML	(t) Rate UUL	(u) Rate GU	(v) Lighting & Unmetered
	*Calculated Allocation Schedules																
	PIS - OH LVD System	305	0.780	-	-	2.883	-	-	2.155	-	-	0.011	5.828	0.054	0.290	0.195	0.540
	PIS - LVD Distribution	306	0.818	0.003	0.007	2.513	0.006	0.016	1.879	0.001	0.001	0.009	5.254	0.072	2.709	0.154	2.935
	PIS- OH (LVD & HVD) & Services	307	0.916	0.006	0.162	3.311	0.035	0.755	2.476	0.007	0.018	0.012	7.698	0.044	0.236	0.159	0.438
	PIS- UG LVD Distribution	308	0.565	-	-	2.089	-	-	1.562	-	-	0.008	4.224	0.055	0.295	0.199	0.549
	PIS- Total Distribution	309	1.215	0.055	0.260	3.961	0.291	1.200	2.962	0.056	0.029	0.014	10.043	0.066	2.168	0.152	2.386
	PIS- Distribution Services	310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	PIS- Streetlighting Equipment	311	-	-	-	-	-	-	-	-	-	-	-	1.189	98.768	-	99.956
	PIS- Line Equipment	312	0.302	-	-	1.116	-	-	0.834	-	-	0.004	2.256	0.056	0.301	0.203	0.560
	PIS- Meters	313	2.482	0.040	0.096	2.546	0.084	0.208	1.912	0.013	0.015	0.007	7.403	0.022	-	-	0.022
	PIS - General	315	1.542	0.371	0.656	6.068	0.822	1.888	3.709	0.335	0.066	0.016	15.472	0.038	0.840	0.167	1.044
	Total PIS	316	1.518	0.273	0.542	5.576	0.692	1.752	3.618	0.253	0.056	0.016	14.296	0.052	1.613	0.167	1.832
	Distribution Depreciation	317	0.841	0.036	0.144	2.964	0.195	0.669	2.216	0.038	0.016	0.011	7.129	0.070	2.720	0.151	2.941
	CWIP	330	2.240	0.771	1.194	9.339	1.623	3.063	5.183	0.705	0.118	0.020	24.256	0.021	0.437	0.200	0.659
	Rate Base- Total	390	1.747	0.381	0.705	6.567	0.910	2.144	4.104	0.349	0.072	0.018	16.996	0.044	1.192	0.174	1.410
	Dist Op Expense (LVD) excl Sup & Eng	400	0.881	0.008	0.125	2.875	0.038	0.570	2.150	0.007	0.014	0.010	6.679	0.081	3.582	0.141	3.805
	Dist Maint Expense (LVD) excl Sup & Eng	401	1.008	0.007	0.153	3.523	0.034	0.708	2.634	0.007	0.017	0.013	8.104	0.045	0.316	0.156	0.517
	Dist Op Expense (HVD Voltage 1) excl Sup & I	402	2.556	0.760	1.159	9.097	3.577	4.877	6.373	0.778	0.123	0.030	29.328	0.032	0.171	0.148	0.351
	Dist Maint Expense (HVD Voltage 1) excl Sup	403	2.559	0.766	1.168	9.173	3.504	4.819	6.349	0.780	0.123	0.030	29.272	0.030	0.164	0.150	0.344
	Dist Op Expense (HVD Voltage 2) excl Sup & I	404	2.689	-	1.197	9.379	-	5.586	7.012	-	0.132	0.035	26.029	0.041	0.223	0.150	0.415
	Dist Maint Expense (HVD Voltage 2) excl Sup	405	2.689	-	1.197	9.379	-	5.586	7.012	-	0.132	0.035	26.029	0.041	0.223	0.150	0.415
	Total HVD Distribution O&M Expense	406	2.662	0.160	1.191	9.334	0.735	5.427	6.874	0.163	0.130	0.034	26.709	0.039	0.211	0.150	0.400
	Total Distribution O&M Expense (excl. HVD)	407	0.961	0.007	0.142	3.286	0.034	0.654	2.457	0.006	0.016	0.012	7.574	0.058	1.483	0.151	1.692
	Total Customer Accounts Expense (excl. Supv	408	0.771	0.269	0.416	3.034	0.642	1.055	1.736	0.195	0.041	0.007	8.166	0.026	0.347	0.087	0.460
	Total Customer Accounts & Service Expense	409	0.874	0.321	0.489	3.478	0.994	1.491	2.166	0.249	0.049	0.008	10.120	0.026	0.336	0.098	0.461
	Jurisdictional Distribution O&M	414	1.066	0.017	0.206	3.657	0.078	0.948	2.728	0.016	0.023	0.013	8.752	0.057	1.412	0.151	1.619
	Pre Tax NOI	439	2.157	0.627	1.025	7.087	1.129	2.288	4.016	(0.409)	0.052	0.008	17.981	0.018	0.685	0.152	0.855
	Depreciation & Amortization Expense	442	1.750	0.448	0.747	6.700	0.989	2.064	3.999	0.411	0.075	0.017	17.199	0.041	1.292	0.174	1.507
	Non PSCR O&M Expense	443	1.510	0.385	0.671	6.003	0.878	1.910	3.690	0.351	0.069	0.016	15.483	0.040	0.845	0.172	1.058
	Distribution Depreciation Expense	444	1.169	0.041	0.196	3.496	0.207	0.888	2.614	0.040	0.022	0.013	8.685	0.067	2.430	0.143	2.641
	Gen/Comm/Int Depreciation Expense	445	1.542	0.371	0.656	6.068	0.822	1.888	3.709	0.335	0.066	0.016	15.472	0.038	0.840	0.167	1.044
	Production Labor	500	2.536	0.972	1.452	10.853	1.999	3.568	5.810	0.888	0.142	0.022	28.243	0.010	0.060	0.215	0.285
	Total Labor	502	1.542	0.371	0.656	6.068	0.822	1.888	3.709	0.335	0.066	0.016	15.472	0.038	0.840	0.167	1.044
	50% O&M, 50% Net Plant	600	1.815	0.446	0.792	6.973	1.119	2.354	4.324	0.418	0.083	0.019	18.343	0.046	1.180	0.187	1.413
	50/50 PIS & Labor	601	1.530	0.322	0.599	5.822	0.757	1.820	3.663	0.294	0.061	0.016	14.884	0.045	1.226	0.167	1.438

*Calculated allocation schedules may vary between production and distribution functions. Combined production and distribution shown.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Electric Cost-of-Service Study
Capacity Related Cost and Charge Calculation
Projected 12-Month Period Ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-79 (EAD-3)
Page: 1 of 1
Witness: EADavis
Date: May 2023

Line No.	(a) Description	(b) Total Electric ($000)	(c) Capacity Charge	(d) Formula
1	Total Production Related Cost	$ 2,742,335		
2	Non-Capacity Related Cost:			
3	Fuel Expense	$ 1,039,289		
4	Purchased & Interchanged	593,953		
5	Energy Related Other O&M Expense	59,634		
6	PSCR Revenue Credits	(684,353)		
7	Non-PSCR Revenue Credits	(105,552)		
8	Transmission Expense	543,730		
9	Total Non-Capacity Related Cost	$ 1,446,700		Σ Lines 3:8
10	Total Capacity Related Cost	$ 1,295,635		Line 1 - Line 9
11	Offsets:			
12	Energy Market Sales	$ 1,967,929		
13	Off-System Energy Sales	12,000		
14	Ancillary Service Sales	11,874		
15	Bilateral Energy Sales	-		
16	Total Revenue	$ 1,991,803		Σ Lines 12:15
17	Related Fuel Cost	899,084		
18	Total Revenue Less Fuel Cost	$ 1,092,719		Line 16 - Line 17
19	Net Capacity Cost	$ 202,916		Line 10 - Line 18
20	Capacity Charge Demand (MW)		7,526	
21	Capacity Charge ($/MW-Day)		$73.87	[(Line 19 x 1,000) ÷ Line 20] ÷ 365

Source:
Lines 1-9: Exhibit A-16 (EAD-2) Schedule F-1.1
Lines 12-15,17, 20 Company witness Megan L. Metz

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy
Substation Ownership Credit
(thousands of dollars)

Case No.: U-21389
Exhibit No.: A-80 (EAD-4)

Witness: EADavis
Date: May 2023

Line	(a) Description	(b) Rate GPD Voltage 1	(c) Rate GPD Voltage 2	(d) Rate GPTU Voltage 1	(e) Rate GPTU Voltage 2	(f) Rate EIP Voltage 1	(g) Rate EIP Voltage 2
1	Plant in Service	$ 25,771	$ 44,127	$ 4,723	$ 9,454	$ 4,995	$ 1,042
2	Depreciation Reserve	(5,959)	(9,318)	(1,092)	(1,996)	(1,155)	(220)
3	Net Plant	19,811	34,809	3,631	7,458	3,840	822
4	Working Capital	1,347	2,786	450	707	360	87
5	CWIP (HV Distribution)	269	146	48	31	52	3
6	Substation Rate Base	$ 21,428	$ 37,741	$ 4,129	$ 8,196	$ 4,252	$ 912
7	Pre-Tax Return	7.60%	7.60%	7.60%	7.60%	7.60%	7.60%
8	Pre-Tax Return ($)	$ 1,629	$ 2,869	$ 314	$ 623	$ 323	$ 69
9	Depreciation Expense	616	1,039	113	223	119	25
10	O&M Expense	108	186	20	40	21	4
11	Other Taxes	835	1,018	155	225	162	33
12	Revenue Credits	(282)	(179)	(45)	(37)	(48)	(6)
13	Total Revenue Requirement	$ 2,906	$ 4,932	$ 557	$ 1,073	$ 577	$ 126
14	Max Demand (MW)	**4,690**	**6,163**	**1,164**	**1,610**	**1,163**	**467**
15	Substation Ownership Credit (kW)	$ 0.6196	$ 0.8001	$ 0.4783	$ 0.6666	$ 0.4961	$ 0.2695

Source: Exhibit A-16 (EAD-2) Schedule F-1.1
WP-AMG-3-4
WP-EAD-192-193

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Allocation of Surcharges ($000)

Case No.: U-21389
Exhibit No.: A-81 (EAD-5)

Witness: EADavis
Date: May 2023

Line No	Description	Total Electric	Source
1	**Electric Rate Case ("ERC") Deferral**	$ 8,556	Exhibit JCA-62
2	Demand Response ("DR") Revenue Req	$ 52,195	Exhibit JCA-61
3	Reconciliation - Incentive	$ 4,640	Exhibit JCA-61
4	Reconciliation - Reg Asset	$ (10,046)	Exhibit JCA-61
5	**Total DR Revenue Requirement**	$ 46,789	
6	**Investment Recovery Mechanism ("IRM")**		
7	IRM 12 Mo. Ending 2/28/25	$ 6,263	Exhibit HJM-1
8	IRM 12 Mo. Ending 2/28/26	$ 17,748	
9	IRM 12 Mo. Ending 2/28/27	$ 29,208	

Line No	Description	Alloc	Total Electric	Total Jurisdictional Electric	Total Residential	Total Commercial Secondary	Total Primary	Total Lighting & Unmetered	Rate GSG	Total Non Jurisdictional
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
10	**Demand Response Surcharge**									
11	1/ 4CP 75/0/25 (Allocator)	220	100.0000	99.1221	46.6808	23.7344	28.2427	0.2855	0.1787	0.8779
12	Allocation of DR Revenue Req		$ 52,195	$ 51,737	$ 24,365	$ 12,388	$ 14,741	$ 149	$ 93	$ 458
13	Allocation of DR Incentive		$ 4,640	$ 4,599	$ 2,166	$ 1,101	$ 1,310	$ 13	$ 8	$ 41
14	Allocation of DR Reg Asset		$ (10,046)	$ (9,958)	$ (4,689)	$ (2,384)	$ (2,837)	$ (29)	$ (18)	$ (88)
15	**Total Allocation of DR Surcharge**		$ 46,789	$ 46,378	$ 21,841	$ 11,105	$ 13,214	$ 134	$ 84	$ 411
16	**ERC Deferral Surcharge**									
17	1/ Distribution: Demand Related Cost		1,519,429	1,518,346	929,150	391,784	158,300	33,515	$ 5,596	$ 1,083
18	1/ Distribution: Customer Related Cost		239,617	239,577	179,947	46,588	11,349	1,558	$ 134	$ 41
19	Total Distribution Costs		$ 1,759,046	$ 1,757,922	$ 1,109,097	$ 438,372	$ 169,649	$ 35,073	$ 5,730	$ 1,124
20	Total Distribution Costs (Allocator)		1.0000	0.9994	0.63051	0.2492	0.0964	0.0199	0.0033	0.0006
21	**Allocation of ERC Surcharge**		$ 8,556	$ 8,550	$ 5,394	$ 2,132	$ 825	$ 171	$ 28	$ 5
22	**Allocation of IRM Surcharge (Ending 2/28/25)**		$ 6,263	$ 6,259	$ 3,949	$ 1,561	$ 604	$ 125	$ 20	$ 4
23	**Allocation of IRM Surcharge (Ending 2/28/26)**		$ 17,748	$ 17,737	$ 11,190	$ 4,423	$ 1,712	$ 354	$ 58	$ 11
24	**Allocation of IRM Surcharge (Ending 2/28/27)**		$ 29,208	$ 29,189	$ 18,416	$ 7,279	$ 2,817	$ 582	$ 95	$ 19

Source:
1/ Exhibit A-16 (EAD-2) Schedule F-1.1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Allocation of Surcharges ($000)

Case No.: U-21389
Exhibit No.: A-81 (EAD-5)
Page: 2 of 3
Witness: EADavis
Date: May 2023

Line No	Description	Alloc	Rate Residential	Total Residential	Rate GS	Rate GSD	Total Commercial Secondary
			(a)	(b)	(c)	(d)	(e)
1	**Demand Response Surcharge**						
2	1/ 4CP 75/0/25 (Allocator)	220	46.6808	46.6808	14.3405	9.3940	23.7344
3	Allocation of DR Revenue Req		$ 24,365	$ 24,365	$ 7,485	$ 4,903	$ 12,388
4	Allocation of DR Incentive		$ 2,166	$ 2,166	$ 665	$ 436	$ 1,101
5	Allocation of DR Reconciliation		$ (4,689)	$ (4,689)	$ (1,441)	$ (944)	$ (2,384)
6	**Total Allocation of DR Surcharge**		$ 21,841	$ 21,841	$ 6,710	$ 4,395	$ 11,105
	ERC Deferral Surcharge						
7	1/ Distribution: Demand Related Cost		929,150	929,150	247,109	144,676	391,784
8	1/ Distribution: Customer Related Cost		179,947	179,947	37,291	9,297	46,588
9	Total Distribution Costs		$ 1,109,097	$ 1,109,097	$ 284,399	$ 153,973	$ 438,372
10	Total Distribution Costs (Allocator)		0.6305	0.6305	0.1617	0.0875	0.2492
11	**Allocation of ERC Surcharge**		$ 5,394	$ 5,394	$ 1,383	$ 749	$ 2,132
12	**Allocation of IRM Surcharge (Ending 2/28/25)**		$ 3,949	$ 3,949	$ 1,013	$ 548	$ 1,561
13	**Allocation of IRM Surcharge (Ending 2/28/26)**		$ 11,190	$ 11,190	$ 2,869	$ 1,554	$ 4,423
14	**Allocation of IRM Surcharge (Ending 2/28/27)**		$ 18,416	$ 18,416	$ 4,722	$ 2,557	$ 7,279

Source:
1/ Exhibit A-16 (EAD-2) Schedule F-1.1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Allocation of Surcharges ($000)

Line No	Description	Alloc	Rate GP	Rate GPTU Vlt 1	Rate GPTU Vlt 2	Rate GPTU Vlt 3	Rate GPD Vlt 1	Rate GPD Vlt 2	Rate GPD Vlt 3	Rate EIP Vlt 1	Rate EIP Vlt 2	Rate EIP Vlt 3	Total Primary	Rate GML	Rate UUL	Rate GU	Total Lighting & Unmetered
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
1	**Demand Response Surcharge**																
2	1/ 4CP 75/0/25 (Allocator)	220	2.5363	0.9723	1.4516	10.8527	1.9992	3.5681	5.8097	0.8885	0.1424	0.0220	28.2427	0.0104	0.0599	0.2152	0.2855
3	Allocation of DR Revenue Req		$ 1,324	$ 507	$ 758	$ 5,665	$ 1,043	$ 1,862	$ 3,032	$ 464	$ 74	$ 11	$ 14,741	$ 5	$ 31	$ 112	$ 149
4	Allocation of DR Incentive		$ 118	$ 45	$ 67	$ 504	$ 93	$ 166	$ 270	$ 41	$ 7	$ 1	$ 1,310	$ 0	$ 3	$ 10	$ 13
5	Allocation of DR Reconciliation		$ (255)	$ (98)	$ (146)	$ (1,090)	$ (201)	$ (358)	$ (584)	$ (89)	$ (14)	$ (2)	$ (2,837)	$ (1)	$ (6)	$ (22)	$ (29)
6	**Total Allocation of DR Surcharge**		$ 1,187	$ 455	$ 679	$ 5,078	$ 935	$ 1,669	$ 2,718	$ 416	$ 67	$ 10	$ 13,214	$ 5	$ 28	$ 101	$ 134
	ERC Deferral Surcharge																
7	1/ Distribution: Demand Related Cost		17,013	952	4,335	63,255	4,365	19,740	47,184	887	358	212	158,300	1,007	30,017	2,491	33,515
8	1/ Distribution: Customer Related Cost		2,659	112	250	3,906	445	920	2,932	82	31	12	11,349	54	1,433	71	1,558
9	Total Distribution Costs		$ 19,672	$ 1,064	$ 4,585	$ 67,161	$ 4,810	$ 20,660	$ 50,116	$ 968	$ 389	$ 224	$ 169,649	$ 1,061	$ 31,450	$ 2,562	$ 35,073
10	Total Distribution Costs (Allocator)		0.01118	0.00060	0.00261	0.03818	0.00273	0.01174	0.02849	0.00055	0.00022	0.00013	0.09644	0.00060	0.01788	0.00146	0.01994
11	**Allocation of ERC Surcharge**		$ 96	$ 5	$ 22	$ 327	$ 23	$ 100	$ 244	$ 5	$ 2	$ 1	$ 825	$ 5	$ 153	$ 12	$ 171
12	**Allocation of IRM Surcharge (Ending 2/28/25)**		$ 70	$ 4	$ 16	$ 239	$ 17	$ 74	$ 178	$ 3	$ 1	$ 1	$ 604	$ 4	$ 112	$ 9	$ 125
13	**Allocation of IRM Surcharge (Ending 2/28/26)**		$ 198	$ 11	$ 46	$ 678	$ 49	$ 208	$ 506	$ 10	$ 4	$ 2	$ 1,712	$ 11	$ 317	$ 26	$ 354
14	**Allocation of IRM Surcharge (Ending 2/28/27)**		$ 327	$ 18	$ 76	$ 1,115	$ 80	$ 343	$ 832	$ 16	$ 6	$ 4	$ 2,817	$ 18	$ 522	$ 43	$ 582

Source:
1/ Exhibit A-16 (EAD-2) Schedule F-1.1

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	))))))	Case No. U-21389

EXHIBITS

OF

MATTHEW J. FOSTER

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Projected Electric O&M Expense
($000)

Case No.: U-21389
Exhibit No.: A-82 (MJF-1)
Page: 1 of 1
Witness: MJFoster
Date: May 2023

Corporate O&M

Line No.	(a) Program Description	(b) Source	(c) 2022 Actual	(d) 2023 Projected	(e) 2024 Projected	(f) 12 Months Ending 2/28/2025 Projected
1	Adjusted Corporate Services Expense	Exhibit A-83 (MJF-2)	$ 38,247	$ 40,201	$ 41,346	$ 48,617
2	Uncollectible Expense	Exhibit A-85 (MJF-4)	$ 18,817	23,796	24,731	17,519
3	Injuries & Damages Expense	Exhibit A-86 (MJF-5)	$ 6,652	3,884	3,969	3,983
4	**TOTAL O&M EXPENSES**		**$ 63,716**	**$ 67,881**	**$ 70,046**	**$ 70,119**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Electric Projected Corporate Services O&M Expense
($000)

Case No.: U-21389
Exhibit No.: A-83 (MJF-2)
Page: 1 of 1
Witness: MJFoster
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
Line No.	Description	2022 Labor Actual	2022 Non-Labor Actual	Total 2022 Actual	2023 Labor Inflation Projected	2023 N-Lbr Inflation Projected	12 Mos Ending 12/31/2023 Projected	2024 Labor Inflation Projected	2024 N-Lbr Inflation Projected	12 Mos Ending 12/31/2024 Projected	2 Mos Ending 2/28/25 Lbr Inflation Projected	2 Mos Ending 2/28/25 N-Lbr Inflation Projected	Other Adjustment	12 Mos Ending 2/28/2025 Projected
1					(b) * Inflation	(c) * Inflation	(d) + (e) + (f)	[(b) + (e)] * Inflation	[(c) + (f)] * Inflation	(d) + (e) + (f)				(j) + (k) + (l) + (m)
2	Governmental Regulatory and Public Affairs	$ 5,949	$ 898	$ 6,847	$ 232	$ 35	$ 7,114	$ 136	$ 21	$ 7,271	$ 22	$ 3	$ -	$ 7,296
3	General Counsel, Legal & Risk Management	5,756	6,828	12,583	224	266	13,074	132	156	13,362	21	25	7,085	20,493
4	People and Culture	14,157	5,595	19,752	552	218	20,523	324	128	20,974	53	21	-	21,047
5	Transformation and Operations Support	2,427	383	2,810	95	15	2,920	55	9	2,984	9	1	-	2,995
6	Chief Financial Officer	13,798	5,055	18,853	538	197	19,588	315	116	20,019	51	19	-	20,089
7	Strategy	1,464	1,235	2,699	57	48	2,804	33	28	2,866	5	5	-	2,876
8	General Activities	266	(5,147)	(4,881)	10	(201)	(5,071)	6	(118)	(5,183)	1	(19)	-	(5,201)
9	Total	$ 43,817	$ 14,847	$ 58,664	$ 1,709	$ 579	$ 60,952	$ 1,002	$ 339	$ 62,293	$ 163	$ 55	$ 7,085	$ 69,596
10	Less: EICP (not inflated)	11,844	-	11,844	-	-	11,844	-	-	11,844	-	-	-	11,844
11	Less: Transfers Out	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Total Corporate Service Departments	$ 31,973	$ 14,847	$ 46,820	$ 1,709	$ 579	$ 49,108	$ 1,002	$ 339	$ 50,449	$ 163	$ 55	$ 7,085	$ 57,752
13	Administration & Other-Electric Portion	-	1,938	1,938	-	76	2,014	-	44	2,058	-	7	-	2,065
14	**Total Corporate Services**	$ 31,973	$ 16,785	$ 48,758	$ 1,709	$ 655	$ 51,122	$ 1,002	$ 384	$ 52,507	$ 163	$ 62	$ 7,085	$ 59,817
	Normalizations													
15	Voluntary Separation Program	(6,044)	-	(6,044)	(236)	-	(6,280)	(138)	-	(6,418)	(22)	-	-	(6,440)
16	One-time Legal Consultant Expense	-	(3,651)	(3,651)	-	(142)	(3,793)	-	(83)	(3,877)	-	(14)	-	(3,890)
17	**Total Normalizations**	$ (6,044)	$ (3,651)	$ (9,695)	$ (236)	$ (142)	$ (10,073)	$ (138)	$ (83)	$ (10,295)	$ (22)	$ (14)	$ -	$ (10,331)
	Less Giving and Communications													
18	Corporate Giving & Communications Salaries per WP-JCA-19	(198)	-	(198)	(8)	-	(206)	(5)	-	(210)	(1)	-	-	(211)
19	Dues, Donations & Lobbying Expenses per WP-JCA-21	-	(618)	(618)	-	(24)	(642)	-	(14)	(656)	-	(2)	-	(659)
20	**Total Giving and Communications**	$ (198)	$ (618)	$ (816)	$ (8)	$ (24)	$ (848)	$ (5)	$ (14)	$ (866)	$ (1)	$ (2)	$ -	$ (869)
21	**TOTAL ADJUSTED CORPORATE SERVICES EXPENSE**	$ 25,731	$ 12,517	**$ 38,247**	$ 1,465	$ 488	**$ 40,201**	$ 859	$ 286	**$ 41,346**	$ 140	$ 47	**$ 7,085**	**$ 48,617**

		2023	2024	2025
	Annual merit increase			
22	Annual merit increase	3.9%	2.2%	2.1%
	Number of months in the period	12	12	2
	Pro-rated merit increase	3.9%	2.2%	0.4%

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
S&P Global Market Intelligence Ranking of Consumers Energy Electric A&G Costs for 2021
Ranked by A&G per Customer (less Pension and Benefits)
(Companies over 500K Customers)

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Rank No.	**Company Name**	**Total Customers (actual)**	**Total Admin & Gen: O&M Expense ($000)**	**Total Admin & Gen: Pension & Benefits ($000)**	**Total Admin & Gen: Excluding Pension & Benefits (d) - (e) ($000)**	**Total Admin & Gen: Excluding Pension & Benefits $/Customer (f)/(c) x $1,000**	**$/Customer Ranking**
1	PacifiCorp	2,002,863	173,646	124,791	48,855	$24.39	1
2	MidAmerican Energy Company	804,312	42,906	13,175	29,731	$36.96	2
3	**Consumers Energy Company**	**1,871,096**	**63,193**	**-22,908**	**86,101**	**$46.02**	**3**
4	Ohio Edison Company	1,062,269	-11,546	-60,882	49,336	$46.44	4
5	Ohio Power Company	1,511,448	81,850	3,559	78,291	$51.80	5
6	Cleveland Electric Illuminating Company	755,212	-256	-43,435	43,179	$57.17	6
7	Florida Power & Light Company	5,214,219	361,970	43,213	318,757	$61.13	7
8	Public Service Electric and Gas Company	2,323,293	42,600	-100,917	143,517	$61.77	8
9	Metropolitan Edison Company	581,453	-18,374	-55,145	36,771	$63.24	9
10	Pennsylvania Electric Company	588,261	-42,295	-81,119	38,824	$66.00	10
11	West Penn Power Company	733,761	5,937	-42,998	48,935	$66.69	11
12	Duke Energy Ohio, Inc.	735,921	58,902	9,415	49,487	$67.24	12
13	Nevada Power Company	984,770	87,099	16,611	70,488	$71.58	13
14	Jersey Central Power & Light Company	1,150,247	-59,142	-143,682	84,540	$73.50	14
15	Commonwealth Edison Company	4,095,262	414,223	111,942	302,281	$73.81	15
16	Public Service Company of Colorado	1,535,755	161,790	46,272	115,518	$75.22	16
17	Wisconsin Electric Power Company	1,144,822	109,624	19,671	89,953	$78.57	17
18	Central Maine Power Company	628,246	60,486	7,323	53,163	$84.62	18
19	Public Service Company of Oklahoma	568,226	53,075	4,486	48,589	$85.51	19
20	Virginia Electric and Power Company	2,698,553	315,512	84,094	231,418	$85.76	20
21	PECO Energy Co.	1,682,172	173,123	26,550	146,573	$87.13	21
22	Puget Sound Energy, Inc.	1,196,851	150,921	35,236	115,685	$96.66	22
23	Oklahoma Gas and Electric Company	874,591	122,311	33,619	88,692	$101.41	23
24	Evergy Metro, Inc.	570,014	134,302	75,245	59,057	$103.61	24
25	Consolidated Edison Company of New York, Inc.	3,530,574	556,760	190,843	365,917	$103.64	25
26	Appalachian Power Company	964,443	105,166	5,145	100,021	$103.71	26
27	PPL Electric Utilities Corporation	1,466,284	165,133	9,135	155,998	$106.39	27
28	Arizona Public Service Company	1,317,266	124,483	-16,279	140,762	$106.86	28
29	Tampa Electric Company	802,049	135,015	49,077	85,938	$107.15	29
30	Dayton Power and Light Company	532,418	67,333	9,714	57,619	$108.22	30
31	Ameren Illinois Company	1,228,566	139,515	6,031	133,484	$108.65	31
32	DTE Electric Company	2,249,459	390,790	142,722	248,068	$110.28	32
33	Baltimore Gas and Electric Company	1,320,805	197,122	45,367	151,755	$114.90	33
34	Southwestern Electric Power Company	546,238	76,841	11,624	65,217	$119.39	34
35	Northern States Power Company - MN	1,522,745	263,008	80,397	182,611	$119.92	35
36	NSTAR Electric Company	1,475,929	177,106	-1,969	179,075	$121.33	36
37	Duke Energy Carolinas, LLC	2,764,923	426,290	79,752	346,538	$125.33	37
38	New York State Electric & Gas Corporation	913,633	132,294	12,759	119,535	$130.83	38
39	Kentucky Utilities Company	565,153	103,770	25,435	78,335	$138.61	39
40	Atlantic City Electric Company	564,929	91,434	9,767	81,667	$144.56	40
41	Duke Energy Indiana, LLC	860,972	157,563	33,009	124,554	$144.67	41
42	Public Service Company of New Hampshire	529,986	81,563	4,282	77,281	$145.82	42
43	Union Electric Company	1,244,264	192,583	7,861	184,722	$148.46	43
44	Indiana Michigan Power Company	604,531	112,140	18,529	93,611	$154.85	44
45	Connecticut Light and Power Company	1,272,008	218,117	18,184	199,933	$157.18	45
46	Potomac Electric Power Company	914,279	158,351	14,464	143,887	$157.38	46
47	Niagara Mohawk Power Corporation	1,706,025	327,873	50,445	277,428	$162.62	47
48	Delmarva Power & Light Company	539,709	96,157	6,511	89,646	$166.10	48
49	Duke Energy Progress, LLC	1,644,311	359,421	78,734	280,687	$170.70	49
50	Idaho Power Company	596,394	162,042	56,595	105,447	$176.81	50
51	Entergy Louisiana, LLC	1,106,510	330,272	133,223	197,049	$178.08	51
52	Georgia Power Company	2,657,949	468,321	-7,159	475,480	$178.89	52
53	Entergy Arkansas, LLC	727,743	211,904	81,099	130,805	$179.74	53
54	Alabama Power Company	1,510,098	294,909	14,314	280,595	$185.81	54
55	Duquesne Light Company	607,350	128,748	13,810	114,938	$189.25	55
56	Dominion Energy South Carolina, Inc.	771,620	188,917	38,984	149,933	$194.31	56
57	Massachusetts Electric Company	1,344,807	315,907	52,766	263,141	$195.67	57
58	Portland General Electric Company	912,209	242,115	62,572	179,543	$196.82	58
59	Duke Energy Florida, LLC	1,899,991	409,717	13,583	396,134	$208.49	59
60	Indianapolis Power & Light Company	514,140	134,376	14,142	120,234	$233.85	60
61	Narragansett Electric Company	501,117	141,580	22,182	119,398	$238.26	61
62	Public Service Company of New Mexico	540,035	173,891	22,600	151,291	$280.15	62
63	San Diego Gas & Electric Company	1,478,307	656,792	56,506	600,286	$406.06	63
64	Pacific Gas and Electric Company	5,623,301	2,972,623	390,655	2,581,968	$459.16	64
65	Southern California Edison Company	5,192,855	2,730,166	52,119	2,678,047	$515.72	65

S&P Global Market Intelligence, 55 Water Street, New York, NY 10041
Columns c-e from S&P Global for regulated electric companies with more than 500,000 customers.

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Electric Uncollectible Accounts Expense

($000)

Case No.: U-21389
Exhibit No.: A-85 (MJF-4)
Page: 1 of 2
Witness: MJFoster
Date: May 2023

Line No.	(a) Description	(b) 2022 Actual	(c) 2023 Projected	(d) 2024 Projected	(e) 12 Months Ending 2/28/2025 Projected
1	Uncollectible Accounts Expense	$ 18,817	$ 23,796 [1]	$ 24,731 [2]	**$ 17,519** [3]

[1] 2023 projected amount based on forecasted O&M
[2] 2024 projected amount based on forecasted O&M
[3] Exhibit A-85 (MJF-4) Page 2, line 9, column (e)

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Electric Uncollectible Accounts Expense
for 12 Mos. Ending 2/28/2025
($000)

Case No.: U-21389
Exhibit No.: A-85 (MJF-4)
Page: 2 of 2
Witness: MJFoster
Date: May 2023

Line No.	(a) Year	(b) Gross Charge-Offs	(c) Less Recoveries	(d) Net Write-Offs	(e) Total Electric Service Revenue MPSC P-521 P. 304.1 col (c) + P. 305 col (c)	(f) BDLR col (d) / col (e)
1	2018	28,943	12,282	16,661	4,382,878	0.380%
2	2019	27,032	11,100	15,932	4,249,553	0.375%
3	2020	22,393	11,965	10,428	4,147,450	0.251%
4	2021	26,335	10,844	15,491	4,681,931	0.331%
5	2022	27,543	8,726	18,817	4,737,236	0.397%
6	3-Year Average 2018, 19, 22	$ 27,839	$ 10,703	$ 17,137	$ 4,456,556	0.385%
7	Test Year Total Company Electric Revenues and Deliveries Exhibit A-15 (EMB-3), Schedule E-2, Page 1 of 1 Row 19, Column (l) - Row 19, Column (c)				$ 4,555,951	
8	3-Year Average 2018, 19, 22				0.385%	
9	Test Year Total Uncollectible Accounts Expense				**$ 17,518.782**	

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Electric Injuries & Damages Expense
for the Years 2017 Through the 12 Months Ending December 31, 2023
($000)

Case No.: U-21389
Exhibit No.: A-86 (MJF-5)
Page: 1 of 1
Witness: MJFoster
Date: May 2023

	(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
Line No.	**Program Description**		**2018 Actual**	**2019 Actual**	**2020 Actual**	**2021 Actual**	**2022 Actual**	**12 Mos Ending 12/31/2023 Projected**	**12 Mos Ending 12/31/2024 Projected**	**12 Mos Ending 2/28/2025 Projected**
1	Electric Injuries & Damages	[1]	$ 2,958	$ 2,396	$ 2,021	$ 2,694	$ 5,567	$ 3,127	$ 3,196	$ 3,207
2	Internal Legal Costs	[2]	559	379	452	412	424	445	$ 455	$ 457
3	Workers' Compensation	[3]	458	176	(139)	401	661	311	$ 318	$ 319
4	Total Electric Injuries & Damages		**$ 3,975**	**$ 2,951**	**$ 2,334**	**$ 3,507**	**$ 6,652**	**$ 3,884**	**$ 3,969**	**$ 3,983**

	2023	**2024**	**2025**
Annual merit increase			
Annual merit increase	3.9%	2.2%	2.1%
Number of months in the period	12	12	2
Pro-rated merit increase	3.9%	2.2%	0.4%
Annual inflation rates per WP-JCA-51			
Annual inflation rates	3.9%	2.2%	2.1%
Number of months in the period	12	12	2
Pro-rated inflation rate	3.9%	2.2%	0.4%

[1] Electric Injuries & Damages costs are 2018 - 2022 (actual expense). Projected 2023 expense based on five-year average of actual expenses for years 2018 - 2022. Projected 2024 and test year based on a five-year average plus inflation.
[2] Legal costs are 2018 - 2022 (actual expense). Projected 2023 expense based on five-year average of actual expenses for years 2018 - 2022. Projected 2024 and test year based on a five-year average plus inflation.
[3] Electric Workers' Compensation costs are 2018 - 2022 (actual expense). Projected 2023 expense based on five-year average of actual expenses for years 2018 - 2022. Projected 2024 and test year based on a five-year average plus inflation.

Schedule: B-5.4

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual and Projected Capital Expenditures
Electric Corporate Services Capital Expenditures
($000)

Case No.: U-21389
Exhibit No.: A-12 (MJF-6)
Schedule: B-5.4
Page: 1 of 1
Witness: MJFoster
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
		Historical Year	Projected Bridge Period			Projected Test Year
Line No	Description	12 Mos Ended 12/31/2022	12 Mos Ended 12/31/2023	2 Mos Ending 2/29/2024	14 Mos Ending 2/29/2024	12 Mos Ending 2/28/2025
1	Corporate Capital	537	558	95	653	572
2	Contractor	139	144	25	169	148
3	Labor	37	38	7	45	39
4	Materials	352	366	62	428	375
5	Business Expenses	-	-	-	-	-
6	Contingency	-	-	-	-	-
7	Other (Loadings, Chargebacks)	9	9	2	11	10
8	**Total Corporate Capital**	537	558	95	653	572

		Projected			
		2 Mos Ending 2/28/2023	12 Mos Ending 2/29/2024	12 Mos Ending 2/28/2025	26 Mos Ending 2/28/2025
9	Corporate Capital	93	560	572	1,225
10	Contractor	24	145	148	317
11	Labor	6	39	39	84
12	Materials	61	367	375	803
13	Business Expenses	-	-	-	-
14	Contingency	-	-	-	-
15	Other (Loadings, Chargebacks)	2	9	10	21
16	**Total Corporate Capital**	93	560	572	1,225

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	))))))	Case No. U-21389

EXHIBITS

OF

ALEX M. GAST

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

Schedule F-2.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Present and Proposed Pro Forma Revenues by Rate Schedule
Total Revenues

Case No.: U-21389
Exhibit No.: A-16 (AMG-1)
Schedule: F-2.0
Page: 1 of 3
Witness: AMGast
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
Line				Revenue		Net Increase / (Decrease)	
No.	Description	Customers	Sales	Present	Proposed	Revenue	Percent
		Mthly	MWh	$000	$000	$000	%
	FULL SERVICE						
	Residential Class						
1	Summer On-peak RSP	1,618,090	12,185,915	$ 2,220,094	$ 2,292,963	$ 72,869	3.3
2	Smart Hours RSH	16,512	125,514	22,787	23,568	781	3.4
3	Night Time Savers RPM	13,773	105,411	18,638	19,458	819	4.4
4	Non-Transmitting Meters RSM	14,474	142,301	26,030	26,936	906	3.5
5	Total Residential Class	1,662,850	12,559,141	$ 2,287,550	$ 2,362,925	$ 75,375	3.3
	Secondary Class						
6	Energy-only GS	196,122	3,996,698	$ 633,550	$ 687,940	$ 54,390	8.6
7	Time-of-Use GSTU	918	27,489	4,193	4,601	408	9.7
8	Demand GSD	20,782	2,949,510	395,241	432,209	36,968	9.4
9	Total Secondary	217,821	6,973,697	$ 1,032,984	$ 1,124,750	$ 91,766	8.9
	Primary Class						
10	Energy-only GP	1,479	805,656	$ 95,337	$ 95,677	$ 340	0.4
	Voltage Level 1	6	15,684	1,568	1,523	(45)	(2.9)
	Voltage Level 2	38	31,696	3,414	3,354	(60)	(1.8)
	Voltage Level 3	1,435	758,276	90,355	90,800	445	0.5
11	Demand GPD	796	4,580,914	428,713	435,150	6,437	1.5
12	Time-of-Use GPTU	1,365	4,681,858	488,788	501,703	12,916	2.6
13	Energy Intensive EIP	17	447,618	32,177	35,547	3,370	10.5
14	Total Primary	3,656	10,516,047	$ 1,045,014	$ 1,068,077	$ 23,062	2.2
	Lighting & Unmetered Class						
15	Metered Lighting GML	404	12,195	$ 1,545	$ 1,900	$ 355	23.0
16	Universal Unmetered Lighting UUL	4,686	71,839	28,616	36,492	7,876	27.5
17	Unmetered GU	461	93,426	9,896	10,484	588	5.9
18	Total Lighting & Unmetered	5,551	177,460	$ 40,056	$ 48,876	$ 8,819	22.0
	Self-generation Class						
19	Small Self-generation GSG-1	-	-	$ -	$ -	$ -	NA
20	Large Self-generation GSG-2	15	101,694	12,214	12,585	371	3.0
21	Total Self-generation	15	101,694	$ 12,214	$ 12,585	$ 371	3.0
22	Total Full Service	1,889,894	30,328,039	$ 4,417,818	$ 4,617,212	$ 199,394	4.5
	ROA SERVICE						
	Secondary Class						
23	Energy-only GS	96	23,026	$ 1,041	$ 1,383	$ 342	32.9
24	Demand GSD	462	172,462	6,526	8,305	1,780	27.3
25	Total Secondary	558	195,488	$ 7,567	$ 9,688	$ 2,122	28.0
	Primary Class						
26	Energy-only GP	59	75,604	$ 1,347	$ 1,645	$ 298	22.1
27	Demand GPD	338	3,442,823	23,011	27,674	4,663	20.3
28	Total Primary	396	3,518,427	$ 24,358	$ 29,319	$ 4,961	20.4
29	Total ROA Service	954	3,713,915	$ 31,925	$ 39,008	$ 7,083	22.2
30	Total Jurisdictional Service	1,890,848	34,041,954	$ 4,449,743	$ 4,656,220	$ 206,477	4.6
31	Plus: Rounding			-	608	608	
32	Total Jurisdictional Revenues			$ 4,449,743	$ 4,656,828	$ 207,085	4.7
33	Less: PSCR Factor Revenues			190,772	190,772	-	
34	Less: DR Surcharge			-	59,182	59,182	
35	Less: IRM Surcharge			-	6,263	6,263	
36	Total Jurisdictional Base Revenues			$ 4,258,971	$ 4,400,610	$ 141,640	3.3
37	Total Jurisdictional Revenues			4,449,743	4,656,828	207,085	4.7
38	Plus: ERC Deferral Surcharge			-	8,558	8,558	
39	Total Jurisdictional Revenues Requested			$ 4,449,743	$ 4,665,386	$ 215,643	4.8

Schedule F-2.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Present and Proposed Pro Forma Revenues by Rate Schedule
Production & Transmission Revenues

Case No.: U-21389
Exhibit No.: A-16 (AMG-1)
Schedule: F-2.0
Page: 2 of 3
Witness: AMGast
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
Line			Revenue		Net Increase / (Decrease)	
No.	Description	Sales	Present	Proposed	Revenue	Percent
		MWh	$000	$000	$000	%
	FULL SERVICE					
	Residential Class					
1	Summer On-peak RSP	12,185,915	$ 1,309,577	$ 1,228,684	$ (80,893)	(6.2)
2	Smart Hours RSH	125,514	13,356	12,553	(803)	(6.0)
3	Night Time Savers RPM	105,411	10,706	10,195	(511)	(4.8)
4	Non-Transmitting Meters RSM	142,301	15,556	14,666	(890)	(5.7)
5	Total Residential Class	12,559,141	$ 1,349,195	$ 1,266,099	$ (83,096)	(6.2)
	Secondary Class					
6	Energy-only GS	3,996,698	$ 407,937	$ 402,473	$ (5,464)	(1.3)
7	Time-of-Use GSTU	27,489	2,744	2,741	(4)	(0.1)
8	Demand GSD	2,949,510	277,469	283,827	6,357	2.3
9	Total Secondary	6,973,697	$ 688,151	$ 689,040	$ 889	0.1
	Primary Class					
10	Energy-only GP	805,656	$ 79,920	$ 77,084	$ (2,836)	(3.5)
	Voltage Level 1	15,684	1,527	1,472	(55)	(3.6)
	Voltage Level 2	31,696	3,131	3,017	(114)	(3.6)
	Voltage Level 3	758,276	75,261	72,594	(2,667)	(3.5)
11	Demand GPD	4,580,914	388,824	387,498	(1,326)	(0.3)
12	Time-of-Use GPTU	4,681,858	421,973	422,492	519	0.1
13	Energy Intensive EIP	447,618	29,871	32,689	2,819	9.4
14	Total Primary	10,516,047	$ 920,587	$ 919,763	$ (824)	(0.1)
	Lighting & Unmetered Class					
15	Metered Lighting GML	12,195	$ 720	$ 827	$ 107	14.9
16	Universal Unmetered Lighting UUL	71,839	4,111	4,728	617	15.0
17	Unmetered GU	93,426	7,772	7,919	147	1.9
18	Total Lighting & Unmetered	177,460	$ 12,603	$ 13,474	$ 871	6.9
	Self-generation Class					
19	Small Self-generation GSG-1	-	$ -	$ -	$ -	NA
20	Large Self-generation GSG-2	101,694	10,526	10,526	-	-
21	Total Self-generation	101,694	$ 10,526	$ 10,526	$ -	-
22	Total Full Service	30,328,039	$ 2,981,062	$ 2,898,903	$ (82,160)	(2.8)
	ROA SERVICE					
	Secondary Class					
23	Energy-only GS	-	$ -	$ -	$ -	NA
24	Demand GSD	-	-	-	-	NA
25	Total Secondary	-	$ -	$ -	$ -	NA
	Primary Class					
26	Energy-only GP	-	$ -	$ -	$ -	NA
27	Demand GPD	-	-	-	-	NA
28	Total Primary	-	$ -	$ -	$ -	NA
29	Total ROA Service	-	$ -	$ -	$ -	NA
30	Total Jurisdictional Service	30,328,039	$ 2,981,062	$ 2,898,903	$ (82,160)	(2.8)
31	Plus: Rounding		-	3	3	
32	Total Jurisdictional Base Revenues		$ 2,981,062	$ 2,898,906	$ (82,157)	(2.8)
33	Less: PSCR Factor Revenues		190,772	190,772	-	
34	Less: DR Surcharge		-	59,182	59,182	
35	Less: IRM Surcharge		-	-	-	
36	Total Jurisdictional Base Revenues		$ 2,790,291	$ 2,648,952	$ (141,339)	(5.1)
37	Total Jurisdictional Revenues		2,981,062	2,898,906	(82,157)	(2.8)
38	Plus: ERC Deferral Surcharge		-	-	-	
39	Total Jurisdictional Revenues Requested		$ 2,981,062	$ 2,898,906	$ (82,157)	(2.8)

Schedule F-2.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Present and Proposed Pro Forma Revenues by Rate Schedule
Delivery Revenues

Case No.: U-21389
Exhibit No.: A-16 (AMG-1)
Schedule: F-2.0
Page: 3 of 3
Witness: AMGast
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
Line			Revenue		Net Increase / (Decrease)	
No.	Description	Sales	Present	Proposed	Revenue	Percent
		MWh	$000	$000	$000	%
	FULL SERVICE					
	Residential Class					
1	Summer On-peak RSP	12,185,915	$ 910,517	$ 1,064,279	$ 153,762	16.9
2	Smart Hours RSH	125,514	9,431	11,015	1,584	16.8
3	Night Time Savers RPM	105,411	7,932	9,263	1,330	16.8
4	Non-Transmitting Meters RSM	142,301	10,474	12,270	1,796	17.1
5	Total Residential Class	12,559,141	$ 938,355	$ 1,096,826	$ 158,471	16.9
	Secondary Class					
6	Energy-only GS	3,996,698	$ 225,612	$ 285,467	$ 59,854	26.5
7	Time-of-Use GSTU	27,489	1,449	1,861	412	28.4
8	Demand GSD	2,949,510	117,772	148,382	30,611	26.0
9	Total Secondary	6,973,697	$ 344,833	$ 435,709	$ 90,877	26.4
	Primary Class					
10	Energy-only GP	805,656	$ 15,417	$ 18,593	$ 3,176	20.6
	Voltage Level 1	15,684	41	51	10	23.9
	Voltage Level 2	31,696	283	337	54	19.1
	Voltage Level 3	758,276	15,094	18,206	3,112	20.6
11	Demand GPD	4,580,914	39,889	47,652	7,763	19.5
12	Time-of-Use GPTU	4,681,858	66,815	79,211	12,396	18.6
13	Energy Intensive EIP	447,618	2,306	2,857	551	23.9
14	Total Primary	10,516,047	$ 124,427	$ 148,313	$ 23,886	19.2
	Lighting & Unmetered Class					
15	Metered Lighting GML	12,195	$ 825	$ 1,073	$ 248	30.1
16	Universal Unmetered Lighting UUL	71,839	24,505	31,764	7,259	29.6
17	Unmetered GU	93,426	2,124	2,565	441	20.8
18	Total Lighting & Unmetered	177,460	$ 27,454	$ 35,402	$ 7,948	29.0
	Self-generation Class					
19	Small Self-generation GSG-1	-	$ -	$ -	$ -	NA
20	Large Self-generation GSG-2	101,694	1,687	2,058	371	22.0
21	Total Self-generation	101,694	$ 1,687	$ 2,058	$ 371	22.0
22	Total Full Service	30,328,039	$ 1,436,756	$ 1,718,309	$ 281,554	19.6
	ROA SERVICE					
	Secondary Class					
23	Energy-only GS	23,026	$ 1,041	$ 1,383	$ 342	32.9
24	Demand GSD	172,462	6,526	8,305	1,780	27.3
25	Total Secondary	195,488	$ 7,567	$ 9,688	$ 2,122	28.0
	Primary Class					
26	Energy-only GP	75,604	$ 1,347	$ 1,645	$ 298	22.1
27	Demand GPD	3,442,823	23,011	27,674	4,663	20.3
28	Total Primary	3,518,427	$ 24,358	$ 29,319	$ 4,961	20.4
29	Total ROA Service	3,713,915	$ 31,925	$ 39,008	$ 7,083	22.2
30	Total Jurisdictional Service	34,041,954	$ 1,468,680	$ 1,757,317	$ 288,637	19.7
31	Plus: Rounding		-	605	605	
32	Total Jurisdictional Base Revenues		$ 1,468,680	$ 1,757,922	$ 289,242	19.7
33	Less: PSCR Factor Revenues		-	-	-	
34	Less: DR Surcharge		-	-	-	
35	Less: IRM Surcharge		-	6,263	6,263	
36	Total Jurisdictional Base Revenues		$ 1,468,680	$ 1,751,659	$ 282,978	19.3
37	Total Jurisdictional Revenues		1,468,680	1,757,922	289,242	19.7
38	Plus: ERC Deferral Surcharge		-	8,558	8,558	
39	Total Jurisdictional Revenues Requested		$ 1,468,680	$ 1,766,481	$ 297,800	20.3

Schedule F-2.1

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Calculation of Rate Design Targets
($000)

Case No.: U-21389
Exhibit No.: A-16 (AMG-2)
Schedule: F-2.1
Page: 1 of 1
Witness: AMGast
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
				Secondary Class		Primary Class				Lighting & Unmetered Class			Self Gen. Class		
Line No.	Description	Jurisdictional	Residential	GS	GSD	GP	GPD	GPTU	EIP	GML	UUL	GU	GSG-1	GSG-2	Source
	Production														
1	Capacity (SRM)	$ 201,135	$ 97,930	$ 29,710	$ 18,755	$ 5,112	$ 21,318	$ 25,776	$ 1,896	$ 1	$ -	$ 371	$ -	$ 266	
	Capacity Adjustments (1)														
2	DR Revenue Requirement	(46,789)	(22,074)	(6,781)	(4,442)	(1,199)	(5,380)	(6,278)	(498)	(5)	(28)	(102)	-	-	WP-AMG-7
3	Self Generation	-	29	9	6	2	6	8	1	0	-	0	-	(60)	Alloc. Line 1
4	Total Adjustments	(46,789)	(22,045)	(6,772)	(4,437)	(1,198)	(5,374)	(6,271)	(497)	(5)	(28)	(102)	-	(60)	
5	Capacity (SRM) Design Target	$ 154,347	$ 75,885	$ 22,938	$ 14,319	$ 3,914	$ 15,944	$ 19,505	$ 1,399	$ (4)	$ (28)	$ 270	$ -	$ 206	
6	Energy (2)	$ 1,968,000	$ 844,704	$ 274,142	$ 196,200	$ 52,782	$ 274,007	$ 293,027	$ 27,753	$ 635	$ 3,646	$ 5,748	$ -	$ (4,645)	
	Energy Adjustments (1)														
7	Self Generation	-	(1,989)	(645)	(462)	(124)	(645)	(690)	(65)	(1)	(9)	(14)	-	4,645	Alloc. Line 6
8	Total Adjustments	-	(1,989)	(645)	(462)	(124)	(645)	(690)	(65)	(1)	(9)	(14)	-	4,645	
9	Energy Design Target	$ 1,968,000	$ 842,715	$ 273,497	$ 195,738	$ 52,658	$ 273,362	$ 292,337	$ 27,687	$ 634	$ 3,638	$ 5,735	$ -	$ -	
10	Total Production	$ 2,122,346	$ 918,600	$ 296,435	$ 210,057	$ 56,572	$ 289,306	$ 311,842	$ 29,086	$ 629	$ 3,609	$ 6,004	$ -	$ 206	
11	**Transmission**														
12	Transmission	538,999	248,150	76,014	50,938	14,154	65,598	74,596	6,373	118	653	1,226	-	1,179	
13	Self Generation	-	544	167	112	31	144	164	14	0	1	3	-	(1,179)	Alloc. Line 12
14	Transmission Design Target	$ 538,999	$ 248,695	$ 76,180	$ 51,049	$ 14,185	$ 65,742	$ 74,759	$ 6,387	$ 118	$ 655	$ 1,228	$ -	$ -	
	Delivery														
15	Distribution (3)	$ 1,512,076	$ 925,194	$ 246,097	$ 144,126	$ 16,945	$ 70,984	$ 68,297	$ 1,450	$ 1,003	$ 29,905	$ 2,481	$ -	$ 5,593	
16	Customer	239,577	179,947	37,291	9,297	2,659	4,297	4,269	124	54	1,433	71	-	134	
17	Subtotal Delivery	1,751,653	1,105,141	283,387	153,423	19,604	75,281	72,566	1,574	1,058	31,338	2,553	-	5,727	
	Credit Adjustments (4)														
18	Substation Credits	$ -	$ 953	$ 254	$ 148	$ 3	$ (570)	$ (243)	$ (136)	$ 1	$ 31	$ 3	$ -	$ (445)	WP-AMG-12
19	Life Line Credits	(0)	(13,221)	4,059	2,566	560	2,667	2,849	230	11	279	-	-	-	WP-AMG-9
20	Total Adjustments	(0)	(12,268)	4,313	2,714	564	2,098	2,606	94	12	310	3	-	(445)	
21	Total Delivery Design Target	$ 1,751,653	$ 1,092,873	$ 287,700	$ 156,138	$ 20,168	$ 77,379	$ 75,172	$ 1,668	$ 1,070	$ 31,648	$ 2,556	$ -	$ 5,282	
22	Total Rate Design Target	$ 4,412,998	$ 2,260,168	$ 660,315	$ 417,243	$ 90,925	$ 432,427	$ 461,774	$ 37,141	$ 1,817	$ 35,912	$ 9,788	$ -	$ 5,488	
23	DR Surcharge	$ 59,132	$ 27,919	$ 8,576	$ 5,574	$ 1,517	$ 6,803	$ 7,943	$ 630	$ 6	$ 36	$ 129	$ -	$ -	WP-AMG-19
24	IRM Surcharge	$ 6,269	$ 3,956	$ 1,012	$ 549	$ 68	$ 305	$ 244	$ 7	$ 4	$ 112	$ 9	$ -	$ 3	Exhibit A-90 (AMG-8), page 1
25	Total Revenue Requirement	$ 4,478,399	$ 2,292,043	$ 669,902	$ 423,367	$ 92,510	$ 439,535	$ 469,961	$ 37,778	$ 1,827	$ 36,060	$ 9,926	$ -	$ 5,491	

Notes
(1) Capacity and energy production costs adjusted to capture elements occurring outside the Cost-of-Service Study.
(2) Includes Non-SRM capacity related costs.
(3) Excludes IRM costs recovered through the IRM surcharge.
(4) Credit adjustments approved in Case No. U-20963 and included in approved settlement for Case No. U-21224.

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Residential Summer On-peak (RSP)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
Page: 1 of 23
Witness: AMGast
Date: May 2023

	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
	Non-capacity								
1	On-peak kWh	827,023	MWh	@	0.078133	$ 64,618	0.098747	$ 81,666	$ 17,048
2	Off-peak kWh	3,519,128	MWh	@	0.049341	173,637	0.063696	224,154	50,517
	Capacity								
3	On-peak kWh	827,023	MWh	@	0.048453	40,072	0.010101	8,354	(31,718)
4	Off-peak kWh	3,519,128	MWh	@	0.032567	114,607	0.006790	23,895	(90,713)
	Winter (Oct. - May)								
5	Non-capacity All kWh	7,839,274	MWh	@	0.053169	416,806	0.065273	511,693	94,887
6	Capacity All kWh	7,839,274	MWh	@	0.025374	198,914	0.005290	41,470	(157,444)
	Provisions								
	Device Cycling								
7	AC Cycling	342,162	Bills	@	(8.00)	(2,737)	(8.00)	(2,737)	-
8	Back-Up Generator Pilot	-	Bills	@	(22.40)	-	(12.99)	-	-
9	Electric Water Tank Pilot	24,000	Bills	@	(3.20)	(77)	(1.88)	(45)	32
10	Peak Time Rewards	1,184	MWh	@	(1.00)	(1,184)	(1.00)	(1,184)	-
	Critical Peak Pricing								
11	Critical-peak Charge	490	MWh	@	1.00	490	1.00	490	-
12	Off-peak Credits	24,954	MWh	@	(0.014702)	(367)	(0.019625)	(490)	(123)
13	Annual PSCR Factor	12,185,915	MWh	@	0.005970	72,750	0.005970	72,750	-
14	Total Production					$ 1,077,529		$ 960,015	$ (117,514)
	Transmission								
	Summer (June - Sept.)								
15	On-peak kWh	827,023	MWh	@	0.031798	$ 26,298	0.033104	$ 27,378	$ 1,080
16	Off-peak kWh	3,519,128	MWh	@	0.021372	75,211	0.022250	78,301	3,090
	Winter (Oct. - May)								
17	All kWh	7,839,274	MWh	@	0.016652	130,540	0.017336	135,902	5,362
18	Total Transmission					$ 232,048		$ 241,580	$ 9,532
	Delivery								
19	System Access	19,417,083	Bills	@	8.00	$ 155,337	8.00	$ 155,337	$ -
20	Distribution	12,185,915	MWh	@	0.064152	781,751	0.076455	931,674	149,923
	Provisions								
21	Senior Citizen (RSC)	3,883,861	Bills	@	(4.00)	(15,535)	(4.00)	(15,535)	-
22	Low Income Credit (LIAC)	50,400	Bills	@	(30.00)	(1,512)	(30.00)	(1,512)	-
23	Income Assistance (RIA)	1,190,399	Bills	@	(8.00)	(9,523)	(8.00)	(9,523)	-
24	Total Delivery					$ 910,517		$ 1,060,440	$ 149,923
25	Total Full Service					$ 2,220,094		$ 2,262,035	$ 41,941
	ROA SERVICE								
	Delivery								
26	System Access	-	Bills	@	8.00	$ -	8.00	$ -	$ -
27	Distribution	-	MWh	@	0.064152	-	0.076455	-	-
	Provisions								
28	Senior Citizen (RSC)	-	Bills	@	(4.00)	-	(4.00)	-	-
29	Low Income Credit (LIAC)	-	Bills	@	(30.00)	-	(30.00)	-	-
30	Income Assistance (RIA)	-	Bills	@	(8.00)	-	(8.00)	-	-
31	Total Delivery					$ -		$ -	$ -
32	Total Full & ROA Service					$ 2,220,094		$ 2,262,035	$ 41,941

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Residential Smart Hours (RSH)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
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Witness: AMGast
Date: May 2023

	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
	Non-capacity								
1	On-peak kWh	7,567	MWh	@	0.078133	$ 591	0.098747	$ 747	$ 156
2	Off-peak kWh	34,872	MWh	@	0.049341	1,721	0.063696	2,221	501
	Capacity								
3	On-peak kWh	7,567	MWh	@	0.048453	367	0.010101	76	(290)
4	Off-peak kWh	34,872	MWh	@	0.032567	1,136	0.006790	237	(899)
	Winter (Oct. - May)								
	Non-capacity								
5	On-peak kWh	12,107	MWh	@	0.059616	722	0.072052	872	151
6	Off-peak kWh	70,959	MWh	@	0.051905	3,683	0.063934	4,537	854
	Capacity								
7	On-peak kWh	12,107	MWh	@	0.027940	338	0.005825	71	(268)
8	Off-peak kWh	70,959	MWh	@	0.024562	1,743	0.005121	363	(1,380)
	Provisions								
	Device Cycling								
9	AC Cycling	2,895	Bills	@	(8.00)	(23)	(8.00)	(23)	-
10	Back-Up Generator Pilot	-	Bills	@	(22.40)	-	(12.99)	-	-
11	Electric Water Tank Pilot	-	Bills	@	(3.20)	-	(1.88)	-	-
12	Peak Time Rewards	22	MWh	@	(1.00)	(22)	(1.00)	(22)	-
	Critical Peak Pricing								
13	Critical-peak Charge	9	MWh	@	1.00	9	1.00	9	-
14	Off-peak Credits	591	MWh	@	(0.014702)	(9)	(0.019625)	(12)	(3)
15	Annual PSCR Factor	125,514	MWh	@	0.005970	749	0.005970	749	-
16	Total Production					$ 11,004		$ 9,826	$ (1,179)
	Transmission								
	Summer (June - Sept.)								
17	On-peak kWh	7,567	MWh	@	0.031798	$ 241	0.033104	$ 250	$ 10
18	Off-peak kWh	34,872	MWh	@	0.021372	745	0.022250	776	31
	Winter (Oct. - May)								
19	On-peak kWh	12,107	MWh	@	0.018336	222	0.019089	231	9
20	Off-peak kWh	70,959	MWh	@	0.016119	1,144	0.016781	1,191	47
21	Total Transmission					$ 2,352		$ 2,448	$ 97
	Delivery								
22	System Access	198,142	Bills	@	8.00	$ 1,585	8.00	$ 1,585	$ -
23	Distribution	125,514	MWh	@	0.064152	8,052	0.076455	9,596	1,544
	Provisions								
24	Senior Citizen (RSC)	33,104	Bills	@	(4.00)	(132)	(4.00)	(132)	-
25	Low Income Credit (LIAC)	-	Bills	@	(30.00)	-	(30.00)	-	-
26	Income Assistance (RIA)	9,172	Bills	@	(8.00)	(73)	(8.00)	(73)	-
27	Total Delivery					$ 9,431		$ 10,976	$ 1,544
28	Total Full Service					$ 22,787		$ 23,250	$ 462
	ROA SERVICE								
	Delivery								
29	System Access	-	Bills	@	8.00	$ -	8.00	$ -	$ -
30	Distribution	-	MWh	@	0.064152	-	0.076455	-	-
	Provisions								
31	Senior Citizen (RSC)	-	Bills	@	(4.00)	-	(4.00)	-	-
32	Low Income Credit (LIAC)	-	Bills	@	(30.00)	-	(30.00)	-	-
33	Income Assistance (RIA)	-	Bills	@	(8.00)	-	(8.00)	-	-
34	Total Delivery					$ -		$ -	$ -
35	Total Full & ROA Service					$ 22,787		$ 23,250	$ 462

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Residential Nighttime Savers (RPM)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
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Witness: AMGast
Date: May 2023

	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
	Non-capacity								
1	On-peak kWh	7,127	MWh	@	0.078133	$ 557	0.098747	$ 704	$ 147
2	Off-peak kWh	14,724	MWh	@	0.055220	813	0.070946	1,045	232
3	Super Off-peak kWh	23,134	MWh	@	0.044158	1,022	0.057238	1,324	303
	Capacity								
4	On-peak kWh	7,127	MWh	@	0.048453	345	0.010101	72	(273)
5	Off-peak kWh	14,724	MWh	@	0.036740	541	0.007660	113	(428)
6	Super Off-peak kWh	23,134	MWh	@	0.022366	517	0.004663	108	(410)
	Winter (Oct. - May)								
	Non-capacity								
7	On-peak kWh	7,932	MWh	@	0.059616	473	0.072052	571	99
8	Off-peak kWh	19,965	MWh	@	0.058664	1,171	0.072238	1,442	271
9	Super Off-peak kWh	32,528	MWh	@	0.045916	1,494	0.056583	1,841	347
	Capacity								
10	On-peak kWh	7,932	MWh	@	0.027940	222	0.005825	46	(175)
11	Off-peak kWh	19,965	MWh	@	0.027016	539	0.005632	112	(427)
12	Super Off-peak kWh	32,528	MWh	@	0.019376	630	0.004040	131	(499)
	Provisions								
	Device Cycling								
13	AC Cycling	3,568	Bills	@	(8.00)	(29)	(8.00)	(29)	-
14	Back-Up Generator Pilot	-	Bills	@	(22.40)	-	(12.99)	-	-
15	Electric Water Tank Pilot	-	Bills	@	(3.20)	-	(1.88)	-	-
16	Peak Time Rewards	36	MWh	@	(1.00)	(36)	(1.00)	(36)	-
	Critical Peak Pricing								
17	Critical-peak Charge	-	MWh	@	1.00	-	1.00	-	-
18	Off-peak Credits	1,153	MWh	@	(0.014702)	(17)	(0.019625)	(23)	(6)
19	Annual PSCR Factor	105,411	MWh	@	0.005970	629	0.005970	629	-
20	Total Production					$ 8,872		$ 8,051	$ (820)
	Transmission								
	Summer (June - Sept.)								
21	On-peak kWh	7,127	MWh	@	0.031798	$ 227	0.033104	$ 236	$ 9
22	Off-peak kWh	14,724	MWh	@	0.024111	355	0.025101	370	15
23	Super Off-peak kWh	23,134	MWh	@	0.014678	340	0.015281	354	14
	Winter (Oct. - May)								
24	On-peak kWh	7,932	MWh	@	0.018336	145	0.019089	151	6
25	Off-peak kWh	19,965	MWh	@	0.017730	354	0.018458	369	15
26	Super Off-peak kWh	32,528	MWh	@	0.012716	414	0.013238	431	17
27	Total Transmission					$ 1,834		$ 1,910	$ 75
	Delivery								
28	System Access	165,280	Bills	@	8.00	$ 1,322	8.00	$ 1,322	$ -
29	Separately Metered EV Charger	300	Bills	@	(8.00)	$ (2)	(8.00)	$ (2)	$ -
30	Distribution	105,411	MWh	@	0.064152	6,762	0.076455	8,059	1,297
	Provisions								
31	Senior Citizen (RSC)	28,759	Bills	@	(4.00)	(115)	(4.00)	(115)	-
32	Low Income Credit (LIAC)	-	Bills	@	(30.00)	-	(30.00)	-	-
33	Income Assistance (RIA)	4,332	Bills	@	(8.00)	(35)	(8.00)	(35)	-
34	Total Delivery					$ 7,932		$ 9,229	$ 1,297
35	Total Full Service					$ 18,638		$ 19,190	$ 552
	ROA SERVICE								
	Delivery								
36	System Access	-	Bills	@	8.00	$ -	8.00	$ -	$ -
37	Distribution	-	MWh	@	0.064152	-	0.076455	-	-
	Provisions								
38	Senior Citizen (RSC)	-	Bills	@	(4.00)	-	(4.00)	-	-
39	Low Income Credit (LIAC)	-	Bills	@	(30.00)	-	(30.00)	-	-
40	Income Assistance (RIA)	-	Bills	@	(8.00)	-	(8.00)	-	-
41	Total Delivery					$ -		$ -	$ -
42	Total Full & ROA Service					$ 18,638		$ 19,190	$ 552

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Residential Non-Transmitting Meters (RSM)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
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Witness: AMGast
Date: May 2023

	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
	Non-capacity								
1	First 600 kWh	25,621	MWh	@	0.053169	$ 1,362	0.065273	$ 1,672	$ 310
2	Excess kWh	18,360	MWh	@	0.078133	1,434	0.098747	1,813	378
	Capacity								
3	First 600 kWh	25,621	MWh	@	0.025374	650	0.005290	136	(515)
4	Excess kWh	18,360	MWh	@	0.048453	890	0.010101	185	(704)
	Winter (Oct. - May)								
5	Non-capacity All kWh	98,320	MWh	@	0.053169	5,228	0.065273	6,418	1,190
6	Capacity All kWh	98,320	MWh	@	0.025374	2,495	0.005290	520	(1,975)
7	Annual PSCR Factor	142,301	MWh	@	0.005970	850	0.005970	850	-
8	Total Production					$ 12,908		$ 11,594	$ (1,315)
	Transmission								
	Summer (June - Sept.)								
9	First 600 kWh	25,621	MWh	@	0.016652	$ 427	0.017336	$ 444	$ 18
10	Excess kWh	18,360	MWh	@	0.031798	584	0.033104	608	24
	Winter (Oct. - May)								
11	All kWh	98,320	MWh	@	0.016652	1,637	0.017336	1,704	67
12	Total Transmission					$ 2,648		$ 2,756	$ 109
	Delivery								
13	System Access	173,693	Bills	@	8.00	$ 1,390	8.00	$ 1,390	$ -
14	Opt-out Fee	101,753	Bills	@	3.00	305	3.00	305	-
15	Distribution	142,301	MWh	@	0.064152	9,129	0.076455	10,880	1,751
	Provisions								
16	Senior Citizen (RSC)	6,404	Bills	@	(4.00)	(26)	(4.00)	(26)	-
17	Low Income Credit (LIAC)	-	Bills	@	(30.00)	-	(30.00)	-	-
18	Income Assistance (RIA)	40,465	Bills	@	(8.00)	(324)	(8.00)	(324)	-
19	Total Delivery					$ 10,474		$ 12,225	$ 1,751
20	Total Full Service					$ 26,030		$ 26,575	$ 545
	ROA SERVICE								
	Delivery								
21	System Access	-	Bills	@	8.00	$ -	8.00	$ -	$ -
22	Opt-out Fee	-	Bills	@	3.00	-	3.00	-	-
23	Distribution	-	MWh	@	0.064152	-	0.076455	-	-
	Provisions								
24	Senior Citizen (RSC)	-	Bills	@	(4.00)	-	(4.00)	-	-
25	Low Income Credit (LIAC)	-	Bills	@	(30.00)	-	(30.00)	-	-
26	Income Assistance (RIA)	-	Bills	@	(8.00)	-	(8.00)	-	-
27	Total Delivery					$ -		$ -	$ -
28	Total Full & ROA Service					$ 26,030		$ 26,575	$ 545

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Secondary Energy-only (GS)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
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Witness: AMGast
Date: May 2023

	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
1	Non-capacity All kWh	1,444,421	MWh	@	0.056152	$ 81,107	0.071055	$ 102,633	$ 21,526
2	Capacity All kWh	1,444,421	MWh	@	0.029502	42,613	0.007053	10,187	(32,426)
	Winter (Oct. - May)								
3	Non-capacity All kWh	2,552,277	MWh	@	0.054738	139,707	0.066209	168,984	29,277
4	Capacity All kWh	2,552,277	MWh	@	0.020650	52,705	0.004937	12,601	(40,104)
5	Annual PSCR Factor	3,996,698	MWh	@	0.005970	23,860	0.005970	23,860	-
6	Total Production					$ 339,992		$ 318,265	$ (21,726)
	Transmission								
	Summer (June - Sept.)								
7	All kWh	1,444,421	MWh	@	0.021030	$ 30,376	0.023427	$ 33,838	$ 3,462
	Winter (Oct. - May)								
8	All kWh	2,552,277	MWh	@	0.014720	37,570	0.016398	41,852	4,283
9	Total Transmission					$ 67,946		$ 75,691	$ 7,745
	Delivery								
10	System Access	2,353,460	Bills	@	20.00	$ 47,069	20.00	$ 47,069	$ -
11	Distribution	3,996,698	MWh	@	0.044692	178,620	0.059423	237,496	58,875
	Provisions								
12	Education GEI	96,645	MWh	@	(0.000802)	(78)	(0.001010)	(98)	(20)
13	Total Delivery					$ 225,612		$ 284,467	$ 58,855
14	Total Full Service					$ 633,550		$ 678,423	$ 44,874
	ROA SERVICE								
	Delivery								
15	System Access	1,153	Bills	@	20.00	$ 23	20.00	$ 23	$ -
16	Distribution	23,026	MWh	@	0.044692	1,029	0.059423	1,368	339
	Provisions								
17	Education GEI	13,863	MWh	@	(0.000802)	(11)	(0.001010)	(14)	(3)
18	Total Delivery					$ 1,041		$ 1,377	$ 336
19	Total Full & ROA Service					$ 634,591		$ 679,801	$ 45,210

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Secondary Time-of-Use (GSTU)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
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Witness: AMGast
Date: May 2023

	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
	Non-capacity								
1	On-peak kWh	1,793	MWh	@	0.083474	$ 150	0.103565	$ 186	$ 36
2	Mid-peak kWh	4,938	MWh	@	0.058660	290	0.074350	367	77
3	Off-peak kWh	5,593	MWh	@	0.045423	254	0.057908	324	70
	Capacity								
4	On-peak kWh	1,793	MWh	@	0.035796	64	0.008558	15	(49)
5	Mid-peak kWh	4,938	MWh	@	0.029742	147	0.007111	35	(112)
6	Off-peak kWh	5,593	MWh	@	0.019194	107	0.004589	26	(82)
	Winter (Oct. - May)								
	Non-capacity								
7	On-peak kWh	7,946	MWh	@	0.060678	482	0.073195	582	99
8	Off-peak kWh	7,219	MWh	@	0.048157	348	0.058461	422	74
	Capacity								
9	On-peak kWh	7,946	MWh	@	0.022389	178	0.005353	43	(135)
10	Off-peak kWh	7,219	MWh	@	0.016727	121	0.003999	29	(92)
	Provisions								
11	Interruptible (GSI)	-	MWh	@	(0.017799)	-	(0.017673)	-	-
12	Annual PSCR Factor	27,489	MWh	@	0.005970	164	0.005970	164	-
13	Total Production					$ 2,304		$ 2,192	$ (112)
	Transmission								
	Summer (June - Sept.)								
14	On-peak kWh	1,793	MWh	@	0.025517	$ 46	0.028425	$ 51	$ 5
15	Mid-peak kWh	4,938	MWh	@	0.021201	105	0.023618	117	12
16	Off-peak kWh	5,593	MWh	@	0.013682	77	0.015242	85	9
	Winter (Oct. - May)								
17	On-peak kWh	7,946	MWh	@	0.015959	127	0.017779	141	14
18	Off-peak kWh	7,219	MWh	@	0.011924	86	0.013283	96	10
19	Total Transmission					$ 440		$ 490	$ 50
	Delivery								
20	System Access	11,015	Bills	@	20.00	$ 220	20.00	$ 220	$ -
21	Distribution	27,489	MWh	@	0.044692	1,229	0.059423	1,633	405
	Provisions								
22	Education GEI	-	MWh	@	(0.000802)	-	(0.001010)	-	-
23	Total Delivery					$ 1,449		$ 1,854	$ 405
24	Total Full Service					$ 4,193		$ 4,536	$ 343

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Secondary Demand (GSD)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
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Witness: AMGast
Date: May 2023

Line No.	(a) Description	(b) Billing Determinants Quantity	(c) Units		(d) Present Rate $/unit	(e) Present Revenue $000	(f) Proposed Rate $/unit	(g) Proposed Revenue $000	(h) Net Increase / (Decrease) $000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
	Non-capacity								
1	Peak kW	2,956	MW	@	11.07	$ 32,725	19.29	$ 57,025	$ 24,300
2	All kWh	1,060,140	MWh	@	0.032069	33,998	0.032115	34,046	49
	Capacity								
3	Peak kW	2,956	MW	@	8.09	23,916	1.88	5,558	(18,358)
4	All kWh	1,060,140	MWh	@	-	-	-	-	-
	Winter (Oct. - May)								
	Non-capacity								
5	Peak kW	5,241	MW	@	5.24	27,463	9.13	47,850	20,387
6	All kWh	1,889,370	MWh	@	0.031261	59,064	0.029925	56,539	(2,524)
	Capacity								
7	Peak kW	5,241	MW	@	7.20	37,735	1.67	8,752	(28,983)
8	All kWh	1,889,370	MWh	@	-	-	-	-	-
9	Power Factor Adjustment					172		296	124
	Provisions								
10	Interruptible (GSI)-Summer	28	MW	@	(7.00)	(196)	(7.00)	(196)	-
11	Interruptible (GSI)-Winter	50	MW	@	(6.00)	(300)	(6.00)	(300)	-
12	Annual PSCR Factor	2,949,510	MWh	@	0.005970	17,609	0.005970	17,609	-
13	Total Production					$ 232,185		$ 227,180	$ (5,005)
	Transmission								
	Summer (June - Sept.)								
14	Peak kW	2,956	MW	@	5.94	$ 17,560	6.71	$ 19,836	$ 2,276
	Winter (Oct. - May)								
15	Peak kW	5,241	MW	@	5.29	27,725	5.96	31,236	3,511
16	Total Transmission					$ 45,285		$ 51,073	$ 5,788
	Delivery								
17	System Access	249,381	Bills	@	30.00	$ 7,481	30.00	$ 7,481	$ -
18	Peak kW	8,197	MW	@	1.00	8,197	1.00	8,197	-
19	Distribution	2,949,510	MWh	@	0.034591	102,027	0.044787	132,100	30,073
20	Power Factor Adjustment					155		198	42
	Provisions								
21	Education GEI	137,614	MWh	@	(0.000647)	(89)	(0.000822)	(113)	(24)
22	Total Delivery					$ 117,772		$ 147,863	$ 30,092
23	Total Full Service					$ 395,241		$ 426,116	$ 30,875
	ROA SERVICE								
	Delivery								
24	System Access	5,542	Bills	@	30.00	$ 166	30.00	$ 166	$ -
25	Peak kW	427	MW	@	1.00	427	1.00	427	-
26	Distribution	172,462	MWh	@	0.034591	5,966	0.044787	7,724	1,758
27	Power Factor Adjustment					10		12	3
	Provisions								
28	Education GEI	66,447	MWh	@	(0.000647)	(43)	(0.000822)	(55)	(12)
29	Total Delivery					$ 6,526		$ 8,275	$ 1,749
30	Total Full & ROA Service					$ 401,767		$ 434,391	$ 32,624

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Primary Energy-only Voltage Level 1 (GP VL 1)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
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	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
1	Non-capacity All kWh	5,472	MWh	@	0.054929	$ 301	0.066117	$ 362	$ 61
2	Capacity All kWh	5,472	MWh	@	0.025180	138	0.005815	32	(106)
	Winter (Oct. - May)								
3	Non-capacity All kWh	10,212	MWh	@	0.053546	547	0.061608	629	82
4	Capacity All kWh	10,212	MWh	@	0.017625	180	0.004070	42	(138)
5	Power Factor Adjustment					18		16	(2)
6	Annual PSCR Factor	15,684	MWh	@	0.005970	94	0.005970	94	-
7	Total Production					$ 1,277		$ 1,174	$ (102)
	Transmission								
	Summer (June - Sept.)								
8	All kWh	5,472	MWh	@	0.019871	$ 109	0.021351	$ 117	$ 8
	Winter (Oct. - May)								
9	All kWh	10,212	MWh	@	0.013909	142	0.014945	153	11
10	Total Transmission					$ 251		$ 269	$ 19
	Delivery								
11	System Access	67	Bills	@	100.00	$ 7	100.00	$ 7	$ -
12	Distribution	15,684	MWh	@	0.002171	34	0.002777	44	10
13	Substation Ownership Credit	460	MWh	@	(0.001123)	(1)	(0.001376)	(1)	(0)
14	Power Factor Adjustment					1		1	0
	Provisions								
15	Education GEI	-	MWh	@	(0.000533)	-	(0.000636)	-	-
16	Total Delivery					$ 41		$ 50	$ 10
17	Total Full Service					$ 1,568		$ 1,494	$ (74)
	ROA SERVICE								
	Delivery								
18	System Access	-	Bills	@	100.00	$ -	100.00	$ -	$ -
19	Distribution	-	MWh	@	0.002171	-	0.002777	-	-
20	Substation Ownership Credit	-	MWh	@	(0.001123)	-	(0.001376)	-	-
21	Power Factor Adjustment					-		-	-
	Provisions								
22	Education GEI	-	MWh	@	(0.000533)	-	(0.000636)	-	-
23	Total Delivery					$ -		$ -	$ -
24	Total Full & ROA Service					$ 1,568		$ 1,494	$ (74)

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Primary Energy-only Voltage Level 2 (GP VL 2)

Case No.: U-21389
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	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
1	Non-capacity All kWh	9,746	MWh	@	0.055588	$ 542	0.066884	$ 652	$ 110
2	Capacity All kWh	9,746	MWh	@	0.025563	249	0.005899	57	(192)
	Winter (Oct. - May)								
3	Non-capacity All kWh	21,950	MWh	@	0.054189	1,189	0.062323	1,368	179
4	Capacity All kWh	21,950	MWh	@	0.017893	393	0.004129	91	(302)
5	Power Factor Adjustment					62		57	(5)
6	Annual PSCR Factor	31,696	MWh	@	0.005970	189	0.005970	189	-
7	Total Production					$ 2,625		$ 2,414	$ (211)
	Transmission								
	Summer (June - Sept.)								
8	All kWh	9,746	MWh	@	0.020173	$ 197	0.021661	$ 211	$ 15
	Winter (Oct. - May)								
9	All kWh	21,950	MWh	@	0.014120	310	0.015162	333	23
10	Total Transmission					$ 507		$ 544	$ 37
	Delivery								
11	System Access	452	Bills	@	100.00	$ 45	100.00	$ 45	$ -
12	Distribution	31,696	MWh	@	0.007661	243	0.009340	296	53
13	Substation Ownership Credit	7,396	MWh	@	(0.001513)	(11)	(0.001783)	(13)	(2)
14	Power Factor Adjustment					6		7	1
	Provisions								
15	Education GEI	-	MWh	@	(0.000533)	-	(0.000636)	-	-
16	Total Delivery					$ 283		$ 335	$ 53
17	Total Full Service					$ 3,414		$ 3,293	$ (121)
	ROA SERVICE								
	Delivery								
18	System Access	29	Bills	@	100.00	$ 3	100.00	$ 3	$ -
19	Distribution	2,770	MWh	@	0.007661	21	0.009340	26	5
20	Substation Ownership Credit	-	MWh	@	(0.001513)	-	(0.001783)	-	-
21	Power Factor Adjustment					(0)		(0)	(0)
	Provisions								
22	Education GEI	-	MWh	@	(0.000533)	-	(0.000636)	-	-
23	Total Delivery					$ 24		$ 29	$ 5
24	Total Full & ROA Service					$ 3,438		$ 3,322	$ (116)

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Primary Energy-only Voltage Level 3 (GP VL 3)

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	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
1	Non-capacity All kWh	256,746	MWh	@	0.056099	$ 14,403	0.067624	$ 17,362	$ 2,959
2	Capacity All kWh	256,746	MWh	@	0.025915	6,654	0.005992	1,538	(5,115)
	Winter (Oct. - May)								
3	Non-capacity All kWh	501,530	MWh	@	0.054687	27,427	0.063013	31,603	4,176
4	Capacity All kWh	501,530	MWh	@	0.018140	9,098	0.004194	2,103	(6,994)
5	Power Factor Adjustment					723		660	(62)
6	Annual PSCR Factor	758,276	MWh	@	0.005970	4,527	0.005970	4,527	-
7	Total Production					$ 62,831		$ 57,794	$ (5,037)
	Transmission								
	Summer (June - Sept.)								
8	All kWh	256,746	MWh	@	0.020451	$ 5,251	0.022000	$ 5,648	$ 398
	Winter (Oct. - May)								
9	All kWh	501,530	MWh	@	0.014315	7,179	0.015399	7,723	544
10	Total Transmission					$ 12,430		$ 13,371	$ 941
	Delivery								
11	System Access	17,224	Bills	@	100.00	$ 1,722	100.00	$ 1,722	$ -
12	Distribution	758,276	MWh	@	0.017474	13,250	0.021460	16,273	3,022
13	Power Factor Adjustment					166		204	38
	Provisions								
14	Education GEI	85,056	MWh	@	(0.000533)	(45)	(0.000636)	(54)	(9)
15	Total Delivery					$ 15,094		$ 18,145	$ 3,052
16	Total Full Service					$ 90,355		$ 89,311	$ (1,044)
	ROA SERVICE								
	Delivery								
17	System Access	674	Bills	@	100.00	$ 67	100.00	$ 67	$ -
18	Distribution	72,834	MWh	@	0.017474	1,273	0.021460	1,563	290
19	Power Factor Adjustment					4		5	1
	Provisions								
20	Education GEI	38,635	MWh	@	(0.000533)	(21)	(0.000636)	(25)	(4)
21	Total Delivery					$ 1,323		$ 1,611	$ 287
22	Total Full & ROA Service					$ 91,678		$ 90,921	$ (757)

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Primary Demand Voltage Level 1 (GPD VL 1)

Case No.: U-21389
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	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
	Non-capacity								
1	On-peak kW	564	MW	@	11.17	$ 6,295	16.30	$ 9,186	$ 2,891
2	On-peak kWh	74,426	MWh	@	0.042163	3,138	0.044427	3,307	169
3	Off-peak kWh	250,778	MWh	@	0.026469	6,638	0.028381	7,117	479
4	Capacity On-peak kW	564	MW	@	8.94	5,038	1.93	1,088	(3,951)
	Winter (Oct. - May)								
	Non-capacity								
5	On-peak kW	1,216	MW	@	9.65	11,730	14.08	17,115	5,385
6	On-peak kWh	165,191	MWh	@	0.033687	5,565	0.033956	5,609	44
7	Off-peak kWh	543,249	MWh	@	0.028934	15,718	0.029592	16,076	357
8	Capacity On-peak kW	1,216	MW	@	8.29	10,077	1.79	2,176	(7,901)
	Provisions								
9	Economic Development GED	-	MW	@	-	-	-	-	-
	Interruptible GI								
10	Summer Contracted kW	53	MW	@	(7.00)	(372)	(7.00)	(372)	-
11	Winter Contracted kW	106	MW	@	(6.00)	(638)	(6.00)	(638)	-
	Interruptible GI-2								
12	Summer Capacity & Transmission	-	MWh	@	0.031935	-	0.033203	-	-
13	Winter Capacity & Transmission	-	MWh	@	0.029184	-	0.029597	-	-
14	LMP	-	MWh	@	-	-	-	-	-
15	Power Factor Adjustment					(132)		(127)	5
16	Annual PSCR Factor	1,033,644	MWh	@	0.005970	6,171	0.005970	6,171	-
17	Total Production					$ 69,226		$ 66,706	$ (2,520)
	Transmission								
	Summer (June - Sept.)								
18	On-peak kW	564	MW	@	7.38	$ 4,159	7.93	$ 4,469	$ 310
	Winter (Oct. - May)								
19	On-peak kW	1,216	MW	@	6.87	8,351	7.38	8,971	620
20	Total Transmission					$ 12,510		$ 13,440	$ 930
	Delivery								
21	System Access	274	Bills	@	200.00	$ 55	200.00	$ 55	$ -
22	Maximum kW	2,493	MW	@	0.74	1,845	0.95	2,368	524
23	Substation Ownership	46	MW	@	(0.46)	(21)	(0.58)	(27)	(6)
24	Distribution	1,033,644	MWh	@	-	-	-	-	-
25	Power Factor Adjustment					(4)		(5)	(1)
	Provisions								
26	Education GEI	-	MWh	@	(0.000201)	-	(0.000210)	-	-
27	Total Delivery					$ 1,875		$ 2,392	$ 517
28	Total Full Service					$ 83,611		$ 82,537	$ (1,074)
	ROA SERVICE								
	Delivery								
29	System Access	161	Bills	@	200.00	$ 32	200.00	$ 32	$ -
30	Maximum kW	2,197	MW	@	0.74	1,626	0.95	2,087	461
31	Substation Ownership	225	MW	@	(0.46)	(104)	(0.58)	(131)	(27)
32	Distribution	1,130,638	MWh	@	-	-	-	-	-
33	Power Factor Adjustment					(4)		(5)	(1)
	Provisions								
34	Education GEI	3,157	MWh	@	(0.000201)	(1)	(0.000210)	(1)	(0)
35	Total Delivery					$ 1,550		$ 1,983	$ 433
36	Total Full & ROA Service					$ 85,161		$ 84,520	$ (640)

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Primary Demand Voltage Level 2 (GPD VL 2)

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	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
	Non-capacity								
1	On-peak kW	898	MW	@	11.30	$ 10,149	16.49	$ 14,810	$ 4,661
2	On-peak kWh	120,049	MWh	@	0.042669	5,122	0.044942	5,395	273
3	Off-peak kWh	352,713	MWh	@	0.026787	9,448	0.028710	10,126	678
4	Capacity On-peak kW	898	MW	@	9.08	8,155	1.96	1,760	(6,394)
	Winter (Oct. - May)								
	Non-capacity								
5	On-peak kW	1,847	MW	@	9.77	18,045	14.24	26,302	8,256
6	On-peak kWh	248,601	MWh	@	0.034091	8,475	0.034350	8,539	64
7	Off-peak kWh	727,305	MWh	@	0.029281	21,296	0.029935	21,772	476
8	Capacity On-peak kW	1,847	MW	@	8.42	15,552	1.82	3,362	(12,190)
	Provisions								
9	Economic Development GED	-	MW	@	-	-	-	-	-
	Interruptible GI								
10	Summer Contracted kW	32	MW	@	(7.00)	(221)	(7.00)	(221)	-
11	Winter Contracted kW	63	MW	@	(6.00)	(379)	(6.00)	(379)	-
	Interruptible GI-2								
12	Summer Capacity & Transmission	-	MWh	@	0.038803	-	0.037025	-	-
13	Winter Capacity & Transmission	-	MWh	@	0.035411	-	0.033216	-	-
14	LMP	-	MWh	@	-	-	-	-	-
15	Power Factor Adjustment					(129)		(123)	6
16	Annual PSCR Factor	1,448,667	MWh	@	0.005970	8,649	0.005970	8,649	-
17	Total Production					$ 104,162		$ 99,991	$ (4,171)
	Transmission								
	Summer (June - Sept.)								
18	On-peak kW	898	MW	@	7.49	$ 6,727	8.04	$ 7,221	$ 494
	Winter (Oct. - May)								
19	On-peak kW	1,847	MW	@	6.97	12,874	7.49	13,834	960
20	Total Transmission					$ 19,601		$ 21,055	$ 1,454
	Delivery								
21	System Access	701	Bills	@	200.00	$ 140	200.00	$ 140	$ -
22	Maximum kW	3,342	MW	@	2.62	8,755	3.19	10,660	1,905
23	Substation Ownership	314	MW	@	(0.62)	(195)	(0.74)	(232)	(38)
24	Distribution	1,448,667	MWh	@	-	-	-	-	-
25	Power Factor Adjustment					(12)		(14)	(3)
	Provisions								
26	Education GEI	27,849	MWh	@	(0.000201)	(6)	(0.000210)	(6)	(0)
27	Total Delivery					$ 8,683		$ 10,547	$ 1,864
28	Total Full Service					$ 132,446		$ 131,594	$ (852)
	ROA SERVICE								
	Delivery								
29	System Access	450	Bills	@	200.00	$ 90	200.00	$ 90	$ -
30	Maximum kW	2,822	MW	@	2.62	7,393	3.19	9,002	1,608
31	Substation Ownership	342	MW	@	(0.62)	(212)	(0.74)	(253)	(41)
32	Distribution	1,351,423	MWh	@	-	-	-	-	-
33	Power Factor Adjustment					15		18	3
	Provisions								
34	Education GEI	69,123	MWh	@	(0.000201)	(14)	(0.000210)	(15)	(1)
35	Total Delivery					$ 7,272		$ 8,842	$ 1,570
36	Total Full & ROA Service					$ 139,718		$ 140,435	$ 718

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Primary Demand Voltage Level 3 (GPD VL 3)

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	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
	Non-capacity								
1	On-peak kW	1,367	MW	@	11.41	$ 15,598	16.67	$ 22,788	$ 7,190
2	On-peak kWh	188,305	MWh	@	0.043061	8,109	0.045440	8,557	448
3	Off-peak kWh	525,139	MWh	@	0.027033	14,196	0.029028	15,244	1,048
4	Capacity On-peak kW	1,367	MW	@	9.20	12,576	1.99	2,720	(9,856)
	Winter (Oct. - May)								
	Non-capacity								
5	On-peak kW	2,641	MW	@	9.86	26,043	14.40	38,034	11,991
6	On-peak kWh	360,950	MWh	@	0.034405	12,418	0.034730	12,536	117
7	Off-peak kWh	1,024,209	MWh	@	0.029550	30,265	0.030267	31,000	734
8	Capacity On-peak kW	2,641	MW	@	8.53	22,530	1.84	4,860	(17,670)
	Provisions								
9	Economic Development GED	-	MW	@	-	-	-	-	-
	Interruptible GI								
10	Summer Contracted kW	5	MW	@	(7.00)	(36)	(7.00)	(36)	-
11	Winter Contracted kW	10	MW	@	(6.00)	(62)	(6.00)	(62)	-
	Interruptible GI-2								
12	Summer Capacity & Transmission	-	MWh	@	0.040422	-	0.037996	-	-
13	Winter Capacity & Transmission	-	MWh	@	0.038216	-	0.035105	-	-
14	LMP	-	MWh	@	-	-	-	-	-
15	Power Factor Adjustment					97		93	(4)
16	Annual PSCR Factor	2,098,603	MWh	@	0.005970	12,529	0.005970	12,529	-
17	Total Production					$ 154,262		$ 148,261	$ (6,001)
	Transmission								
	Summer (June - Sept.)								
18	On-peak kW	1,367	MW	@	7.60	$ 10,389	8.17	$ 11,168	$ 779
	Winter (Oct. - May)								
19	On-peak kW	2,641	MW	@	7.07	18,674	7.60	20,073	1,400
20	Total Transmission					$ 29,063		$ 31,242	$ 2,179
	Delivery								
21	System Access	8,582	Bills	@	200.00	$ 1,716	200.00	$ 1,716	$ -
22	Maximum kW	5,352	MW	@	5.16	27,617	6.13	32,809	5,192
23	Distribution	2,098,603	MWh	@	-	-	-	-	-
24	Power Factor Adjustment					19		23	4
	Provisions								
25	Education GEI	107,908	MWh	@	(0.000201)	(22)	(0.000210)	(23)	(1)
26	Total Delivery					$ 29,331		$ 34,525	$ 5,194
27	Total Full Service					$ 212,656		$ 214,029	$ 1,372
	ROA SERVICE								
	Delivery								
28	System Access	3,439	Bills	@	200.00	$ 688	200.00	$ 688	$ -
29	Maximum kW	2,617	MW	@	5.16	13,502	6.13	16,041	2,538
30	Distribution	960,761	MWh	@	-	-	-	-	-
31	Power Factor Adjustment					30		35	6
	Provisions								
32	Education GEI	153,597	MWh	@	(0.000201)	(31)	(0.000210)	(32)	(1)
33	Total Delivery					$ 14,189		$ 16,731	$ 2,542
34	Total Full & ROA Service					$ 226,845		$ 230,760	$ 3,915

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Primary Time-of-Use Voltage Level 1 (GPTU VL 1)

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	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
	Non-capacity								
1	High-peak kWh	12,200	MWh	@	0.079435	$ 969	0.096813	$ 1,181	$ 212
2	Mid-peak kWh	16,297	MWh	@	0.065988	1,075	0.082384	1,343	267
3	Low-peak kWh	39,282	MWh	@	0.049204	1,933	0.061403	2,412	479
4	Off-peak kWh	85,166	MWh	@	0.041890	3,568	0.052761	4,493	926
	Capacity								
5	High-peak kWh	12,200	MWh	@	0.028718	350	0.006600	81	(270)
6	Mid-peak kWh	16,297	MWh	@	0.027414	447	0.006301	103	(344)
7	Low-peak kWh	39,282	MWh	@	0.022017	865	0.005060	199	(666)
8	Off-peak kWh	85,166	MWh	@	0.014872	1,267	0.003418	291	(975)
	Winter (Oct. - May)								
	Non-capacity								
9	High-peak kWh	23,301	MWh	@	0.059055	1,376	0.069509	1,620	244
10	Mid-peak kWh	30,706	MWh	@	0.053930	1,656	0.064526	1,981	325
11	Off-peak kWh	190,807	MWh	@	0.048735	9,299	0.058218	11,108	1,809
	Capacity								
12	High-peak kWh	23,301	MWh	@	0.018424	429	0.004235	99	(331)
13	Mid-peak kWh	30,706	MWh	@	0.018416	565	0.004233	130	(436)
14	Off-peak kWh	190,807	MWh	@	0.015850	3,024	0.003643	695	(2,329)
15	Power Factor Adjustment					43		42	(2)
	Provisions								
	Interruptible GI								
16	Summer Contracted kW	-	MW	@	-	-	(7.00)	-	-
17	Winter Contracted kW	-	MW	@	-	-	(6.00)	-	-
18	Annual PSCR Factor	397,758	MWh	@	0.005970	2,375	0.005970	2,375	-
19	Total Production					$ 29,242		$ 28,152	$ (1,090)
	Transmission								
	Summer (June - Sept.)								
20	High-peak kWh	12,200	MWh	@	0.023290	$ 284	0.025348	$ 309	$ 25
21	Mid-peak kWh	16,297	MWh	@	0.022233	362	0.024198	394	32
22	Low-peak kWh	39,282	MWh	@	0.017856	701	0.019434	763	62
23	Off-peak kWh	85,166	MWh	@	0.012061	1,027	0.013127	1,118	91
24	Winter (Oct. - May)								
25	High-peak kWh	23,301	MWh	@	0.014942	348	0.016263	379	31
26	Mid-peak kWh	30,706	MWh	@	0.014935	459	0.016256	499	41
27	Off-peak kWh	190,807	MWh	@	0.012854	2,453	0.013991	2,670	217
28	Total Transmission					$ 5,634		$ 6,133	$ 498
	Delivery								
29	System Access	227	Bills	@	200.00	$ 45	200.00	$ 45	$ -
30	Maximum kW	1,164	MW	@	0.74	861	0.95	1,106	244
31	Substation Ownership	207	MW	@	(0.46)	(95)	(0.58)	(120)	(25)
32	Distribution	397,758	MWh	@	-	-	-	-	-
33	Power Factor Adjustment					1		2	0
	Provisions								
34	Education GEI	10,473	MWh	@	(0.000201)	(2)	(0.000210)	(2)	(0)
35	Total Delivery					$ 811		$ 1,031	$ 220
36	Total Full Service					$ 35,687		$ 35,315	$ (372)

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Primary Time-of-Use Voltage Level 2 (GPTU VL 2)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
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Witness: AMGast
Date: May 2023

	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
	Non-capacity								
1	High-peak kWh	15,606	MWh	@	0.080388	$ 1,255	0.097936	$ 1,528	$ 274
2	Mid-peak kWh	20,947	MWh	@	0.066780	1,399	0.083340	1,746	347
3	Low-peak kWh	56,128	MWh	@	0.049794	2,795	0.062115	3,486	692
4	Off-peak kWh	109,754	MWh	@	0.042393	4,653	0.053373	5,858	1,205
	Capacity								
5	High-peak kWh	15,606	MWh	@	0.029155	455	0.006696	104	(350)
6	Mid-peak kWh	20,947	MWh	@	0.027831	583	0.006392	134	(449)
7	Low-peak kWh	56,128	MWh	@	0.022352	1,255	0.005133	288	(966)
8	Off-peak kWh	109,754	MWh	@	0.015098	1,657	0.003468	381	(1,276)
	Winter (Oct. - May)								
	Non-capacity								
9	High-peak kWh	36,356	MWh	@	0.059764	2,173	0.070315	2,556	384
10	Mid-peak kWh	49,188	MWh	@	0.054577	2,685	0.065275	3,211	526
11	Off-peak kWh	286,729	MWh	@	0.049320	14,141	0.058893	16,886	2,745
	Capacity								
12	High-peak kWh	36,356	MWh	@	0.018704	680	0.004296	156	(524)
13	Mid-peak kWh	49,188	MWh	@	0.018696	920	0.004294	211	(708)
14	Off-peak kWh	286,729	MWh	@	0.016091	4,614	0.003696	1,060	(3,554)
15	Power Factor Adjustment					(17)		(16)	1
	Provisions								
	Interruptible GI								
16	Summer Contracted kW	-	MW	@	-	-	(7.00)	-	-
17	Winter Contracted kW	-	MW	@	-	-	(6.00)	-	-
18	Annual PSCR Factor	574,708	MWh	@	0.005970	3,431	0.005970	3,431	-
19	Total Production					$ 42,677		$ 41,021	$ (1,656)
	Transmission								
	Summer (June - Sept.)								
20	High-peak kWh	15,606	MWh	@	0.023644	$ 369	0.025716	$ 401	$ 32
21	Mid-peak kWh	20,947	MWh	@	0.022571	473	0.024549	514	41
22	Low-peak kWh	56,128	MWh	@	0.018127	1,017	0.019716	1,107	89
23	Off-peak kWh	109,754	MWh	@	0.012244	1,344	0.013317	1,462	118
	Winter (Oct. - May)								
24	High-peak kWh	36,356	MWh	@	0.015169	551	0.016499	600	48
25	Mid-peak kWh	49,188	MWh	@	0.015162	746	0.016492	811	65
26	Off-peak kWh	286,729	MWh	@	0.013049	3,742	0.014194	4,070	328
27	Total Transmission					$ 8,242		$ 8,965	$ 723
	Delivery								
28	System Access	492	Bills	@	200.00	$ 98	200.00	$ 98	$ -
29	Maximum kW	1,610	MW	@	2.62	4,218	3.19	5,135	918
30	Substation Ownership	261	MW	@	(0.62)	(162)	(0.74)	(193)	(31)
31	Distribution	574,708	MWh	@	-	-	-	-	-
32	Power Factor Adjustment					(2)		(2)	(0)
	Provisions								
33	Education GEI	16,903	MWh	@	(0.000201)	(3)	(0.000210)	(4)	(0)
34	Total Delivery					$ 4,149		$ 5,035	$ 886
35	Total Full Service					$ 55,068		$ 55,021	$ (47)

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Primary Time-of-Use Voltage Level 3 (GPTU VL 3)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
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Witness: AMGast
Date: May 2023

	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
	Non-capacity								
1	High-peak kWh	129,064	MWh	@	0.081127	$ 10,471	0.099020	$ 12,780	$ 2,309
2	Mid-peak kWh	169,998	MWh	@	0.067394	11,457	0.084262	14,324	2,868
3	Low-peak kWh	393,095	MWh	@	0.050252	19,754	0.062803	24,688	4,934
4	Off-peak kWh	700,656	MWh	@	0.042782	29,975	0.053964	37,810	7,835
	Capacity								
5	High-peak kWh	129,064	MWh	@	0.029557	3,815	0.006801	878	(2,937)
6	Mid-peak kWh	169,998	MWh	@	0.028214	4,796	0.006493	1,104	(3,693)
7	Low-peak kWh	393,095	MWh	@	0.022660	8,908	0.005214	2,050	(6,858)
8	Off-peak kWh	700,656	MWh	@	0.015306	10,724	0.003522	2,468	(8,257)
	Winter (Oct. - May)								
	Non-capacity								
9	High-peak kWh	236,344	MWh	@	0.060313	14,255	0.071094	16,803	2,548
10	Mid-peak kWh	322,752	MWh	@	0.055079	17,777	0.065997	21,301	3,524
11	Off-peak kWh	1,757,484	MWh	@	0.049773	87,475	0.059545	104,649	17,174
	Capacity								
12	High-peak kWh	236,344	MWh	@	0.018962	4,482	0.004364	1,031	(3,450)
13	Mid-peak kWh	322,752	MWh	@	0.018954	6,117	0.004362	1,408	(4,710)
14	Off-peak kWh	1,757,484	MWh	@	0.016313	28,670	0.003754	6,598	(22,072)
15	Power Factor Adjustment					608		583	(25)
	Provisions								
	Interruptible GI								
16	Summer Contracted kW	-	MW	@	-	-	(7.00)	-	-
17	Winter Contracted kW	-	MW	@	-	-	(6.00)	-	-
18	Annual PSCR Factor	3,709,392	MWh	@	0.005970	22,145	0.005970	22,145	-
19	Total Production					$ 281,428		$ 270,618	$ (10,810)
	Transmission								
	Summer (June - Sept.)								
20	High-peak kWh	129,064	MWh	@	0.023970	$ 3,094	0.026119	$ 3,371	$ 277
21	Mid-peak kWh	169,998	MWh	@	0.022882	3,890	0.024934	4,239	349
22	Low-peak kWh	393,095	MWh	@	0.018377	7,224	0.020025	7,872	648
23	Off-peak kWh	700,656	MWh	@	0.012413	8,697	0.013526	9,477	780
	Winter (Oct. - May)								
24	High-peak kWh	236,344	MWh	@	0.015378	3,634	0.016757	3,960	326
25	Mid-peak kWh	322,752	MWh	@	0.015371	4,961	0.016750	5,406	445
26	Off-peak kWh	1,757,484	MWh	@	0.013229	23,250	0.014416	25,336	2,086
27	Total Transmission					$ 54,750		$ 59,661	$ 4,911
	Delivery								
28	System Access	15,656	Bills	@	200.00	$ 3,131	200.00	$ 3,131	$ -
29	Maximum kW	11,364	MW	@	5.16	58,639	6.13	69,663	11,023
30	Distribution	3,709,392	MWh	@	-	-	-	-	-
31	Power Factor Adjustment					138		164	26
	Provisions								
32	Education GEI	266,636	MWh	@	(0.000201)	(54)	(0.000210)	(56)	(2)
33	Total Delivery					$ 61,855		$ 72,901	$ 11,047
34	Total Full Service					$ 398,033		$ 403,180	$ 5,148

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Primary Energy Intensive Level 1 (EIP VL 1)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
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Witness: AMGast
Date: May 2023

	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
	Non-capacity								
1	Critical-peak kWh	1,333	MWh	@	0.106778	$ 142	0.154881	$ 206	$ 64
2	High-peak kWh	5,312	MWh	@	0.071185	378	0.103254	548	170
3	Mid-peak kWh	6,635	MWh	@	0.059191	393	0.088722	589	196
4	Low-peak kWh	44,036	MWh	@	0.045119	1,987	0.067797	2,985	999
5	Off-peak kWh	89,821	MWh	@	0.035526	3,191	0.053839	4,836	1,645
	Capacity								
6	Emergency kWh	-	MWh	@	1.000000	-	1.000000	-	-
7	Critical-peak kWh	1,333	MWh	@	0.014969	20	0.007776	10	(10)
8	High-peak kWh	5,312	MWh	@	0.009979	53	0.005184	28	(25)
9	Mid-peak kWh	6,635	MWh	@	0.009754	65	0.005067	34	(31)
10	Low-peak kWh	44,036	MWh	@	0.008023	353	0.004168	184	(170)
11	Off-peak kWh	89,821	MWh	@	0.005134	461	0.002667	240	(222)
	Winter (Oct. - May)								
	Non-capacity								
12	Critical-peak kWh	1,063	MWh	@	0.077160	82	0.109554	116	34
13	High-peak kWh	13,757	MWh	@	0.051440	708	0.073036	1,005	297
14	Mid-peak kWh	14,749	MWh	@	0.048036	708	0.069404	1,024	315
15	Off-peak kWh	197,697	MWh	@	0.041715	8,247	0.059896	11,841	3,594
	Capacity								
16	Emergency kWh	-	MWh	@	1.000000	-	1.000000	-	-
17	Critical-peak kWh	1,063	MWh	@	0.009690	10	0.005034	5	(5)
18	High-peak kWh	13,757	MWh	@	0.006460	89	0.003356	46	(43)
19	Mid-peak kWh	14,749	MWh	@	0.006373	94	0.003310	49	(45)
20	Off-peak kWh	197,697	MWh	@	0.005585	1,104	0.002901	574	(531)
21	Power Factor Adjustment					7		9	2
22	Interruptible Credit	374,401	MWh	@	-	-	(0.013595)	(5,090)	(5,090)
23	Annual PSCR Factor	374,401	MWh	@	0.005970	2,235	0.005970	2,235	-
24	Total Production					$ 20,327		$ 21,474	$ 1,146
	Transmission								
	Summer (June - Sept.)								
25	Critical-peak kWh	1,333	MWh	@	0.030929	$ 41	0.035492	$ 47	$ 6
26	High-peak kWh	5,312	MWh	@	0.020619	110	0.023661	126	16
27	Mid-peak kWh	6,635	MWh	@	0.020155	134	0.023128	153	20
28	Low-peak kWh	44,036	MWh	@	0.016576	730	0.019022	838	108
29	Off-peak kWh	89,821	MWh	@	0.010608	953	0.012173	1,093	141
	Winter (Oct. - May)								
30	Critical-peak kWh	1,063	MWh	@	0.020022	21	0.022976	24	3
31	High-peak kWh	13,757	MWh	@	0.013348	184	0.015317	211	27
32	Mid-peak kWh	14,749	MWh	@	0.013169	194	0.015111	223	29
33	Off-peak kWh	197,697	MWh	@	0.011540	2,281	0.013242	2,618	336
34	Total Transmission					$ 4,648		$ 5,333	$ 686
	Delivery								
35	System Access	66	Bills	@	200.00	$ 13	200.00	$ 13	$ -
36	Maximum kW	1,163	MW	@	0.74	861	0.95	1,105	244
37	Substation Ownership	-	MW	@	(0.46)	-	(0.58)	-	-
38	Power Factor Adjustment					0		0	0
39	Distribution	374,401	MWh	@	-	-	-	-	-
40	Total Delivery					$ 874		$ 1,119	$ 244
41	Total Full Service					$ 25,850		$ 27,926	$ 2,076

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Primary Energy Intensive Level 2 (EIP VL 2)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
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Witness: AMGast
Date: May 2023

	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
	Non-capacity								
1	Critical-peak kWh	178	MWh	@	0.108059	$ 19	0.156678	$ 28	$ 9
2	High-peak kWh	703	MWh	@	0.072039	51	0.104452	73	23
3	Mid-peak kWh	908	MWh	@	0.059901	54	0.089751	82	27
4	Low-peak kWh	7,354	MWh	@	0.045660	336	0.068583	504	169
5	Off-peak kWh	15,035	MWh	@	0.035952	541	0.054464	819	278
	Capacity								
6	Emergency kWh	-	MWh	@	1.000000	-	1.000000	-	-
7	Critical-peak kWh	178	MWh	@	0.015197	3	0.007889	1	(1)
8	High-peak kWh	703	MWh	@	0.010131	7	0.005259	4	(3)
9	Mid-peak kWh	908	MWh	@	0.009902	9	0.005140	5	(4)
10	Low-peak kWh	7,354	MWh	@	0.008145	60	0.004228	31	(29)
11	Off-peak kWh	15,035	MWh	@	0.005212	78	0.002706	41	(38)
	Winter (Oct. - May)								
	Non-capacity								
12	Critical-peak kWh	164	MWh	@	0.078086	13	0.110825	18	5
13	High-peak kWh	1,754	MWh	@	0.052057	91	0.073883	130	38
14	Mid-peak kWh	1,913	MWh	@	0.048612	93	0.070209	134	41
15	Off-peak kWh	35,995	MWh	@	0.042216	1,520	0.060591	2,181	661
	Capacity								
16	Emergency kWh	-	MWh	@	1.000000	-	1.000000	-	-
17	Critical-peak kWh	164	MWh	@	0.009837	2	0.005107	1	(1)
18	High-peak kWh	1,754	MWh	@	0.006558	12	0.003405	6	(6)
19	Mid-peak kWh	1,913	MWh	@	0.006470	12	0.003358	6	(6)
20	Off-peak kWh	35,995	MWh	@	0.005670	204	0.002943	106	(98)
21	Power Factor Adjustment					(15)		(21)	(5)
22	Interruptible Credit	64,003	MWh	@	-	-	(0.013595)	(870)	(870)
23	Annual PSCR Factor	64,003	MWh	@	0.005970	382	0.005970	382	-
24	Total Production					$ 3,471		$ 3,661	$ 190
	Transmission								
	Summer (June - Sept.)								
25	Critical-peak kWh	178	MWh	@	0.031399	$ 6	0.036007	$ 6	$ 1
26	High-peak kWh	703	MWh	@	0.020932	15	0.024004	17	2
27	Mid-peak kWh	908	MWh	@	0.020461	19	0.023463	21	3
28	Low-peak kWh	7,354	MWh	@	0.016828	124	0.019298	142	18
29	Off-peak kWh	15,035	MWh	@	0.010769	162	0.012350	186	24
	Winter (Oct. - May)								
30	Critical-peak kWh	164	MWh	@	0.020326	3	0.023309	4	0
31	High-peak kWh	1,754	MWh	@	0.013551	24	0.015539	27	3
32	Mid-peak kWh	1,913	MWh	@	0.013369	26	0.015330	29	4
33	Off-peak kWh	35,995	MWh	@	0.011715	422	0.013434	484	62
34	Total Transmission					$ 799		$ 916	$ 117
	Delivery								
35	System Access	80	Bills	@	200.00	$ 16	200.00	$ 16	$ -
36	Maximum kW	467	MW	@	2.62	1,224	3.19	1,491	266
37	Substation Ownership	187	MW	@	(0.62)	(116)	(0.74)	(138)	(22)
38	Power Factor Adjustment					(6)		(7)	(1)
39	Distribution	64,003	MWh	@	-	-	-	-	-
40	Total Delivery					$ 1,119		$ 1,362	$ 243
41	Total Full Service					$ 5,389		$ 5,939	$ 550

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Primary Energy Intensive Level 3 (EIP VL 3)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
Page: 19 of 23
Witness: AMGast
Date: May 2023

	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
	Summer (June - Sept.)								
	Non-capacity								
1	Critical-peak kWh	19	MWh	@	0.109052	$ 2	0.158412	$ 3	$ 1
2	High-peak kWh	93	MWh	@	0.072701	7	0.105608	10	3
3	Mid-peak kWh	158	MWh	@	0.060452	10	0.090745	14	5
4	Low-peak kWh	1,679	MWh	@	0.046080	77	0.069343	116	39
5	Off-peak kWh	2,131	MWh	@	0.036283	77	0.055067	117	40
	Capacity								
6	Emergency kWh	-	MWh	@	1.000000	-	1.000000	-	-
7	Critical-peak kWh	19	MWh	@	0.015406	0	0.008012	0	(0)
8	High-peak kWh	93	MWh	@	0.010270	1	0.005342	0	(0)
9	Mid-peak kWh	158	MWh	@	0.010039	2	0.005221	1	(1)
10	Low-peak kWh	1,679	MWh	@	0.008257	14	0.004295	7	(7)
11	Off-peak kWh	2,131	MWh	@	0.005284	11	0.002748	6	(5)
	Winter (Oct. - May)								
	Non-capacity								
12	Critical-peak kWh	9	MWh	@	0.078804	1	0.112052	1	0
13	High-peak kWh	132	MWh	@	0.052536	7	0.074701	10	3
14	Mid-peak kWh	196	MWh	@	0.049059	10	0.070986	14	4
15	Off-peak kWh	4,797	MWh	@	0.042604	204	0.061262	294	90
	Capacity								
16	Emergency kWh	-	MWh	@	1.000000	-	1.000000	-	-
17	Critical-peak kWh	9	MWh	@	0.009973	0	0.005187	0	(0)
18	High-peak kWh	132	MWh	@	0.006649	1	0.003458	0	(0)
19	Mid-peak kWh	196	MWh	@	0.006559	1	0.003411	1	(1)
20	Off-peak kWh	4,797	MWh	@	0.005748	28	0.002989	14	(13)
21	Power Factor Adjustment					(1)		(1)	(0)
22	Interruptible Credit	9,214	MWh	@	-	-	(0.013595)	(125)	(125)
23	Annual PSCR Factor	9,214	MWh	@	0.005970	55	0.005970	55	-
24	Total Production					$ 507		$ 538	$ 32
	Transmission								
	Summer (June - Sept.)								
25	Critical-peak kWh	19	MWh	@	0.031832	$ 1	0.036571	$ 1	$ 0
26	High-peak kWh	93	MWh	@	0.021221	2	0.024380	2	0
27	Mid-peak kWh	158	MWh	@	0.020744	3	0.023831	4	0
28	Low-peak kWh	1,679	MWh	@	0.017060	29	0.019600	33	4
29	Off-peak kWh	2,131	MWh	@	0.010918	23	0.012543	27	3
	Winter (Oct. - May)								
30	Critical-peak kWh	9	MWh	@	0.020607	0	0.023674	0	0
31	High-peak kWh	132	MWh	@	0.013738	2	0.015783	2	0
32	Mid-peak kWh	196	MWh	@	0.013554	3	0.015570	3	0
33	Off-peak kWh	4,797	MWh	@	0.011877	57	0.013645	65	8
34	Total Transmission					$ 119		$ 137	$ 18
	Delivery								
35	System Access	53	Bills	@	200.00	$ 11	200.00	$ 11	$ -
36	Maximum kW	59	MW	@	5.16	303	6.13	360	57
37	Power Factor Adjustment					(1)		(1)	(0)
38	Distribution	9,214	MWh	@	-	-	-	-	-
39	Total Delivery					$ 313		$ 369	$ 57
40	Total Full Service					$ 939		$ 1,045	$ 106

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Metered Lighting (GML)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
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Witness: AMGast
Date: May 2023

	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
1	Secondary All kWh	11,686	MWh	@	0.045428	$ 531	0.052717	$ 616	$ 85
2	Primary All kWh	509	MWh	@	0.022294	11	0.025871	13	2
3	Annual PSCR Factor	12,195	MWh	@	0.005970	73	0.005970	73	-
4	Total Production					$ 615		$ 702	$ 87
	Transmission								
5	Secondary All kWh	11,686	MWh	@	0.008754	102	0.009919	116	14
6	Primary All kWh	509	MWh	@	0.004296	2	0.004868	2	0
7	Total Transmission	12,195				104		118	14
	Delivery								
	Secondary								
8	System Access	4,739	Bills	@	10.00	$ 47	10.00	$ 47	$ -
9	Distribution	11,686	MWh	@	0.064240	751	0.084486	987	237
	Primary								
10	System Access	110	Bills	@	20.00	$ 2	20.00	$ 2	$ -
11	Distribution	509	MWh	@	0.048956	25	0.064385	33	8
12	Total Delivery					$ 825		$ 1,070	$ 244
13	Total Full Service					$ 1,545		$ 1,890	$ 345

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Universal Unmetered Light (UUL)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
Page: 21 of 23
Witness: AMGast
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)		(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
Line		Billing Determinants							Present					Proposed					
						Customer	Company		Customer Owned		Company Owned			Customer Owned		Company Owned			Net Increase
No.	Description	Customer	Company	Units	Watts	MWh	MWh		Production	Delivery	Production	Delivery	Revenue	Production	Delivery	Production	Delivery	Revenue	/ (Decrease)
									$/Light	$/Light	$/Light	$/Light	$000	$/Light	$/Light	$/Light	$/Light	$000	$000
1	15 - 24 Watts	12	-	Lights	20	0	-	@	0.35	5.67	0.35	8.67	$ 0	0.41	7.63	0.41	10.63	$ 0	$ 0
2	25 - 34 Watts	-	-	Lights	30	-	-	@	0.53	6.11	0.53	9.11	-	0.61	8.28	0.61	11.28	-	-
3	35 - 44 Watts	1,524	31,068	Lights	40	21	430	@	0.71	6.55	0.71	9.55	330	0.82	8.92	0.82	11.92	411	81
4	45 - 54 Watts	1,308	922,740	Lights	50	23	15,986	@	0.89	7.00	0.89	10.00	10,059	1.03	9.57	1.03	12.57	12,563	2,504
5	55 - 64 Watts	1,092	72	Lights	60	23	1	@	1.07	7.44	1.07	10.44	10	1.24	10.21	1.24	13.21	14	3
6	65 - 74 Watts	312	124,344	Lights	70	8	3,025	@	1.25	7.88	1.25	10.88	1,511	1.44	10.86	1.44	13.86	1,906	395
7	75 - 84 Watts	72	2,412	Lights	80	2	67	@	1.43	8.32	1.43	11.32	31	1.65	11.51	1.65	14.51	40	8
8	85 - 94 Watts	-	120,000	Lights	90	-	3,759	@	1.61	8.76	1.61	11.76	1,604	1.86	12.15	1.86	15.15	2,041	437
9	95 - 104 Watts	-	180	Lights	100	-	6	@	1.78	9.20	1.78	12.20	3	2.07	12.80	2.07	15.80	3	1
10	105 - 114 Watts	-	7,092	Lights	110	-	272	@	1.96	9.64	1.96	12.64	104	2.27	13.44	2.27	16.44	133	29
11	115 - 124 Watts	804	648,348	Lights	120	34	27,117	@	2.14	10.08	2.14	13.08	9,878	2.48	14.09	2.48	17.09	12,701	2,824
12	125 - 134 Watts	-	276	Lights	130	-	13	@	2.32	10.53	2.32	13.53	4	2.69	14.73	2.69	17.73	6	1
13	135 - 144 Watts	-	-	Lights	140	-	-	@	2.50	10.97	2.50	13.97	-	2.90	15.38	2.90	18.38	-	-
14	145 - 154 Watts	-	84	Lights	150	-	4	@	2.68	11.41	2.68	14.41	1	3.11	16.03	3.11	19.03	2	0
15	155 - 164 Watts	-	-	Lights	160	-	-	@	2.86	11.85	2.86	14.85	-	3.31	16.67	3.31	19.67	-	-
16	165 - 174 Watts	1,404	94,668	Lights	170	83	5,616	@	3.04	12.29	3.04	15.29	1,757	3.52	17.32	3.52	20.32	2,286	529
17	175 - 184 Watts	-	-	Lights	180	-	-	@	3.22	12.73	3.22	15.73	-	3.73	17.96	3.73	20.96	-	-
18	185 - 194 Watts	-	156	Lights	190	-	10	@	3.40	13.17	3.40	16.17	3	3.94	18.61	3.94	21.61	4	1
19	195 - 204 Watts	-	48	Lights	200	-	3	@	3.58	13.62	3.58	16.62	1	4.14	19.26	4.14	22.26	1	0
20	205 - 214 Watts	504	12,588	Lights	210	37	923	@	3.76	14.06	3.76	17.06	271	4.35	19.90	4.35	22.90	355	84
21	215 - 224 Watts	-	-	Lights	220	-	-	@	3.94	14.50	3.94	17.50	-	4.56	20.55	4.56	23.55	-	-
22	225 - 234 Watts	-	-	Lights	230	-	-	@	4.12	14.94	4.12	17.94	-	4.77	21.19	4.77	24.19	-	-
23	235 - 244 Watts	-	-	Lights	240	-	-	@	4.30	15.38	4.30	18.38	-	4.98	21.84	4.98	24.84	-	-
24	245 - 254 Watts	60	204	Lights	250	5	18	@	4.48	15.82	4.48	18.82	6	5.18	22.49	5.18	25.49	8	2
25	255 - 264 Watts	-	-	Lights	260	-	-	@	4.65	16.26	4.65	19.26	-	5.39	23.13	5.39	26.13	-	-
26	265 - 274 Watts	-	-	Lights	270	-	-	@	4.83	16.71	4.83	19.71	-	5.60	23.78	5.60	26.78	-	-
27	275 - 284 Watts	432	3,756	Lights	280	42	367	@	5.01	17.15	5.01	20.15	104	5.81	24.42	5.81	27.42	138	34
28	285 - 294 Watts	12	1,020	Lights	290	1	103	@	5.19	17.59	5.19	20.59	27	6.01	25.07	6.01	28.07	35	9
29	295 - 304 Watts	-	-	Lights	300	-	-	@	5.37	18.03	5.37	21.03	-	6.22	25.72	6.22	28.72	-	-
30	305 - 314 Watts	108	-	Lights	310	12	-	@	5.55	18.47	5.55	21.47	3	6.43	26.36	6.43	29.36	4	1
31	315 - 324 Watts	540	65,916	Lights	320	60	7,371	@	5.73	18.91	5.73	21.91	1,835	6.64	27.01	6.64	30.01	2,434	599
32	325 - 334 Watts	-	-	Lights	330	-	-	@	5.91	19.35	5.91	22.35	-	6.85	27.65	6.85	30.65	-	-
33	335 - 344 Watts	-	-	Lights	340	-	-	@	6.09	19.80	6.09	22.80	-	7.05	28.30	7.05	31.30	-	-
34	345 - 354 Watts	-	-	Lights	350	-	-	@	6.27	20.24	6.27	23.24	-	7.26	28.94	7.26	31.94	-	-
35	355 - 364 Watts	-	-	Lights	360	-	-	@	6.45	20.68	6.45	23.68	-	7.47	29.59	7.47	32.59	-	-
36	365 - 374 Watts	-	-	Lights	370	-	-	@	6.63	21.12	6.63	24.12	-	7.68	30.24	7.68	33.24	-	-
37	375 - 384 Watts	-	-	Lights	380	-	-	@	6.81	21.56	6.81	24.56	-	7.88	30.88	7.88	33.88	-	-
38	385 - 394 Watts	-	-	Lights	390	-	-	@	6.99	22.00	6.99	25.00	-	8.09	31.53	8.09	34.53	-	-
39	395 - 404 Watts	-	-	Lights	400	-	-	@	7.17	22.44	7.17	25.44	-	8.30	32.17	8.30	35.17	-	-
40	405 - 414 Watts	24	-	Lights	410	3	-	@	7.35	22.89	7.35	25.89	1	8.51	32.82	8.51	35.82	1	0
41	415 - 424 Watts	-	-	Lights	420	-	-	@	7.52	23.33	7.52	26.33	-	8.72	33.47	8.72	36.47	-	-
42	425 - 434 Watts	-	-	Lights	430	-	-	@	7.70	23.77	7.70	26.77	-	8.92	34.11	8.92	37.11	-	-
43	435 - 444 Watts	-	-	Lights	440	-	-	@	7.88	24.21	7.88	27.21	-	9.13	34.76	9.13	37.76	-	-
44	445 - 454 Watts	-	-	Lights	450	-	-	@	8.06	24.65	8.06	27.65	-	9.34	35.40	9.34	38.40	-	-
45	455 - 464 Watts	852	1,212	Lights	460	137	195	@	8.24	25.09	8.24	28.09	72	9.55	36.05	9.55	39.05	98	25
46	465 - 474 Watts	-	-	Lights	470	-	-	@	8.42	25.53	8.42	28.53	-	9.75	36.70	9.75	39.70	-	-
47	475 - 484 Watts	180	35,928	Lights	480	30	6,030	@	8.60	25.98	8.60	28.98	1,356	9.96	37.34	9.96	40.34	1,816	459
48	Conversion Credit	-	129,840	Lights								(6.04)	(784)				(8.35)	(1,084)	(300)
49	Annual PSCR Factor	9,240	2,072,112	Lights		521	71,317		0.005970		0.005970		429	0.005970		0.005970		429	-
50	Total Unmetered LED	9,240	2,072,112	Lights		521	71,317						$ 28,616					$ 36,344	$ 7,728

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Unmetered Service (GU)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
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Witness: AMGast
Date: May 2023

	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	FULL SERVICE								
	Production								
1	Non-capacity All kWh	93,426	MWh	@	0.051503	$ 4,812	0.061382	$ 5,735	$ 923
2	Capacity All kWh	93,426	MWh	@	0.013565	1,267	0.002887	270	(998)
3	Annual PSCR Factor	93,426	MWh	@	0.005970	558	0.005970	558	-
4	Total Production					$ 6,637		$ 6,562	$ (75)
	Transmission								
5	All kWh	93,426	MWh	@	0.012151	1,135	0.013147	1,228	93
	Delivery								
6	System Access	5,536	Bills	@	2.00	$ 11	2.00	$ 11	$ -
7	Distribution	93,426	MWh	@	0.022612	2,113	0.027235	2,544	432
8	Total Delivery					$ 2,124		$ 2,556	$ 432
9	Total Full Service					$ 9,896		$ 10,346	$ 450

Schedule F-3.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Present and Proposed Revenue Detail

Large Self-generation (GSG-2)

Case No.: U-21389
Exhibit No.: A-16 (AMG-3)
Schedule: F-3.0
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Witness: AMGast
Date: May 2023

	(a)	(b)	(c)		(d)	(e)	(f)	(g)	(h)
Line		Billing Determinants			Present		Proposed		Net Increase
No.	Description	Quantity	Units		Rate	Revenue	Rate	Revenue	/ (Decrease)
					$/unit	$000	$/unit	$000	$000
	STANDBY SERVICE								
	Production								
	Voltage Level 1								
1	On-peak kW-day	158	MW	@	11.33	$ 1,785	11.33	$ 1,785	$ -
2	All kWh	46,664	MWh	@	0.047444	2,214	0.047444	2,214	-
	Voltage Level 2								
3	On-peak kW-day	157	MW	@	11.49	1,800	11.49	1,800	-
4	All kWh	54,438	MWh	@	0.066009	3,593	0.066009	3,593	-
	Voltage Level 3								
5	On-peak kW-day	9	MW	@	11.67	110	11.67	110	-
6	All kWh	592	MWh	@	0.048878	29	0.048878	29	-
7	Power Factor Adjustment					129		129	-
8	Total Production					$ 9,661		$ 9,661	$ -
	Transmission								
	Voltage Level 1								
9	On-peak kW-day	158	MW	@	2.65	$ 418	2.65	$ 418	$ -
	Voltage Level 2								
10	On-peak kW-day	157	MW	@	2.69	421	2.69	421	-
	Voltage Level 3								
11	On-peak kW-day	9	MW	@	2.73	26	2.73	26	-
12	Total Transmission					$ 865		$ 865	$ -
	Delivery								
	System Access								
	Voltage Level 1								
13	Standby	48	Bills	@	200.00	$ 10	100.00	$ 5	$ (5)
14	Supplemental	36	Bills	@	100.00	4	100.00	4	-
15	Maximum kW	839	MW	@	0.74	621	0.95	797	176
16	Interconnect	355	MW	@	(0.74)	(263)	(0.95)	(337)	(75)
17	Substation Ownership	512	MW	@	(0.46)	(236)	(0.58)	(297)	(61)
	Voltage Level 2								
18	Standby	24	Bills	@	200.00	$ 5	100.00	$ 2	$ (2)
19	Supplemental	60	Bills	@	100.00	6	100.00	6	-
20	Maximum kW	599	MW	@	2.62	1,570	3.19	1,912	342
21	Substation Ownership	200	MW	@	(0.62)	(124)	(0.74)	(148)	(24)
	Voltage Level 3								
22	Standby	-	Bills	@	200.00	$ -	100.00	$ -	$ -
23	Supplemental	12	Bills	@	100.00	1	100.00	1	-
24	Maximum kW	14	MW	@	5.16	72	6.13	86	14
25	Power Factor Adjustment					22		26	5
26	Total Delivery					$ 1,687		$ 2,056	$ 369
27	Total Standby Service					$ 12,214		$ 12,582	$ 369

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Residential Summer On-peak RSP

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
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Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	5	8.89	8.91	0.02	0.2%	178.1	8.80	8.84	0.04	0.5%	176.7
2	50	16.88	17.06	0.18	1.1%	34.1	15.97	16.37	0.40	2.5%	32.7
3	100	25.76	26.12	0.36	1.4%	26.1	23.93	24.73	0.80	3.3%	24.7
4	150	34.64	35.19	0.55	1.6%	23.5	31.90	33.10	1.20	3.8%	22.1
5	200	43.52	44.25	0.73	1.7%	22.1	39.87	41.47	1.60	4.0%	20.7
6	250	52.40	53.31	0.91	1.7%	21.3	47.84	49.83	2.00	4.2%	19.9
7	300	61.28	62.37	1.09	1.8%	20.8	55.80	58.20	2.39	4.3%	19.4
8	350	70.16	71.44	1.28	1.8%	20.4	63.77	66.56	2.79	4.4%	19.0
9	400	79.04	80.50	1.46	1.8%	20.1	71.74	74.93	3.19	4.5%	18.7
10	450	87.92	89.56	1.64	1.9%	19.9	79.71	83.30	3.59	4.5%	18.5
11	500	96.80	98.62	1.82	1.9%	19.7	87.67	91.66	3.99	4.6%	18.3
12	550	105.68	107.69	2.01	1.9%	19.6	95.64	100.03	4.39	4.6%	18.2
13	600	114.56	116.75	2.19	1.9%	19.5	103.61	108.40	4.79	4.6%	18.1
14	650	123.44	125.81	2.37	1.9%	19.4	111.58	116.76	5.19	4.6%	18.0
15	700	132.32	134.87	2.55	1.9%	19.3	119.54	125.13	5.59	4.7%	17.9
16	750	141.20	143.94	2.73	1.9%	19.2	127.51	133.50	5.99	4.7%	17.8
17	800	150.08	153.00	2.92	1.9%	19.1	135.48	141.86	6.38	4.7%	17.7
18	850	158.96	162.06	3.10	1.9%	19.1	143.44	150.23	6.78	4.7%	17.7
19	900	167.84	171.12	3.28	2.0%	19.0	151.41	158.60	7.18	4.7%	17.6
20	950	176.72	180.19	3.46	2.0%	19.0	159.38	166.96	7.58	4.8%	17.6
21	1,000	185.60	189.25	3.65	2.0%	18.9	167.35	175.33	7.98	4.8%	17.5
22	1,500	274.41	279.87	5.47	2.0%	18.7	247.02	258.99	11.97	4.8%	17.3
23	2,000	363.21	370.50	7.29	2.0%	18.5	326.69	342.66	15.96	4.9%	17.1
24	2,500	452.01	461.12	9.12	2.0%	18.4	406.37	426.32	19.95	4.9%	17.1
25	3,000	540.81	551.75	10.94	2.0%	18.4	486.04	509.98	23.94	4.9%	17.0
26	3,500	629.61	642.37	12.76	2.0%	18.4	565.71	593.65	27.93	4.9%	17.0
27	4,000	718.41	733.00	14.58	2.0%	18.3	645.39	677.31	31.92	4.9%	16.9
28	4,500	807.22	823.62	16.41	2.0%	18.3	725.06	760.98	35.91	5.0%	16.9
29	5,000	896.02	914.25	18.23	2.0%	18.3	804.74	844.64	39.90	5.0%	16.9

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Residential Summer On-peak RSP
Senior Citizen Provision RSC

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	2 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	5	4.89	4.91	0.02	0.4%	98.1	4.80	4.84	0.04	0.8%	96.7
2	50	12.88	13.06	0.18	1.4%	26.1	11.97	12.37	0.40	3.3%	24.7
3	100	21.76	22.12	0.36	1.7%	22.1	19.93	20.73	0.80	4.0%	20.7
4	150	30.64	31.19	0.55	1.8%	20.8	27.90	29.10	1.20	4.3%	19.4
5	200	39.52	40.25	0.73	1.8%	20.1	35.87	37.47	1.60	4.5%	18.7
6	250	48.40	49.31	0.91	1.9%	19.7	43.84	45.83	2.00	4.6%	18.3
7	300	57.28	58.37	1.09	1.9%	19.5	51.80	54.20	2.39	4.6%	18.1
8	350	66.16	67.44	1.28	1.9%	19.3	59.77	62.56	2.79	4.7%	17.9
9	400	75.04	76.50	1.46	1.9%	19.1	67.74	70.93	3.19	4.7%	17.7
10	450	83.92	85.56	1.64	2.0%	19.0	75.71	79.30	3.59	4.7%	17.6
11	500	92.80	94.62	1.82	2.0%	18.9	83.67	87.66	3.99	4.8%	17.5
12	550	101.68	103.69	2.01	2.0%	18.9	91.64	96.03	4.39	4.8%	17.5
13	600	110.56	112.75	2.19	2.0%	18.8	99.61	104.40	4.79	4.8%	17.4
14	650	119.44	121.81	2.37	2.0%	18.7	107.58	112.76	5.19	4.8%	17.3
15	700	128.32	130.87	2.55	2.0%	18.7	115.54	121.13	5.59	4.8%	17.3
16	750	137.20	139.94	2.73	2.0%	18.7	123.51	129.50	5.99	4.8%	17.3
17	800	146.08	149.00	2.92	2.0%	18.6	131.48	137.86	6.38	4.9%	17.2
18	850	154.96	158.06	3.10	2.0%	18.6	139.44	146.23	6.78	4.9%	17.2
19	900	163.84	167.12	3.28	2.0%	18.6	147.41	154.60	7.18	4.9%	17.2
20	950	172.72	176.19	3.46	2.0%	18.5	155.38	162.96	7.58	4.9%	17.2
21	1,000	181.60	185.25	3.65	2.0%	18.5	163.35	171.33	7.98	4.9%	17.1
22	1,500	270.41	275.87	5.47	2.0%	18.4	243.02	254.99	11.97	4.9%	17.0
23	2,000	359.21	366.50	7.29	2.0%	18.3	322.69	338.66	15.96	4.9%	16.9
24	2,500	448.01	457.12	9.12	2.0%	18.3	402.37	422.32	19.95	5.0%	16.9
25	3,000	536.81	547.75	10.94	2.0%	18.3	482.04	505.98	23.94	5.0%	16.9
26	3,500	625.61	638.37	12.76	2.0%	18.2	561.71	589.65	27.93	5.0%	16.8
27	4,000	714.41	729.00	14.58	2.0%	18.2	641.39	673.31	31.92	5.0%	16.8
28	4,500	803.22	819.62	16.41	2.0%	18.2	721.06	756.98	35.91	5.0%	16.8
29	5,000	892.02	910.25	18.23	2.0%	18.2	800.74	840.64	39.90	5.0%	16.8

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Residential Summer On-peak RSP
Income Assistance Provision RIA

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	3 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	5	0.89	0.91	0.02	2.1%	18.1	0.80	0.84	0.04	5.0%	16.7
2	50	8.88	9.06	0.18	2.1%	18.1	7.97	8.37	0.40	5.0%	16.7
3	100	17.76	18.12	0.36	2.1%	18.1	15.93	16.73	0.80	5.0%	16.7
4	150	26.64	27.19	0.55	2.1%	18.1	23.90	25.10	1.20	5.0%	16.7
5	200	35.52	36.25	0.73	2.1%	18.1	31.87	33.47	1.60	5.0%	16.7
6	250	44.40	45.31	0.91	2.1%	18.1	39.84	41.83	2.00	5.0%	16.7
7	300	53.28	54.37	1.09	2.1%	18.1	47.80	50.20	2.39	5.0%	16.7
8	350	62.16	63.44	1.28	2.1%	18.1	55.77	58.56	2.79	5.0%	16.7
9	400	71.04	72.50	1.46	2.1%	18.1	63.74	66.93	3.19	5.0%	16.7
10	450	79.92	81.56	1.64	2.1%	18.1	71.71	75.30	3.59	5.0%	16.7
11	500	88.80	90.62	1.82	2.1%	18.1	79.67	83.66	3.99	5.0%	16.7
12	550	97.68	99.69	2.01	2.1%	18.1	87.64	92.03	4.39	5.0%	16.7
13	600	106.56	108.75	2.19	2.1%	18.1	95.61	100.40	4.79	5.0%	16.7
14	650	115.44	117.81	2.37	2.1%	18.1	103.58	108.76	5.19	5.0%	16.7
15	700	124.32	126.87	2.55	2.1%	18.1	111.54	117.13	5.59	5.0%	16.7
16	750	133.20	135.94	2.73	2.1%	18.1	119.51	125.50	5.99	5.0%	16.7
17	800	142.08	145.00	2.92	2.1%	18.1	127.48	133.86	6.38	5.0%	16.7
18	850	150.96	154.06	3.10	2.1%	18.1	135.44	142.23	6.78	5.0%	16.7
19	900	159.84	163.12	3.28	2.1%	18.1	143.41	150.60	7.18	5.0%	16.7
20	950	168.72	172.19	3.46	2.1%	18.1	151.38	158.96	7.58	5.0%	16.7
21	1,000	177.60	181.25	3.65	2.1%	18.1	159.35	167.33	7.98	5.0%	16.7
22	1,500	266.41	271.87	5.47	2.1%	18.1	239.02	250.99	11.97	5.0%	16.7
23	2,000	355.21	362.50	7.29	2.1%	18.1	318.69	334.66	15.96	5.0%	16.7
24	2,500	444.01	453.12	9.12	2.1%	18.1	398.37	418.32	19.95	5.0%	16.7
25	3,000	532.81	543.75	10.94	2.1%	18.1	478.04	501.98	23.94	5.0%	16.7
26	3,500	621.61	634.37	12.76	2.1%	18.1	557.71	585.65	27.93	5.0%	16.7
27	4,000	710.41	725.00	14.58	2.1%	18.1	637.39	669.31	31.92	5.0%	16.7
28	4,500	799.22	815.62	16.41	2.1%	18.1	717.06	752.98	35.91	5.0%	16.7
29	5,000	888.02	906.25	18.23	2.1%	18.1	796.74	836.64	39.90	5.0%	16.7

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Residential Smart Hours RSH

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
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Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	5	8.89	8.91	0.02	0.2%	178.1	8.79	8.83	0.04	0.5%	176.7
2	50	16.87	17.06	0.18	1.1%	34.1	15.93	16.34	0.41	2.6%	32.7
3	100	25.75	26.11	0.37	1.4%	26.1	23.87	24.69	0.82	3.4%	24.7
4	150	34.62	35.17	0.55	1.6%	23.4	31.80	33.03	1.23	3.9%	22.0
5	200	43.49	44.22	0.73	1.7%	22.1	39.74	41.38	1.64	4.1%	20.7
6	250	52.36	53.28	0.92	1.7%	21.3	47.67	49.72	2.05	4.3%	19.9
7	300	61.24	62.33	1.10	1.8%	20.8	55.61	58.07	2.46	4.4%	19.4
8	350	70.11	71.39	1.28	1.8%	20.4	63.54	66.41	2.87	4.5%	19.0
9	400	78.98	80.45	1.47	1.9%	20.1	71.48	74.76	3.28	4.6%	18.7
10	450	87.85	89.50	1.65	1.9%	19.9	79.41	83.10	3.69	4.7%	18.5
11	500	96.73	98.56	1.83	1.9%	19.7	87.34	91.45	4.10	4.7%	18.3
12	550	105.60	107.61	2.01	1.9%	19.6	95.28	99.79	4.51	4.7%	18.1
13	600	114.47	116.67	2.20	1.9%	19.4	103.21	108.14	4.92	4.8%	18.0
14	650	123.34	125.72	2.38	1.9%	19.3	111.15	116.48	5.34	4.8%	17.9
15	700	132.22	134.78	2.56	1.9%	19.3	119.08	124.83	5.75	4.8%	17.8
16	750	141.09	143.83	2.75	1.9%	19.2	127.02	133.17	6.16	4.8%	17.8
17	800	149.96	152.89	2.93	2.0%	19.1	134.95	141.52	6.57	4.9%	17.7
18	850	158.83	161.95	3.11	2.0%	19.1	142.88	149.86	6.98	4.9%	17.6
19	900	167.71	171.00	3.30	2.0%	19.0	150.82	158.21	7.39	4.9%	17.6
20	950	176.58	180.06	3.48	2.0%	19.0	158.75	166.55	7.80	4.9%	17.5
21	1,000	185.45	189.11	3.66	2.0%	18.9	166.69	174.90	8.21	4.9%	17.5
22	1,500	274.18	279.67	5.49	2.0%	18.6	246.03	258.34	12.31	5.0%	17.2
23	2,000	362.90	370.23	7.33	2.0%	18.5	325.38	341.79	16.42	5.0%	17.1
24	2,500	451.63	460.78	9.16	2.0%	18.4	404.72	425.24	20.52	5.1%	17.0
25	3,000	540.35	551.34	10.99	2.0%	18.4	484.06	508.69	24.62	5.1%	17.0
26	3,500	629.08	641.89	12.82	2.0%	18.3	563.41	592.14	28.73	5.1%	16.9
27	4,000	717.80	732.45	14.65	2.0%	18.3	642.75	675.58	32.83	5.1%	16.9
28	4,500	806.53	823.01	16.48	2.0%	18.3	722.10	759.03	36.94	5.1%	16.9
29	5,000	895.25	913.56	18.31	2.0%	18.3	801.44	842.48	41.04	5.1%	16.8

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Residential Smart Hours RSH
Senior Citizen Provision RSC

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	5 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	5	4.89	4.91	0.02	0.4%	98.1	4.79	4.83	0.04	0.9%	96.7
2	50	12.87	13.06	0.18	1.4%	26.1	11.93	12.34	0.41	3.4%	24.7
3	100	21.75	22.11	0.37	1.7%	22.1	19.87	20.69	0.82	4.1%	20.7
4	150	30.62	31.17	0.55	1.8%	20.8	27.80	29.03	1.23	4.4%	19.4
5	200	39.49	40.22	0.73	1.9%	20.1	35.74	37.38	1.64	4.6%	18.7
6	250	48.36	49.28	0.92	1.9%	19.7	43.67	45.72	2.05	4.7%	18.3
7	300	57.24	58.33	1.10	1.9%	19.4	51.61	54.07	2.46	4.8%	18.0
8	350	66.11	67.39	1.28	1.9%	19.3	59.54	62.41	2.87	4.8%	17.8
9	400	74.98	76.45	1.47	2.0%	19.1	67.48	70.76	3.28	4.9%	17.7
10	450	83.85	85.50	1.65	2.0%	19.0	75.41	79.10	3.69	4.9%	17.6
11	500	92.73	94.56	1.83	2.0%	18.9	83.34	87.45	4.10	4.9%	17.5
12	550	101.60	103.61	2.01	2.0%	18.8	91.28	95.79	4.51	4.9%	17.4
13	600	110.47	112.67	2.20	2.0%	18.8	99.21	104.14	4.92	5.0%	17.4
14	650	119.34	121.72	2.38	2.0%	18.7	107.15	112.48	5.34	5.0%	17.3
15	700	128.22	130.78	2.56	2.0%	18.7	115.08	120.83	5.75	5.0%	17.3
16	750	137.09	139.83	2.75	2.0%	18.6	123.02	129.17	6.16	5.0%	17.2
17	800	145.96	148.89	2.93	2.0%	18.6	130.95	137.52	6.57	5.0%	17.2
18	850	154.83	157.95	3.11	2.0%	18.6	138.88	145.86	6.98	5.0%	17.2
19	900	163.71	167.00	3.30	2.0%	18.6	146.82	154.21	7.39	5.0%	17.1
20	950	172.58	176.06	3.48	2.0%	18.5	154.75	162.55	7.80	5.0%	17.1
21	1,000	181.45	185.11	3.66	2.0%	18.5	162.69	170.90	8.21	5.0%	17.1
22	1,500	270.18	275.67	5.49	2.0%	18.4	242.03	254.34	12.31	5.1%	17.0
23	2,000	358.90	366.23	7.33	2.0%	18.3	321.38	337.79	16.42	5.1%	16.9
24	2,500	447.63	456.78	9.16	2.0%	18.3	400.72	421.24	20.52	5.1%	16.8
25	3,000	536.35	547.34	10.99	2.0%	18.2	480.06	504.69	24.62	5.1%	16.8
26	3,500	625.08	637.89	12.82	2.1%	18.2	559.41	588.14	28.73	5.1%	16.8
27	4,000	713.80	728.45	14.65	2.1%	18.2	638.75	671.58	32.83	5.1%	16.8
28	4,500	802.53	819.01	16.48	2.1%	18.2	718.10	755.03	36.94	5.1%	16.8
29	5,000	891.25	909.56	18.31	2.1%	18.2	797.44	838.48	41.04	5.1%	16.8

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Residential Smart Hours RSH
Income Assistance Provision RIA

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	6 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	5	0.89	0.91	0.02	2.1%	18.1	0.79	0.83	0.04	5.2%	16.7
2	50	8.87	9.06	0.18	2.1%	18.1	7.93	8.34	0.41	5.2%	16.7
3	100	17.75	18.11	0.37	2.1%	18.1	15.87	16.69	0.82	5.2%	16.7
4	150	26.62	27.17	0.55	2.1%	18.1	23.80	25.03	1.23	5.2%	16.7
5	200	35.49	36.22	0.73	2.1%	18.1	31.74	33.38	1.64	5.2%	16.7
6	250	44.36	45.28	0.92	2.1%	18.1	39.67	41.72	2.05	5.2%	16.7
7	300	53.24	54.33	1.10	2.1%	18.1	47.61	50.07	2.46	5.2%	16.7
8	350	62.11	63.39	1.28	2.1%	18.1	55.54	58.41	2.87	5.2%	16.7
9	400	70.98	72.45	1.47	2.1%	18.1	63.48	66.76	3.28	5.2%	16.7
10	450	79.85	81.50	1.65	2.1%	18.1	71.41	75.10	3.69	5.2%	16.7
11	500	88.73	90.56	1.83	2.1%	18.1	79.34	83.45	4.10	5.2%	16.7
12	550	97.60	99.61	2.01	2.1%	18.1	87.28	91.79	4.51	5.2%	16.7
13	600	106.47	108.67	2.20	2.1%	18.1	95.21	100.14	4.92	5.2%	16.7
14	650	115.34	117.72	2.38	2.1%	18.1	103.15	108.48	5.34	5.2%	16.7
15	700	124.22	126.78	2.56	2.1%	18.1	111.08	116.83	5.75	5.2%	16.7
16	750	133.09	135.83	2.75	2.1%	18.1	119.02	125.17	6.16	5.2%	16.7
17	800	141.96	144.89	2.93	2.1%	18.1	126.95	133.52	6.57	5.2%	16.7
18	850	150.83	153.95	3.11	2.1%	18.1	134.88	141.86	6.98	5.2%	16.7
19	900	159.71	163.00	3.30	2.1%	18.1	142.82	150.21	7.39	5.2%	16.7
20	950	168.58	172.06	3.48	2.1%	18.1	150.75	158.55	7.80	5.2%	16.7
21	1,000	177.45	181.11	3.66	2.1%	18.1	158.69	166.90	8.21	5.2%	16.7
22	1,500	266.18	271.67	5.49	2.1%	18.1	238.03	250.34	12.31	5.2%	16.7
23	2,000	354.90	362.23	7.33	2.1%	18.1	317.38	333.79	16.42	5.2%	16.7
24	2,500	443.63	452.78	9.16	2.1%	18.1	396.72	417.24	20.52	5.2%	16.7
25	3,000	532.35	543.34	10.99	2.1%	18.1	476.06	500.69	24.62	5.2%	16.7
26	3,500	621.08	633.89	12.82	2.1%	18.1	555.41	584.14	28.73	5.2%	16.7
27	4,000	709.80	724.45	14.65	2.1%	18.1	634.75	667.58	32.83	5.2%	16.7
28	4,500	798.53	815.01	16.48	2.1%	18.1	714.10	751.03	36.94	5.2%	16.7
29	5,000	887.25	905.56	18.31	2.1%	18.1	793.44	834.48	41.04	5.2%	16.7

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Residential Nighttime Savers RPM

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	7 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	5	8.85	8.88	0.03	0.4%	177.7	8.78	8.82	0.05	0.5%	176.5
2	50	16.51	16.83	0.32	1.9%	33.7	15.77	16.24	0.47	3.0%	32.5
3	100	25.02	25.66	0.63	2.5%	25.7	23.55	24.48	0.93	4.0%	24.5
4	150	33.53	34.48	0.95	2.8%	23.0	31.32	32.72	1.40	4.5%	21.8
5	200	42.04	43.31	1.27	3.0%	21.7	39.09	40.96	1.87	4.8%	20.5
6	250	50.56	52.14	1.58	3.1%	20.9	46.87	49.20	2.33	5.0%	19.7
7	300	59.07	60.97	1.90	3.2%	20.3	54.64	57.44	2.80	5.1%	19.1
8	350	67.58	69.79	2.22	3.3%	19.9	62.42	65.68	3.27	5.2%	18.8
9	400	76.09	78.62	2.53	3.3%	19.7	70.19	73.92	3.73	5.3%	18.5
10	450	84.60	87.45	2.85	3.4%	19.4	77.96	82.16	4.20	5.4%	18.3
11	500	93.11	96.28	3.16	3.4%	19.3	85.74	90.40	4.66	5.4%	18.1
12	550	101.62	105.10	3.48	3.4%	19.1	93.51	98.64	5.13	5.5%	17.9
13	600	110.13	113.93	3.80	3.4%	19.0	101.28	106.88	5.60	5.5%	17.8
14	650	118.64	122.76	4.11	3.5%	18.9	109.06	115.12	6.06	5.6%	17.7
15	700	127.16	131.59	4.43	3.5%	18.8	116.83	123.36	6.53	5.6%	17.6
16	750	135.67	140.41	4.75	3.5%	18.7	124.60	131.60	7.00	5.6%	17.5
17	800	144.18	149.24	5.06	3.5%	18.7	132.38	139.84	7.46	5.6%	17.5
18	850	152.69	158.07	5.38	3.5%	18.6	140.15	148.08	7.93	5.7%	17.4
19	900	161.20	166.90	5.70	3.5%	18.5	147.93	156.32	8.40	5.7%	17.4
20	950	169.71	175.72	6.01	3.5%	18.5	155.70	164.56	8.86	5.7%	17.3
21	1,000	178.22	184.55	6.33	3.6%	18.5	163.47	172.80	9.33	5.7%	17.3
22	1,500	263.33	272.83	9.49	3.6%	18.2	241.21	255.20	13.99	5.8%	17.0
23	2,000	348.44	361.10	12.66	3.6%	18.1	318.95	337.60	18.66	5.8%	16.9
24	2,500	433.56	449.38	15.82	3.6%	18.0	396.68	420.00	23.32	5.9%	16.8
25	3,000	518.67	537.65	18.99	3.7%	17.9	474.42	502.40	27.99	5.9%	16.7
26	3,500	603.78	625.93	22.15	3.7%	17.9	552.15	584.81	32.65	5.9%	16.7
27	4,000	688.89	714.20	25.32	3.7%	17.9	629.89	667.21	37.32	5.9%	16.7
28	4,500	774.00	802.48	28.48	3.7%	17.8	707.63	749.61	41.98	5.9%	16.7
29	5,000	859.11	890.76	31.65	3.7%	17.8	785.36	832.01	46.64	5.9%	16.6

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Residential Nighttime Savers RPM
Senior Citizen Provision RSC

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	8 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	5	4.85	4.88	0.02	0.5%	97.5	4.78	4.82	0.05	1.0%	96.5
2	50	12.51	12.75	0.24	1.9%	25.5	11.77	12.24	0.47	4.0%	24.5
3	100	21.02	21.50	0.48	2.3%	21.5	19.55	20.48	0.93	4.8%	20.5
4	150	29.53	30.26	0.72	2.4%	20.2	27.32	28.72	1.40	5.1%	19.1
5	200	38.04	39.01	0.96	2.5%	19.5	35.09	36.96	1.87	5.3%	18.5
6	250	46.56	47.76	1.20	2.6%	19.1	42.87	45.20	2.33	5.4%	18.1
7	300	55.07	56.51	1.44	2.6%	18.8	50.64	53.44	2.80	5.5%	17.8
8	350	63.58	65.26	1.68	2.6%	18.6	58.42	61.68	3.27	5.6%	17.6
9	400	72.09	74.01	1.92	2.7%	18.5	66.19	69.92	3.73	5.6%	17.5
10	450	80.60	82.77	2.17	2.7%	18.4	73.96	78.16	4.20	5.7%	17.4
11	500	89.11	91.52	2.41	2.7%	18.3	81.74	86.40	4.66	5.7%	17.3
12	550	97.62	100.27	2.65	2.7%	18.2	89.51	94.64	5.13	5.7%	17.2
13	600	106.13	109.02	2.89	2.7%	18.2	97.28	102.88	5.60	5.8%	17.1
14	650	114.64	117.77	3.13	2.7%	18.1	105.06	111.12	6.06	5.8%	17.1
15	700	123.16	126.52	3.37	2.7%	18.1	112.83	119.36	6.53	5.8%	17.1
16	750	131.67	135.28	3.61	2.7%	18.0	120.60	127.60	7.00	5.8%	17.0
17	800	140.18	144.03	3.85	2.7%	18.0	128.38	135.84	7.46	5.8%	17.0
18	850	148.69	152.78	4.09	2.8%	18.0	136.15	144.08	7.93	5.8%	17.0
19	900	157.20	161.53	4.33	2.8%	17.9	143.93	152.32	8.40	5.8%	16.9
20	950	165.71	170.28	4.57	2.8%	17.9	151.70	160.56	8.86	5.8%	16.9
21	1,000	174.22	179.03	4.81	2.8%	17.9	159.47	168.80	9.33	5.8%	16.9
22	1,500	259.33	266.55	7.22	2.8%	17.8	237.21	251.20	13.99	5.9%	16.7
23	2,000	344.44	354.07	9.62	2.8%	17.7	314.95	333.60	18.66	5.9%	16.7
24	2,500	429.56	441.59	12.03	2.8%	17.7	392.68	416.00	23.32	5.9%	16.6
25	3,000	514.67	529.10	14.44	2.8%	17.6	470.42	498.40	27.99	5.9%	16.6
26	3,500	599.78	616.62	16.84	2.8%	17.6	548.15	580.81	32.65	6.0%	16.6
27	4,000	684.89	704.14	19.25	2.8%	17.6	625.89	663.21	37.32	6.0%	16.6
28	4,500	770.00	791.65	21.66	2.8%	17.6	703.63	745.61	41.98	6.0%	16.6
29	5,000	855.11	879.17	24.06	2.8%	17.6	781.36	828.01	46.64	6.0%	16.6

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Residential Nighttime Savers RPM
Income Assistance Provision RIA

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	9 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	5	0.85	0.88	0.03	3.7%	17.7	0.78	0.82	0.05	6.0%	16.5
2	50	8.51	8.83	0.32	3.7%	17.7	7.77	8.24	0.47	6.0%	16.5
3	100	17.02	17.66	0.63	3.7%	17.7	15.55	16.48	0.93	6.0%	16.5
4	150	25.53	26.48	0.95	3.7%	17.7	23.32	24.72	1.40	6.0%	16.5
5	200	34.04	35.31	1.27	3.7%	17.7	31.09	32.96	1.87	6.0%	16.5
6	250	42.56	44.14	1.58	3.7%	17.7	38.87	41.20	2.33	6.0%	16.5
7	300	51.07	52.97	1.90	3.7%	17.7	46.64	49.44	2.80	6.0%	16.5
8	350	59.58	61.79	2.22	3.7%	17.7	54.42	57.68	3.27	6.0%	16.5
9	400	68.09	70.62	2.53	3.7%	17.7	62.19	65.92	3.73	6.0%	16.5
10	450	76.60	79.45	2.85	3.7%	17.7	69.96	74.16	4.20	6.0%	16.5
11	500	85.11	88.28	3.16	3.7%	17.7	77.74	82.40	4.66	6.0%	16.5
12	550	93.62	97.10	3.48	3.7%	17.7	85.51	90.64	5.13	6.0%	16.5
13	600	102.13	105.93	3.80	3.7%	17.7	93.28	98.88	5.60	6.0%	16.5
14	650	110.64	114.76	4.11	3.7%	17.7	101.06	107.12	6.06	6.0%	16.5
15	700	119.16	123.59	4.43	3.7%	17.7	108.83	115.36	6.53	6.0%	16.5
16	750	127.67	132.41	4.75	3.7%	17.7	116.60	123.60	7.00	6.0%	16.5
17	800	136.18	141.24	5.06	3.7%	17.7	124.38	131.84	7.46	6.0%	16.5
18	850	144.69	150.07	5.38	3.7%	17.7	132.15	140.08	7.93	6.0%	16.5
19	900	153.20	158.90	5.70	3.7%	17.7	139.93	148.32	8.40	6.0%	16.5
20	950	161.71	167.72	6.01	3.7%	17.7	147.70	156.56	8.86	6.0%	16.5
21	1,000	170.22	176.55	6.33	3.7%	17.7	155.47	164.80	9.33	6.0%	16.5
22	1,500	255.33	264.83	9.49	3.7%	17.7	233.21	247.20	13.99	6.0%	16.5
23	2,000	340.44	353.10	12.66	3.7%	17.7	310.95	329.60	18.66	6.0%	16.5
24	2,500	425.56	441.38	15.82	3.7%	17.7	388.68	412.00	23.32	6.0%	16.5
25	3,000	510.67	529.65	18.99	3.7%	17.7	466.42	494.40	27.99	6.0%	16.5
26	3,500	595.78	617.93	22.15	3.7%	17.7	544.15	576.81	32.65	6.0%	16.5
27	4,000	680.89	706.20	25.32	3.7%	17.7	621.89	659.21	37.32	6.0%	16.5
28	4,500	766.00	794.48	28.48	3.7%	17.7	699.63	741.61	41.98	6.0%	16.5
29	5,000	851.11	882.76	31.65	3.7%	17.7	777.36	824.01	46.64	6.0%	16.5

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Residential Non-Transmitting Meters RSM

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	10 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	5	8.80	8.82	0.02	0.3%	176.4	8.80	8.82	0.02	0.3%	176.4
2	50	15.97	16.22	0.25	1.6%	32.4	15.97	16.22	0.25	1.6%	32.4
3	100	23.93	24.43	0.50	2.1%	24.4	23.93	24.43	0.50	2.1%	24.4
4	150	31.90	32.65	0.75	2.3%	21.8	31.90	32.65	0.75	2.3%	21.8
5	200	39.87	40.87	1.00	2.5%	20.4	39.87	40.87	1.00	2.5%	20.4
6	250	47.84	49.09	1.25	2.6%	19.6	47.84	49.09	1.25	2.6%	19.6
7	300	55.80	57.30	1.50	2.7%	19.1	55.80	57.30	1.50	2.7%	19.1
8	350	63.77	65.52	1.75	2.7%	18.7	63.77	65.52	1.75	2.7%	18.7
9	400	71.74	73.74	2.00	2.8%	18.4	71.74	73.74	2.00	2.8%	18.4
10	450	79.71	81.95	2.25	2.8%	18.2	79.71	81.95	2.25	2.8%	18.2
11	500	87.67	90.17	2.50	2.8%	18.0	87.67	90.17	2.50	2.8%	18.0
12	550	95.64	98.39	2.75	2.9%	17.9	95.64	98.39	2.75	2.9%	17.9
13	600	103.61	106.61	3.00	2.9%	17.8	103.61	106.61	3.00	2.9%	17.8
14	650	114.74	117.53	2.79	2.4%	18.1	111.58	114.82	3.25	2.9%	17.7
15	700	125.86	128.45	2.58	2.1%	18.3	119.54	123.04	3.50	2.9%	17.6
16	750	136.99	139.37	2.38	1.7%	18.6	127.51	131.26	3.75	2.9%	17.5
17	800	148.12	150.29	2.17	1.5%	18.8	135.48	139.48	4.00	3.0%	17.4
18	850	159.24	161.21	1.96	1.2%	19.0	143.44	147.69	4.25	3.0%	17.4
19	900	170.37	172.13	1.76	1.0%	19.1	151.41	155.91	4.50	3.0%	17.3
20	950	181.50	183.05	1.55	0.9%	19.3	159.38	164.13	4.75	3.0%	17.3
21	1,000	192.62	193.97	1.34	0.7%	19.4	167.35	172.34	5.00	3.0%	17.2
22	1,500	303.89	303.16	(0.73)	-0.2%	20.2	247.02	254.52	7.50	3.0%	17.0
23	2,000	415.16	412.36	(2.80)	-0.7%	20.6	326.69	336.69	9.99	3.1%	16.8
24	2,500	526.43	521.56	(4.87)	-0.9%	20.9	406.37	418.86	12.49	3.1%	16.8
25	3,000	637.69	630.76	(6.94)	-1.1%	21.0	486.04	501.03	14.99	3.1%	16.7
26	3,500	748.96	739.96	(9.00)	-1.2%	21.1	565.71	583.20	17.49	3.1%	16.7
27	4,000	860.23	849.16	(11.07)	-1.3%	21.2	645.39	665.38	19.99	3.1%	16.6
28	4,500	971.50	958.35	(13.14)	-1.4%	21.3	725.06	747.55	22.49	3.1%	16.6
29	5,000	1,082.77	1,067.55	(15.21)	-1.4%	21.4	804.74	829.72	24.98	3.1%	16.6

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Residential Non-Transmitting Meters RSM
Senior Citizen Provision RSC

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	11 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	5	4.80	4.82	0.02	0.5%	96.4	4.80	4.82	0.02	0.5%	96.4
2	50	11.97	12.22	0.25	2.1%	24.4	11.97	12.22	0.25	2.1%	24.4
3	100	19.93	20.43	0.50	2.5%	20.4	19.93	20.43	0.50	2.5%	20.4
4	150	27.90	28.65	0.75	2.7%	19.1	27.90	28.65	0.75	2.7%	19.1
5	200	35.87	36.87	1.00	2.8%	18.4	35.87	36.87	1.00	2.8%	18.4
6	250	43.84	45.09	1.25	2.8%	18.0	43.84	45.09	1.25	2.8%	18.0
7	300	51.80	53.30	1.50	2.9%	17.8	51.80	53.30	1.50	2.9%	17.8
8	350	59.77	61.52	1.75	2.9%	17.6	59.77	61.52	1.75	2.9%	17.6
9	400	67.74	69.74	2.00	3.0%	17.4	67.74	69.74	2.00	3.0%	17.4
10	450	75.71	77.95	2.25	3.0%	17.3	75.71	77.95	2.25	3.0%	17.3
11	500	83.67	86.17	2.50	3.0%	17.2	83.67	86.17	2.50	3.0%	17.2
12	550	91.64	94.39	2.75	3.0%	17.2	91.64	94.39	2.75	3.0%	17.2
13	600	99.61	102.61	3.00	3.0%	17.1	99.61	102.61	3.00	3.0%	17.1
14	650	110.74	113.53	2.79	2.5%	17.5	107.58	110.82	3.25	3.0%	17.0
15	700	121.86	124.45	2.58	2.1%	17.8	115.54	119.04	3.50	3.0%	17.0
16	750	132.99	135.37	2.38	1.8%	18.0	123.51	127.26	3.75	3.0%	17.0
17	800	144.12	146.29	2.17	1.5%	18.3	131.48	135.48	4.00	3.0%	16.9
18	850	155.24	157.21	1.96	1.3%	18.5	139.44	143.69	4.25	3.0%	16.9
19	900	166.37	168.13	1.76	1.1%	18.7	147.41	151.91	4.50	3.1%	16.9
20	950	177.50	179.05	1.55	0.9%	18.8	155.38	160.13	4.75	3.1%	16.9
21	1,000	188.62	189.97	1.34	0.7%	19.0	163.35	168.34	5.00	3.1%	16.8
22	1,500	299.89	299.16	(0.73)	-0.2%	19.9	243.02	250.52	7.50	3.1%	16.7
23	2,000	411.16	408.36	(2.80)	-0.7%	20.4	322.69	332.69	9.99	3.1%	16.6
24	2,500	522.43	517.56	(4.87)	-0.9%	20.7	402.37	414.86	12.49	3.1%	16.6
25	3,000	633.69	626.76	(6.94)	-1.1%	20.9	482.04	497.03	14.99	3.1%	16.6
26	3,500	744.96	735.96	(9.00)	-1.2%	21.0	561.71	579.20	17.49	3.1%	16.5
27	4,000	856.23	845.16	(11.07)	-1.3%	21.1	641.39	661.38	19.99	3.1%	16.5
28	4,500	967.50	954.35	(13.14)	-1.4%	21.2	721.06	743.55	22.49	3.1%	16.5
29	5,000	1,078.77	1,063.55	(15.21)	-1.4%	21.3	800.74	825.72	24.98	3.1%	16.5

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Residential Non-Transmitting Meters RSM
Income Assistance Provision RIA

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	12 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	5	4.80	4.82	0.02	0.5%	96.4	4.80	4.82	0.02	0.5%	96.4
2	50	11.97	12.22	0.25	2.1%	24.4	11.97	12.22	0.25	2.1%	24.4
3	100	19.93	20.43	0.50	2.5%	20.4	19.93	20.43	0.50	2.5%	20.4
4	150	27.90	28.65	0.75	2.7%	19.1	27.90	28.65	0.75	2.7%	19.1
5	200	35.87	36.87	1.00	2.8%	18.4	35.87	36.87	1.00	2.8%	18.4
6	250	43.84	45.09	1.25	2.8%	18.0	43.84	45.09	1.25	2.8%	18.0
7	300	51.80	53.30	1.50	2.9%	17.8	51.80	53.30	1.50	2.9%	17.8
8	350	59.77	61.52	1.75	2.9%	17.6	59.77	61.52	1.75	2.9%	17.6
9	400	67.74	69.74	2.00	3.0%	17.4	67.74	69.74	2.00	3.0%	17.4
10	450	75.71	77.95	2.25	3.0%	17.3	75.71	77.95	2.25	3.0%	17.3
11	500	83.67	86.17	2.50	3.0%	17.2	83.67	86.17	2.50	3.0%	17.2
12	550	91.64	94.39	2.75	3.0%	17.2	91.64	94.39	2.75	3.0%	17.2
13	600	99.61	102.61	3.00	3.0%	17.1	99.61	102.61	3.00	3.0%	17.1
14	650	110.74	113.53	2.79	2.5%	17.5	107.58	110.82	3.25	3.0%	17.0
15	700	121.86	124.45	2.58	2.1%	17.8	115.54	119.04	3.50	3.0%	17.0
16	750	132.99	135.37	2.38	1.8%	18.0	123.51	127.26	3.75	3.0%	17.0
17	800	144.12	146.29	2.17	1.5%	18.3	131.48	135.48	4.00	3.0%	16.9
18	850	155.24	157.21	1.96	1.3%	18.5	139.44	143.69	4.25	3.0%	16.9
19	900	166.37	168.13	1.76	1.1%	18.7	147.41	151.91	4.50	3.1%	16.9
20	950	177.50	179.05	1.55	0.9%	18.8	155.38	160.13	4.75	3.1%	16.9
21	1,000	188.62	189.97	1.34	0.7%	19.0	163.35	168.34	5.00	3.1%	16.8
22	1,500	299.89	299.16	(0.73)	-0.2%	19.9	243.02	250.52	7.50	3.1%	16.7
23	2,000	411.16	408.36	(2.80)	-0.7%	20.4	322.69	332.69	9.99	3.1%	16.6
24	2,500	522.43	517.56	(4.87)	-0.9%	20.7	402.37	414.86	12.49	3.1%	16.6
25	3,000	633.69	626.76	(6.94)	-1.1%	20.9	482.04	497.03	14.99	3.1%	16.6
26	3,500	744.96	735.96	(9.00)	-1.2%	21.0	561.71	579.20	17.49	3.1%	16.5
27	4,000	856.23	845.16	(11.07)	-1.3%	21.1	641.39	661.38	19.99	3.1%	16.5
28	4,500	967.50	954.35	(13.14)	-1.4%	21.2	721.06	743.55	22.49	3.1%	16.5
29	5,000	1,078.77	1,063.55	(15.21)	-1.4%	21.3	800.74	825.72	24.98	3.1%	16.5

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Secondary Energy-only GS

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	13 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	250	57.84	60.92	3.08	5.3%	24.4	53.70	57.43	3.73	6.9%	23.0
2	500	95.69	101.85	6.16	6.4%	20.4	87.40	94.85	7.45	8.5%	19.0
3	750	133.53	142.77	9.24	6.9%	19.0	121.10	132.28	11.18	9.2%	17.6
4	1,000	171.38	183.69	12.32	7.2%	18.4	154.80	169.70	14.90	9.6%	17.0
5	1,500	247.06	265.54	18.48	7.5%	17.7	222.20	244.55	22.35	10.1%	16.3
6	2,000	322.75	347.39	24.64	7.6%	17.4	289.60	319.41	29.81	10.3%	16.0
7	2,500	398.44	429.24	30.79	7.7%	17.2	357.00	394.26	37.26	10.4%	15.8
8	3,000	474.13	511.08	36.95	7.8%	17.0	424.40	469.11	44.71	10.5%	15.6
9	3,500	549.82	592.93	43.11	7.8%	16.9	491.80	543.96	52.16	10.6%	15.5
10	4,000	625.50	674.78	49.27	7.9%	16.9	559.20	618.81	59.61	10.7%	15.5
11	4,500	701.19	756.62	55.43	7.9%	16.8	626.60	693.66	67.06	10.7%	15.4
12	5,000	776.88	838.47	61.59	7.9%	16.8	694.00	768.52	74.51	10.7%	15.4
13	6,000	928.26	1,002.16	73.91	8.0%	16.7	828.80	918.22	89.42	10.8%	15.3
14	7,000	1,079.63	1,165.86	86.23	8.0%	16.7	963.60	1,067.92	104.32	10.8%	15.3
15	8,000	1,231.01	1,329.55	98.54	8.0%	16.6	1,098.40	1,217.62	119.22	10.9%	15.2
16	9,000	1,382.38	1,493.25	110.86	8.0%	16.6	1,233.20	1,367.33	134.13	10.9%	15.2
17	10,000	1,533.76	1,656.94	123.18	8.0%	16.6	1,368.00	1,517.03	149.03	10.9%	15.2
18	15,000	2,290.64	2,475.41	184.77	8.1%	16.5	2,042.00	2,265.55	223.55	10.9%	15.1
19	20,000	3,047.52	3,293.88	246.36	8.1%	16.5	2,716.00	3,014.06	298.06	11.0%	15.1
20	25,000	3,804.40	4,112.35	307.95	8.1%	16.4	3,390.00	3,762.58	372.57	11.0%	15.1
21	30,000	4,561.28	4,930.82	369.54	8.1%	16.4	4,064.00	4,511.09	447.09	11.0%	15.0
22	35,000	5,318.16	5,749.29	431.13	8.1%	16.4	4,738.00	5,259.61	521.61	11.0%	15.0
23	40,000	6,075.04	6,567.76	492.72	8.1%	16.4	5,412.00	6,008.12	596.12	11.0%	15.0
24	45,000	6,831.92	7,386.23	554.31	8.1%	16.4	6,086.00	6,756.64	670.63	11.0%	15.0
25	50,000	7,588.80	8,204.70	615.90	8.1%	16.4	6,760.00	7,505.15	745.15	11.0%	15.0
26	55,000	8,345.68	9,023.17	677.49	8.1%	16.4	7,434.00	8,253.67	819.66	11.0%	15.0
27	60,000	9,102.56	9,841.64	739.08	8.1%	16.4	8,108.00	9,002.18	894.18	11.0%	15.0
28	65,000	9,859.44	10,660.11	800.67	8.1%	16.4	8,782.00	9,750.70	968.69	11.0%	15.0
29	70,000	10,616.32	11,478.58	862.26	8.1%	16.4	9,456.00	10,499.21	1,043.21	11.0%	15.0

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Secondary Energy-only GS
Education Provision GEI

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	14 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	250	57.64	60.67	3.03	5.3%	24.3	53.50	57.17	3.67	6.9%	22.9
2	500	95.29	101.34	6.05	6.4%	20.3	87.00	94.35	7.35	8.4%	18.9
3	750	132.93	142.01	9.08	6.8%	18.9	120.50	131.52	11.02	9.1%	17.5
4	1,000	170.57	182.68	12.11	7.1%	18.3	154.00	168.69	14.69	9.5%	16.9
5	1,500	245.86	264.03	18.16	7.4%	17.6	221.00	243.04	22.04	10.0%	16.2
6	2,000	321.15	345.37	24.22	7.5%	17.3	288.00	317.39	29.39	10.2%	15.9
7	2,500	396.44	426.71	30.27	7.6%	17.1	355.00	391.73	36.74	10.3%	15.7
8	3,000	471.72	508.05	36.33	7.7%	16.9	421.99	466.08	44.08	10.4%	15.5
9	3,500	547.01	589.39	42.38	7.7%	16.8	488.99	540.43	51.43	10.5%	15.4
10	4,000	622.30	670.74	48.44	7.8%	16.8	555.99	614.77	58.78	10.6%	15.4
11	4,500	697.58	752.08	54.49	7.8%	16.7	622.99	689.12	66.13	10.6%	15.3
12	5,000	772.87	833.42	60.55	7.8%	16.7	689.99	763.47	73.47	10.6%	15.3
13	6,000	923.44	996.10	72.66	7.9%	16.6	823.99	912.16	88.17	10.7%	15.2
14	7,000	1,074.02	1,158.79	84.77	7.9%	16.6	957.99	1,060.85	102.87	10.7%	15.2
15	8,000	1,224.59	1,321.47	96.88	7.9%	16.5	1,091.98	1,209.54	117.56	10.8%	15.1
16	9,000	1,375.17	1,484.16	108.99	7.9%	16.5	1,225.98	1,358.24	132.26	10.8%	15.1
17	10,000	1,525.74	1,646.84	121.10	7.9%	16.5	1,359.98	1,506.93	146.95	10.8%	15.1
18	15,000	2,278.61	2,460.26	181.65	8.0%	16.4	2,029.97	2,250.40	220.42	10.9%	15.0
19	20,000	3,031.48	3,273.68	242.20	8.0%	16.4	2,699.96	2,993.86	293.90	10.9%	15.0
20	25,000	3,784.35	4,087.10	302.75	8.0%	16.3	3,369.95	3,737.33	367.37	10.9%	14.9
21	30,000	4,537.22	4,900.52	363.30	8.0%	16.3	4,039.94	4,480.79	440.85	10.9%	14.9
22	35,000	5,290.09	5,713.94	423.85	8.0%	16.3	4,709.93	5,224.26	514.32	10.9%	14.9
23	40,000	6,042.96	6,527.36	484.40	8.0%	16.3	5,379.92	5,967.72	587.80	10.9%	14.9
24	45,000	6,795.83	7,340.78	544.95	8.0%	16.3	6,049.91	6,711.19	661.27	10.9%	14.9
25	50,000	7,548.70	8,154.20	605.50	8.0%	16.3	6,719.90	7,454.65	734.75	10.9%	14.9
26	55,000	8,301.57	8,967.62	666.05	8.0%	16.3	7,389.89	8,198.12	808.22	10.9%	14.9
27	60,000	9,054.44	9,781.04	726.60	8.0%	16.3	8,059.88	8,941.58	881.70	10.9%	14.9
28	65,000	9,807.31	10,594.46	787.15	8.0%	16.3	8,729.87	9,685.05	955.17	10.9%	14.9
29	70,000	10,560.18	11,407.88	847.70	8.0%	16.3	9,399.86	10,428.51	1,028.65	10.9%	14.9

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Secondary Demand GSD

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	15 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	97.44	107.30	9.85	10.1%	21.5	87.41	91.67	4.26	4.9%	18.3
2	1,000	164.89	184.59	19.71	12.0%	18.5	144.81	153.34	8.52	5.9%	15.3
3	1,500	232.33	261.89	29.56	12.7%	17.5	202.22	215.00	12.78	6.3%	14.3
4	2,000	299.77	339.19	39.42	13.1%	17.0	259.63	276.67	17.05	6.6%	13.8
5	2,500	367.22	416.49	49.27	13.4%	16.7	317.03	338.34	21.31	6.7%	13.5
6	3,000	434.66	493.78	59.12	13.6%	16.5	374.44	400.01	25.57	6.8%	13.3
7	3,500	502.10	571.08	68.98	13.7%	16.3	431.85	461.68	29.83	6.9%	13.2
8	4,000	569.55	648.38	78.83	13.8%	16.2	489.25	523.34	34.09	7.0%	13.1
9	4,500	636.99	725.67	88.68	13.9%	16.1	546.66	585.01	38.35	7.0%	13.0
10	5,000	704.43	802.97	98.54	14.0%	16.1	604.06	646.68	42.61	7.1%	12.9
11	6,000	839.32	957.56	118.25	14.1%	16.0	718.88	770.02	51.14	7.1%	12.8
12	7,000	974.21	1,112.16	137.95	14.2%	15.9	833.69	893.35	59.66	7.2%	12.8
13	8,000	1,109.09	1,266.75	157.66	14.2%	15.8	948.50	1,016.69	68.18	7.2%	12.7
14	9,000	1,243.98	1,421.35	177.37	14.3%	15.8	1,063.32	1,140.02	76.71	7.2%	12.7
15	10,000	1,378.86	1,575.94	197.08	14.3%	15.8	1,178.13	1,263.36	85.23	7.2%	12.6
16	11,000	1,513.75	1,730.53	216.78	14.3%	15.7	1,292.94	1,386.70	93.75	7.3%	12.6
17	12,000	1,648.64	1,885.13	236.49	14.3%	15.7	1,407.76	1,510.03	102.28	7.3%	12.6
18	13,000	1,783.52	2,039.72	256.20	14.4%	15.7	1,522.57	1,633.37	110.80	7.3%	12.6
19	14,000	1,918.41	2,194.32	275.91	14.4%	15.7	1,637.38	1,756.70	119.32	7.3%	12.5
20	15,000	2,053.30	2,348.91	295.61	14.4%	15.7	1,752.19	1,880.04	127.84	7.3%	12.5
21	16,000	2,188.18	2,503.51	315.32	14.4%	15.6	1,867.01	2,003.37	136.37	7.3%	12.5
22	17,000	2,323.07	2,658.10	335.03	14.4%	15.6	1,981.82	2,126.71	144.89	7.3%	12.5
23	18,000	2,457.96	2,812.69	354.74	14.4%	15.6	2,096.63	2,250.05	153.41	7.3%	12.5
24	19,000	2,592.84	2,967.29	374.44	14.4%	15.6	2,211.45	2,373.38	161.94	7.3%	12.5
25	20,000	2,727.73	3,121.88	394.15	14.4%	15.6	2,326.26	2,496.72	170.46	7.3%	12.5
26	21,000	2,862.62	3,276.48	413.86	14.5%	15.6	2,441.07	2,620.05	178.98	7.3%	12.5
27	22,000	2,997.50	3,431.07	433.57	14.5%	15.6	2,555.89	2,743.39	187.50	7.3%	12.5
28	23,000	3,132.39	3,585.66	453.27	14.5%	15.6	2,670.70	2,866.73	196.03	7.3%	12.5
29	24,000	3,267.28	3,740.26	472.98	14.5%	15.6	2,785.51	2,990.06	204.55	7.3%	12.5

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Secondary Demand GSD
Education Provision GEI

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	16 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	97.12	106.00	8.88	9.1%	21.2	87.08	90.37	3.29	3.8%	18.1
2	1,000	164.24	181.99	17.76	10.8%	18.2	144.17	150.74	6.57	4.6%	15.1
3	1,500	231.36	257.99	26.63	11.5%	17.2	201.25	211.10	9.86	4.9%	14.1
4	2,000	298.48	333.99	35.51	11.9%	16.7	258.33	271.47	13.14	5.1%	13.6
5	2,500	365.60	409.99	44.39	12.1%	16.4	315.41	331.84	16.43	5.2%	13.3
6	3,000	432.72	485.98	53.27	12.3%	16.2	372.50	392.21	19.71	5.3%	13.1
7	3,500	499.84	561.98	62.14	12.4%	16.1	429.58	452.58	23.00	5.4%	12.9
8	4,000	566.96	637.98	71.02	12.5%	15.9	486.66	512.95	26.28	5.4%	12.8
9	4,500	634.08	713.98	79.90	12.6%	15.9	543.75	573.31	29.57	5.4%	12.7
10	5,000	701.20	789.97	88.78	12.7%	15.8	600.83	633.68	32.85	5.5%	12.7
11	6,000	835.44	941.97	106.53	12.8%	15.7	715.00	754.42	39.42	5.5%	12.6
12	7,000	969.68	1,093.96	124.29	12.8%	15.6	829.16	875.15	45.99	5.5%	12.5
13	8,000	1,103.92	1,245.96	142.04	12.9%	15.6	943.33	995.89	52.56	5.6%	12.4
14	9,000	1,238.16	1,397.95	159.80	12.9%	15.5	1,057.49	1,116.63	59.13	5.6%	12.4
15	10,000	1,372.39	1,549.95	177.55	12.9%	15.5	1,171.66	1,237.36	65.70	5.6%	12.4
16	11,000	1,506.63	1,701.94	195.31	13.0%	15.5	1,285.83	1,358.10	72.27	5.6%	12.3
17	12,000	1,640.87	1,853.93	213.06	13.0%	15.4	1,399.99	1,478.84	78.84	5.6%	12.3
18	13,000	1,775.11	2,005.93	230.82	13.0%	15.4	1,514.16	1,599.57	85.41	5.6%	12.3
19	14,000	1,909.35	2,157.92	248.57	13.0%	15.4	1,628.32	1,720.31	91.99	5.6%	12.3
20	15,000	2,043.59	2,309.92	266.33	13.0%	15.4	1,742.49	1,841.05	98.56	5.7%	12.3
21	16,000	2,177.83	2,461.91	284.08	13.0%	15.4	1,856.66	1,961.78	105.13	5.7%	12.3
22	17,000	2,312.07	2,613.91	301.84	13.1%	15.4	1,970.82	2,082.52	111.70	5.7%	12.3
23	18,000	2,446.31	2,765.90	319.59	13.1%	15.4	2,084.99	2,203.25	118.27	5.7%	12.2
24	19,000	2,580.55	2,917.90	337.35	13.1%	15.4	2,199.15	2,323.99	124.84	5.7%	12.2
25	20,000	2,714.79	3,069.89	355.10	13.1%	15.3	2,313.32	2,444.73	131.41	5.7%	12.2
26	21,000	2,849.03	3,221.88	372.86	13.1%	15.3	2,427.49	2,565.46	137.98	5.7%	12.2
27	22,000	2,983.27	3,373.88	390.61	13.1%	15.3	2,541.65	2,686.20	144.55	5.7%	12.2
28	23,000	3,117.51	3,525.87	408.37	13.1%	15.3	2,655.82	2,806.94	151.12	5.7%	12.2
29	24,000	3,251.75	3,677.87	426.12	13.1%	15.3	2,769.98	2,927.67	157.69	5.7%	12.2

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Secondary Time-of-Use GSTU

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	17 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	103.77	110.56	6.79	6.5%	22.1	86.17	93.97	7.80	9.1%	18.8
2	1,000	187.54	201.12	13.59	7.2%	20.1	152.33	167.94	15.61	10.2%	16.8
3	1,500	271.30	291.68	20.38	7.5%	19.4	218.50	241.91	23.41	10.7%	16.1
4	2,000	355.07	382.25	27.17	7.7%	19.1	284.66	315.87	31.21	11.0%	15.8
5	2,500	438.84	472.81	33.97	7.7%	18.9	350.83	389.84	39.01	11.1%	15.6
6	3,000	522.61	563.37	40.76	7.8%	18.8	417.00	463.81	46.82	11.2%	15.5
7	3,500	606.38	653.93	47.55	7.8%	18.7	483.16	537.78	54.62	11.3%	15.4
8	4,000	690.15	744.49	54.35	7.9%	18.6	549.33	611.75	62.42	11.4%	15.3
9	4,500	773.91	835.05	61.14	7.9%	18.6	615.49	685.72	70.22	11.4%	15.2
10	5,000	857.68	925.61	67.93	7.9%	18.5	681.66	759.69	78.03	11.4%	15.2
11	6,000	1,025.22	1,106.74	81.52	8.0%	18.4	813.99	907.62	93.63	11.5%	15.1
12	7,000	1,192.76	1,287.86	95.10	8.0%	18.4	946.32	1,055.56	109.24	11.5%	15.1
13	8,000	1,360.29	1,468.98	108.69	8.0%	18.4	1,078.65	1,203.50	124.84	11.6%	15.0
14	9,000	1,527.83	1,650.11	122.28	8.0%	18.3	1,210.99	1,351.43	140.45	11.6%	15.0
15	10,000	1,695.37	1,831.23	135.86	8.0%	18.3	1,343.32	1,499.37	156.05	11.6%	15.0
16	11,000	1,862.90	2,012.35	149.45	8.0%	18.3	1,475.65	1,647.31	171.66	11.6%	15.0
17	12,000	2,030.44	2,193.48	163.04	8.0%	18.3	1,607.98	1,795.25	187.26	11.6%	15.0
18	13,000	2,197.98	2,374.60	176.62	8.0%	18.3	1,740.31	1,943.18	202.87	11.7%	14.9
19	14,000	2,365.51	2,555.72	190.21	8.0%	18.3	1,872.65	2,091.12	218.48	11.7%	14.9
20	15,000	2,533.05	2,736.84	203.80	8.0%	18.2	2,004.98	2,239.06	234.08	11.7%	14.9
21	16,000	2,700.58	2,917.97	217.38	8.0%	18.2	2,137.31	2,387.00	249.69	11.7%	14.9
22	17,000	2,868.12	3,099.09	230.97	8.1%	18.2	2,269.64	2,534.93	265.29	11.7%	14.9
23	18,000	3,035.66	3,280.21	244.56	8.1%	18.2	2,401.97	2,682.87	280.90	11.7%	14.9
24	19,000	3,203.19	3,461.34	258.14	8.1%	18.2	2,534.30	2,830.81	296.50	11.7%	14.9
25	20,000	3,370.73	3,642.46	271.73	8.1%	18.2	2,666.64	2,978.74	312.11	11.7%	14.9
26	21,000	3,538.27	3,823.58	285.31	8.1%	18.2	2,798.97	3,126.68	327.71	11.7%	14.9
27	22,000	3,705.80	4,004.71	298.90	8.1%	18.2	2,931.30	3,274.62	343.32	11.7%	14.9
28	23,000	3,873.34	4,185.83	312.49	8.1%	18.2	3,063.63	3,422.56	358.92	11.7%	14.9
29	24,000	4,040.88	4,366.95	326.07	8.1%	18.2	3,195.96	3,570.49	374.53	11.7%	14.9

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Secondary Time-of-Use GSTU
Education Provision GEI

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	18 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	103.37	110.06	6.69	6.5%	22.0	85.76	93.46	7.70	9.0%	18.7
2	1,000	186.73	200.11	13.38	7.2%	20.0	151.53	166.93	15.40	10.2%	16.7
3	1,500	270.10	290.17	20.07	7.4%	19.3	217.29	240.39	23.10	10.6%	16.0
4	2,000	353.47	380.23	26.76	7.6%	19.0	283.06	313.85	30.79	10.9%	15.7
5	2,500	436.84	470.28	33.45	7.7%	18.8	348.82	387.32	38.49	11.0%	15.5
6	3,000	520.20	560.34	40.14	7.7%	18.7	414.59	460.78	46.19	11.1%	15.4
7	3,500	603.57	650.40	46.82	7.8%	18.6	480.35	534.25	53.89	11.2%	15.3
8	4,000	686.94	740.45	53.51	7.8%	18.5	546.12	607.71	61.59	11.3%	15.2
9	4,500	770.31	830.51	60.20	7.8%	18.5	611.88	681.17	69.29	11.3%	15.1
10	5,000	853.67	920.56	66.89	7.8%	18.4	677.65	754.64	76.99	11.4%	15.1
11	6,000	1,020.41	1,100.68	80.27	7.9%	18.3	809.18	901.56	92.38	11.4%	15.0
12	7,000	1,187.14	1,280.79	93.65	7.9%	18.3	940.71	1,048.49	107.78	11.5%	15.0
13	8,000	1,353.88	1,460.90	107.03	7.9%	18.3	1,072.24	1,195.42	123.18	11.5%	14.9
14	9,000	1,520.61	1,641.02	120.41	7.9%	18.2	1,203.77	1,342.34	138.58	11.5%	14.9
15	10,000	1,687.35	1,821.13	133.78	7.9%	18.2	1,335.30	1,489.27	153.97	11.5%	14.9
16	11,000	1,854.08	2,001.24	147.16	7.9%	18.2	1,466.83	1,636.20	169.37	11.5%	14.9
17	12,000	2,020.81	2,181.36	160.54	7.9%	18.2	1,598.36	1,783.13	184.77	11.6%	14.9
18	13,000	2,187.55	2,361.47	173.92	8.0%	18.2	1,729.89	1,930.05	200.17	11.6%	14.8
19	14,000	2,354.28	2,541.58	187.30	8.0%	18.2	1,861.42	2,076.98	215.56	11.6%	14.8
20	15,000	2,521.02	2,721.69	200.68	8.0%	18.1	1,992.95	2,223.91	230.96	11.6%	14.8
21	16,000	2,687.75	2,901.81	214.05	8.0%	18.1	2,124.48	2,370.84	246.36	11.6%	14.8
22	17,000	2,854.49	3,081.92	227.43	8.0%	18.1	2,256.01	2,517.76	261.76	11.6%	14.8
23	18,000	3,021.22	3,262.03	240.81	8.0%	18.1	2,387.54	2,664.69	277.15	11.6%	14.8
24	19,000	3,187.96	3,442.15	254.19	8.0%	18.1	2,519.07	2,811.62	292.55	11.6%	14.8
25	20,000	3,354.69	3,622.26	267.57	8.0%	18.1	2,650.60	2,958.54	307.95	11.6%	14.8
26	21,000	3,521.43	3,802.37	280.95	8.0%	18.1	2,782.13	3,105.47	323.35	11.6%	14.8
27	22,000	3,688.16	3,982.49	294.33	8.0%	18.1	2,913.66	3,252.40	338.74	11.6%	14.8
28	23,000	3,854.89	4,162.60	307.70	8.0%	18.1	3,045.19	3,399.33	354.14	11.6%	14.8
29	24,000	4,021.63	4,342.71	321.08	8.0%	18.1	3,176.72	3,546.25	369.54	11.6%	14.8

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Secondary Time-of-Use GSTU
Secondary Interruptible Provision

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	19 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	94.87	101.73	6.86	7.2%	20.3	77.27	85.13	7.87	10.2%	17.0
2	1,000	169.74	183.45	13.71	8.1%	18.3	134.53	150.26	15.73	11.7%	15.0
3	1,500	244.61	265.18	20.57	8.4%	17.7	191.80	215.40	23.60	12.3%	14.4
4	2,000	319.47	346.90	27.43	8.6%	17.3	249.07	280.53	31.46	12.6%	14.0
5	2,500	394.34	428.63	34.28	8.7%	17.1	306.33	345.66	39.33	12.8%	13.8
6	3,000	469.21	510.35	41.14	8.8%	17.0	363.60	410.79	47.20	13.0%	13.7
7	3,500	544.08	592.08	48.00	8.8%	16.9	420.86	475.93	55.06	13.1%	13.6
8	4,000	618.95	673.80	54.85	8.9%	16.8	478.13	541.06	62.93	13.2%	13.5
9	4,500	693.82	755.53	61.71	8.9%	16.8	535.40	606.19	70.79	13.2%	13.5
10	5,000	768.69	837.25	68.56	8.9%	16.7	592.66	671.32	78.66	13.3%	13.4
11	6,000	918.42	1,000.70	82.28	9.0%	16.7	707.20	801.59	94.39	13.3%	13.4
12	7,000	1,068.16	1,164.15	95.99	9.0%	16.6	821.73	931.85	110.12	13.4%	13.3
13	8,000	1,217.90	1,327.60	109.70	9.0%	16.6	936.26	1,062.12	125.86	13.4%	13.3
14	9,000	1,367.64	1,491.05	123.42	9.0%	16.6	1,050.79	1,192.38	141.59	13.5%	13.2
15	10,000	1,517.37	1,654.50	137.13	9.0%	16.5	1,165.33	1,322.65	157.32	13.5%	13.2
16	11,000	1,667.11	1,817.95	150.84	9.0%	16.5	1,279.86	1,452.91	173.05	13.5%	13.2
17	12,000	1,816.85	1,981.40	164.55	9.1%	16.5	1,394.39	1,583.17	188.78	13.5%	13.2
18	13,000	1,966.59	2,144.85	178.27	9.1%	16.5	1,508.92	1,713.44	204.51	13.6%	13.2
19	14,000	2,116.32	2,308.30	191.98	9.1%	16.5	1,623.46	1,843.70	220.25	13.6%	13.2
20	15,000	2,266.06	2,471.75	205.69	9.1%	16.5	1,737.99	1,973.97	235.98	13.6%	13.2
21	16,000	2,415.80	2,635.20	219.41	9.1%	16.5	1,852.52	2,104.23	251.71	13.6%	13.2
22	17,000	2,565.53	2,798.65	233.12	9.1%	16.5	1,967.05	2,234.50	267.44	13.6%	13.1
23	18,000	2,715.27	2,962.10	246.83	9.1%	16.5	2,081.59	2,364.76	283.17	13.6%	13.1
24	19,000	2,865.01	3,125.55	260.55	9.1%	16.5	2,196.12	2,495.03	298.91	13.6%	13.1
25	20,000	3,014.75	3,289.00	274.26	9.1%	16.4	2,310.65	2,625.29	314.64	13.6%	13.1
26	21,000	3,164.48	3,452.46	287.97	9.1%	16.4	2,425.19	2,755.55	330.37	13.6%	13.1
27	22,000	3,314.22	3,615.91	301.68	9.1%	16.4	2,539.72	2,885.82	346.10	13.6%	13.1
28	23,000	3,463.96	3,779.36	315.40	9.1%	16.4	2,654.25	3,016.08	361.83	13.6%	13.1
29	24,000	3,613.70	3,942.81	329.11	9.1%	16.4	2,768.78	3,146.35	377.57	13.6%	13.1

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Energy-only GP Voltage Level 1

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	20 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	151.08	148.97	(2.10)	-1.4%	29.8	143.63	142.64	(0.98)	-0.7%	28.5
2	1,000	202.15	197.94	(4.21)	-2.1%	19.8	187.25	185.28	(1.97)	-1.1%	18.5
3	1,500	253.23	246.91	(6.31)	-2.5%	16.5	230.88	227.92	(2.95)	-1.3%	15.2
4	2,000	304.30	295.89	(8.42)	-2.8%	14.8	274.50	270.57	(3.94)	-1.4%	13.5
5	2,500	355.38	344.86	(10.52)	-3.0%	13.8	318.13	313.21	(4.92)	-1.5%	12.5
6	3,000	406.45	393.83	(12.62)	-3.1%	13.1	361.75	355.85	(5.90)	-1.6%	11.9
7	4,000	508.60	491.77	(16.83)	-3.3%	12.3	449.00	441.13	(7.87)	-1.8%	11.0
8	5,000	610.76	589.72	(21.04)	-3.4%	11.8	536.26	526.42	(9.84)	-1.8%	10.5
9	6,000	712.91	687.66	(25.25)	-3.5%	11.5	623.51	611.70	(11.81)	-1.9%	10.2
10	7,000	815.06	785.60	(29.46)	-3.6%	11.2	710.76	696.98	(13.78)	-1.9%	10.0
11	8,000	917.21	883.54	(33.66)	-3.7%	11.0	798.01	782.26	(15.74)	-2.0%	9.8
12	9,000	1,019.36	981.49	(37.87)	-3.7%	10.9	885.26	867.55	(17.71)	-2.0%	9.6
13	10,000	1,121.51	1,079.43	(42.08)	-3.8%	10.8	972.51	952.83	(19.68)	-2.0%	9.5
14	15,000	1,632.27	1,569.15	(63.12)	-3.9%	10.5	1,408.77	1,379.25	(29.52)	-2.1%	9.2
15	20,000	2,143.02	2,058.86	(84.16)	-3.9%	10.3	1,845.02	1,805.66	(39.36)	-2.1%	9.0
16	25,000	2,653.78	2,548.58	(105.20)	-4.0%	10.2	2,281.28	2,232.08	(49.20)	-2.2%	8.9
17	30,000	3,164.53	3,038.29	(126.24)	-4.0%	10.1	2,717.53	2,658.49	(59.04)	-2.2%	8.9
18	35,000	3,675.29	3,528.01	(147.28)	-4.0%	10.1	3,153.79	3,084.91	(68.88)	-2.2%	8.8
19	40,000	4,186.04	4,017.72	(168.32)	-4.0%	10.0	3,590.04	3,511.32	(78.72)	-2.2%	8.8
20	45,000	4,696.80	4,507.44	(189.36)	-4.0%	10.0	4,026.30	3,937.74	(88.56)	-2.2%	8.8
21	50,000	5,207.55	4,997.15	(210.40)	-4.0%	10.0	4,462.55	4,364.15	(98.40)	-2.2%	8.7
22	60,000	6,229.06	5,976.58	(252.48)	-4.1%	10.0	5,335.06	5,216.98	(118.08)	-2.2%	8.7
23	70,000	7,250.57	6,956.01	(294.56)	-4.1%	9.9	6,207.57	6,069.81	(137.76)	-2.2%	8.7
24	80,000	8,272.08	7,935.44	(336.64)	-4.1%	9.9	7,080.08	6,922.64	(157.44)	-2.2%	8.7
25	90,000	9,293.59	8,914.87	(378.72)	-4.1%	9.9	7,952.59	7,775.47	(177.12)	-2.2%	8.6
26	100,000	10,315.10	9,894.30	(420.80)	-4.1%	9.9	8,825.10	8,628.30	(196.80)	-2.2%	8.6
27	110,000	11,336.61	10,873.73	(462.88)	-4.1%	9.9	9,697.61	9,481.13	(216.48)	-2.2%	8.6
28	120,000	12,358.12	11,853.16	(504.96)	-4.1%	9.9	10,570.12	10,333.96	(236.16)	-2.2%	8.6
29	130,000	13,379.63	12,832.59	(547.04)	-4.1%	9.9	11,442.63	11,186.79	(255.84)	-2.2%	8.6

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Energy-only GP Voltage Level 1
Education Provision GEI

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	21 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	150.81	148.65	(2.16)	-1.4%	29.7	143.36	142.32	(1.04)	-0.7%	28.5
2	1,000	201.62	197.31	(4.31)	-2.1%	19.7	186.72	184.65	(2.07)	-1.1%	18.5
3	1,500	252.43	245.96	(6.47)	-2.6%	16.4	230.08	226.97	(3.11)	-1.4%	15.1
4	2,000	303.24	294.61	(8.62)	-2.8%	14.7	273.44	269.29	(4.14)	-1.5%	13.5
5	2,500	354.05	343.27	(10.78)	-3.0%	13.7	316.80	311.62	(5.18)	-1.6%	12.5
6	3,000	404.85	391.92	(12.93)	-3.2%	13.1	360.15	353.94	(6.21)	-1.7%	11.8
7	4,000	506.47	489.23	(17.24)	-3.4%	12.2	446.87	438.59	(8.28)	-1.9%	11.0
8	5,000	608.09	586.54	(21.55)	-3.5%	11.7	533.59	523.24	(10.36)	-1.9%	10.5
9	6,000	709.71	683.84	(25.87)	-3.6%	11.4	620.31	607.88	(12.43)	-2.0%	10.1
10	7,000	811.33	781.15	(30.18)	-3.7%	11.2	707.03	692.53	(14.50)	-2.1%	9.9
11	8,000	912.94	878.46	(34.49)	-3.8%	11.0	793.74	777.18	(16.57)	-2.1%	9.7
12	9,000	1,014.56	975.76	(38.80)	-3.8%	10.8	880.46	861.82	(18.64)	-2.1%	9.6
13	10,000	1,116.18	1,073.07	(43.11)	-3.9%	10.7	967.18	946.47	(20.71)	-2.1%	9.5
14	15,000	1,624.27	1,559.61	(64.67)	-4.0%	10.4	1,400.77	1,369.71	(31.07)	-2.2%	9.1
15	20,000	2,132.36	2,046.14	(86.22)	-4.0%	10.2	1,834.36	1,792.94	(41.42)	-2.3%	9.0
16	25,000	2,640.45	2,532.68	(107.78)	-4.1%	10.1	2,267.95	2,216.18	(51.78)	-2.3%	8.9
17	30,000	3,148.54	3,019.21	(129.33)	-4.1%	10.1	2,701.54	2,639.41	(62.13)	-2.3%	8.8
18	35,000	3,656.63	3,505.75	(150.89)	-4.1%	10.0	3,135.13	3,062.65	(72.49)	-2.3%	8.8
19	40,000	4,164.72	3,992.28	(172.44)	-4.1%	10.0	3,568.72	3,485.88	(82.84)	-2.3%	8.7
20	45,000	4,672.81	4,478.82	(194.00)	-4.2%	10.0	4,002.31	3,909.12	(93.20)	-2.3%	8.7
21	50,000	5,180.90	4,965.35	(215.55)	-4.2%	9.9	4,435.90	4,332.35	(103.55)	-2.3%	8.7
22	60,000	6,197.08	5,938.42	(258.66)	-4.2%	9.9	5,303.08	5,178.82	(124.26)	-2.3%	8.6
23	70,000	7,213.26	6,911.49	(301.77)	-4.2%	9.9	6,170.26	6,025.29	(144.97)	-2.3%	8.6
24	80,000	8,229.44	7,884.56	(344.88)	-4.2%	9.9	7,037.44	6,871.76	(165.68)	-2.4%	8.6
25	90,000	9,245.62	8,857.63	(387.99)	-4.2%	9.8	7,904.62	7,718.23	(186.39)	-2.4%	8.6
26	100,000	10,261.80	9,830.70	(431.10)	-4.2%	9.8	8,771.80	8,564.70	(207.10)	-2.4%	8.6
27	110,000	11,277.98	10,803.77	(474.21)	-4.2%	9.8	9,638.98	9,411.17	(227.81)	-2.4%	8.6
28	120,000	12,294.16	11,776.84	(517.32)	-4.2%	9.8	10,506.16	10,257.64	(248.52)	-2.4%	8.5
29	130,000	13,310.34	12,749.91	(560.43)	-4.2%	9.8	11,373.34	11,104.11	(269.23)	-2.4%	8.5

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Energy-only GP Voltage Level 2

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	22 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	154.49	152.89	(1.61)	-1.0%	30.6	146.93	146.47	(0.46)	-0.3%	29.3
2	1,000	208.99	205.77	(3.21)	-1.5%	20.6	193.86	192.94	(0.92)	-0.5%	19.3
3	1,500	263.48	258.66	(4.82)	-1.8%	17.2	240.79	239.41	(1.38)	-0.6%	16.0
4	2,000	317.97	311.54	(6.43)	-2.0%	15.6	287.73	285.88	(1.84)	-0.6%	14.3
5	2,500	372.46	364.43	(8.03)	-2.2%	14.6	334.66	332.35	(2.31)	-0.7%	13.3
6	3,000	426.96	417.31	(9.64)	-2.3%	13.9	381.59	378.82	(2.77)	-0.7%	12.6
7	4,000	535.94	523.08	(12.86)	-2.4%	13.1	475.45	471.76	(3.69)	-0.8%	11.8
8	5,000	644.93	628.86	(16.07)	-2.5%	12.6	569.32	564.71	(4.61)	-0.8%	11.3
9	6,000	753.91	734.63	(19.28)	-2.6%	12.2	663.18	657.65	(5.53)	-0.8%	11.0
10	7,000	862.90	840.40	(22.50)	-2.6%	12.0	757.04	750.59	(6.45)	-0.9%	10.7
11	8,000	971.88	946.17	(25.71)	-2.6%	11.8	850.90	843.53	(7.38)	-0.9%	10.5
12	9,000	1,080.87	1,051.94	(28.93)	-2.7%	11.7	944.77	936.47	(8.30)	-0.9%	10.4
13	10,000	1,189.85	1,157.71	(32.14)	-2.7%	11.6	1,038.63	1,029.41	(9.22)	-0.9%	10.3
14	15,000	1,734.78	1,686.57	(48.21)	-2.8%	11.2	1,507.95	1,494.12	(13.83)	-0.9%	10.0
15	20,000	2,279.70	2,215.42	(64.28)	-2.8%	11.1	1,977.26	1,958.82	(18.44)	-0.9%	9.8
16	25,000	2,824.63	2,744.28	(80.35)	-2.8%	11.0	2,446.58	2,423.53	(23.05)	-0.9%	9.7
17	30,000	3,369.55	3,273.13	(96.42)	-2.9%	10.9	2,915.89	2,888.23	(27.66)	-0.9%	9.6
18	35,000	3,914.48	3,801.99	(112.49)	-2.9%	10.9	3,385.21	3,352.94	(32.27)	-1.0%	9.6
19	40,000	4,459.40	4,330.84	(128.56)	-2.9%	10.8	3,854.52	3,817.64	(36.88)	-1.0%	9.5
20	45,000	5,004.33	4,859.70	(144.63)	-2.9%	10.8	4,323.84	4,282.35	(41.49)	-1.0%	9.5
21	50,000	5,549.25	5,388.55	(160.70)	-2.9%	10.8	4,793.15	4,747.05	(46.10)	-1.0%	9.5
22	60,000	6,639.10	6,446.26	(192.84)	-2.9%	10.7	5,731.78	5,676.46	(55.32)	-1.0%	9.5
23	70,000	7,728.95	7,503.97	(224.98)	-2.9%	10.7	6,670.41	6,605.87	(64.54)	-1.0%	9.4
24	80,000	8,818.80	8,561.68	(257.12)	-2.9%	10.7	7,609.04	7,535.28	(73.76)	-1.0%	9.4
25	90,000	9,908.65	9,619.39	(289.26)	-2.9%	10.7	8,547.67	8,464.69	(82.98)	-1.0%	9.4
26	100,000	10,998.50	10,677.10	(321.40)	-2.9%	10.7	9,486.30	9,394.10	(92.20)	-1.0%	9.4
27	110,000	12,088.35	11,734.81	(353.54)	-2.9%	10.7	10,424.93	10,323.51	(101.42)	-1.0%	9.4
28	120,000	13,178.20	12,792.52	(385.68)	-2.9%	10.7	11,363.56	11,252.92	(110.64)	-1.0%	9.4
29	130,000	14,268.05	13,850.23	(417.82)	-2.9%	10.7	12,302.19	12,182.33	(119.86)	-1.0%	9.4

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Energy-only GP Voltage Level 2
Education Provision GEI

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	23 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	154.23	152.57	(1.66)	-1.1%	30.5	146.67	146.15	(0.51)	-0.3%	29.2
2	1,000	208.45	205.14	(3.32)	-1.6%	20.5	193.33	192.31	(1.02)	-0.5%	19.2
3	1,500	262.68	257.70	(4.98)	-1.9%	17.2	240.00	238.46	(1.54)	-0.6%	15.9
4	2,000	316.90	310.27	(6.63)	-2.1%	15.5	286.66	284.61	(2.05)	-0.7%	14.2
5	2,500	371.13	362.84	(8.29)	-2.2%	14.5	333.33	330.76	(2.56)	-0.8%	13.2
6	3,000	425.36	415.41	(9.95)	-2.3%	13.8	379.99	376.92	(3.07)	-0.8%	12.6
7	4,000	533.81	520.54	(13.27)	-2.5%	13.0	473.32	469.22	(4.10)	-0.9%	11.7
8	5,000	642.26	625.68	(16.58)	-2.6%	12.5	566.65	561.53	(5.13)	-0.9%	11.2
9	6,000	750.71	730.81	(19.90)	-2.7%	12.2	659.98	653.83	(6.15)	-0.9%	10.9
10	7,000	859.16	835.95	(23.22)	-2.7%	11.9	753.31	746.14	(7.17)	-1.0%	10.7
11	8,000	967.62	941.08	(26.54)	-2.7%	11.8	846.64	838.44	(8.20)	-1.0%	10.5
12	9,000	1,076.07	1,046.22	(29.85)	-2.8%	11.6	939.97	930.75	(9.22)	-1.0%	10.3
13	10,000	1,184.52	1,151.35	(33.17)	-2.8%	11.5	1,033.30	1,023.05	(10.25)	-1.0%	10.2
14	15,000	1,726.78	1,677.03	(49.75)	-2.9%	11.2	1,499.95	1,484.58	(15.38)	-1.0%	9.9
15	20,000	2,269.04	2,202.70	(66.34)	-2.9%	11.0	1,966.60	1,946.10	(20.50)	-1.0%	9.7
16	25,000	2,811.30	2,728.38	(82.92)	-2.9%	10.9	2,433.25	2,407.63	(25.63)	-1.1%	9.6
17	30,000	3,353.56	3,254.05	(99.51)	-3.0%	10.8	2,899.90	2,869.15	(30.75)	-1.1%	9.6
18	35,000	3,895.82	3,779.73	(116.09)	-3.0%	10.8	3,366.55	3,330.68	(35.88)	-1.1%	9.5
19	40,000	4,438.08	4,305.40	(132.68)	-3.0%	10.8	3,833.20	3,792.20	(41.00)	-1.1%	9.5
20	45,000	4,980.34	4,831.08	(149.26)	-3.0%	10.7	4,299.85	4,253.73	(46.12)	-1.1%	9.5
21	50,000	5,522.60	5,356.75	(165.85)	-3.0%	10.7	4,766.50	4,715.25	(51.25)	-1.1%	9.4
22	60,000	6,607.12	6,408.10	(199.02)	-3.0%	10.7	5,699.80	5,638.30	(61.50)	-1.1%	9.4
23	70,000	7,691.64	7,459.45	(232.19)	-3.0%	10.7	6,633.10	6,561.35	(71.75)	-1.1%	9.4
24	80,000	8,776.16	8,510.80	(265.36)	-3.0%	10.6	7,566.40	7,484.40	(82.00)	-1.1%	9.4
25	90,000	9,860.68	9,562.15	(298.53)	-3.0%	10.6	8,499.70	8,407.45	(92.25)	-1.1%	9.3
26	100,000	10,945.20	10,613.50	(331.70)	-3.0%	10.6	9,433.00	9,330.50	(102.50)	-1.1%	9.3
27	110,000	12,029.72	11,664.85	(364.87)	-3.0%	10.6	10,366.30	10,253.55	(112.75)	-1.1%	9.3
28	120,000	13,114.24	12,716.20	(398.04)	-3.0%	10.6	11,299.60	11,176.60	(123.00)	-1.1%	9.3
29	130,000	14,198.76	13,767.55	(431.21)	-3.0%	10.6	12,232.90	12,099.65	(133.25)	-1.1%	9.3

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Energy-only GP Voltage Level 3

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	24 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	159.97	159.58	(0.39)	-0.2%	31.9	152.31	153.08	0.77	0.5%	30.6
2	1,000	219.94	219.16	(0.78)	-0.4%	21.9	204.62	206.15	1.54	0.8%	20.6
3	1,500	279.91	278.74	(1.17)	-0.4%	18.6	256.92	259.23	2.30	0.9%	17.3
4	2,000	339.88	338.32	(1.56)	-0.5%	16.9	309.23	312.30	3.07	1.0%	15.6
5	2,500	399.85	397.90	(1.94)	-0.5%	15.9	361.54	365.38	3.84	1.1%	14.6
6	3,000	459.82	457.48	(2.33)	-0.5%	15.2	413.85	418.45	4.60	1.1%	13.9
7	4,000	579.76	576.64	(3.11)	-0.5%	14.4	518.46	524.60	6.14	1.2%	13.1
8	5,000	699.70	695.81	(3.89)	-0.6%	13.9	623.08	630.76	7.67	1.2%	12.6
9	6,000	819.63	814.97	(4.67)	-0.6%	13.6	727.70	736.91	9.21	1.3%	12.3
10	7,000	939.57	934.13	(5.45)	-0.6%	13.3	832.31	843.06	10.75	1.3%	12.0
11	8,000	1,059.51	1,053.29	(6.22)	-0.6%	13.2	936.93	949.21	12.28	1.3%	11.9
12	9,000	1,179.45	1,172.45	(7.00)	-0.6%	13.0	1,041.54	1,055.36	13.82	1.3%	11.7
13	10,000	1,299.39	1,291.61	(7.78)	-0.6%	12.9	1,146.16	1,161.51	15.35	1.3%	11.6
14	15,000	1,899.09	1,887.42	(11.67)	-0.6%	12.6	1,669.24	1,692.27	23.02	1.4%	11.3
15	20,000	2,498.78	2,483.22	(15.56)	-0.6%	12.4	2,192.32	2,223.02	30.70	1.4%	11.1
16	25,000	3,098.48	3,079.03	(19.45)	-0.6%	12.3	2,715.40	2,753.78	38.38	1.4%	11.0
17	30,000	3,698.17	3,674.83	(23.34)	-0.6%	12.2	3,238.48	3,284.53	46.05	1.4%	10.9
18	35,000	4,297.87	4,270.64	(27.23)	-0.6%	12.2	3,761.56	3,815.29	53.72	1.4%	10.9
19	40,000	4,897.56	4,866.44	(31.12)	-0.6%	12.2	4,284.64	4,346.04	61.40	1.4%	10.9
20	45,000	5,497.26	5,462.25	(35.01)	-0.6%	12.1	4,807.72	4,876.80	69.07	1.4%	10.8
21	50,000	6,096.95	6,058.05	(38.90)	-0.6%	12.1	5,330.80	5,407.55	76.75	1.4%	10.8
22	60,000	7,296.34	7,249.66	(46.68)	-0.6%	12.1	6,376.96	6,469.06	92.10	1.4%	10.8
23	70,000	8,495.73	8,441.27	(54.46)	-0.6%	12.1	7,423.12	7,530.57	107.45	1.4%	10.8
24	80,000	9,695.12	9,632.88	(62.24)	-0.6%	12.0	8,469.28	8,592.08	122.80	1.4%	10.7
25	90,000	10,894.51	10,824.49	(70.02)	-0.6%	12.0	9,515.44	9,653.59	138.15	1.5%	10.7
26	100,000	12,093.90	12,016.10	(77.80)	-0.6%	12.0	10,561.60	10,715.10	153.50	1.5%	10.7
27	110,000	13,293.29	13,207.71	(85.58)	-0.6%	12.0	11,607.76	11,776.61	168.85	1.5%	10.7
28	120,000	14,492.68	14,399.32	(93.36)	-0.6%	12.0	12,653.92	12,838.12	184.20	1.5%	10.7
29	130,000	15,692.07	15,590.93	(101.14)	-0.6%	12.0	13,700.08	13,899.63	199.55	1.5%	10.7

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Energy-only GP Voltage Level 3
Education Provision GEI

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	25 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	159.70	159.26	(0.44)	-0.3%	31.9	152.04	152.76	0.72	0.5%	30.6
2	1,000	219.41	218.53	(0.88)	-0.4%	21.9	204.08	205.52	1.43	0.7%	20.6
3	1,500	279.11	277.79	(1.32)	-0.5%	18.5	256.12	258.27	2.15	0.8%	17.2
4	2,000	338.81	337.05	(1.76)	-0.5%	16.9	308.17	311.03	2.86	0.9%	15.6
5	2,500	398.52	396.31	(2.20)	-0.6%	15.9	360.21	363.79	3.58	1.0%	14.6
6	3,000	458.22	455.58	(2.64)	-0.6%	15.2	412.25	416.55	4.30	1.0%	13.9
7	4,000	577.62	574.10	(3.52)	-0.6%	14.4	516.33	522.06	5.73	1.1%	13.1
8	5,000	697.03	692.63	(4.40)	-0.6%	13.9	620.42	627.58	7.16	1.2%	12.6
9	6,000	816.44	811.15	(5.29)	-0.6%	13.5	724.50	733.09	8.59	1.2%	12.2
10	7,000	935.84	929.68	(6.17)	-0.7%	13.3	828.58	838.61	10.02	1.2%	12.0
11	8,000	1,055.25	1,048.20	(7.05)	-0.7%	13.1	932.66	944.12	11.46	1.2%	11.8
12	9,000	1,174.65	1,166.73	(7.93)	-0.7%	13.0	1,036.75	1,049.64	12.89	1.2%	11.7
13	10,000	1,294.06	1,285.25	(8.81)	-0.7%	12.9	1,140.83	1,155.15	14.32	1.3%	11.6
14	15,000	1,891.09	1,877.88	(13.21)	-0.7%	12.5	1,661.25	1,682.73	21.48	1.3%	11.2
15	20,000	2,488.12	2,470.50	(17.62)	-0.7%	12.4	2,181.66	2,210.30	28.64	1.3%	11.1
16	25,000	3,085.15	3,063.13	(22.02)	-0.7%	12.3	2,702.08	2,737.88	35.80	1.3%	11.0
17	30,000	3,682.18	3,655.75	(26.43)	-0.7%	12.2	3,222.49	3,265.45	42.96	1.3%	10.9
18	35,000	4,279.21	4,248.38	(30.83)	-0.7%	12.1	3,742.91	3,793.03	50.12	1.3%	10.8
19	40,000	4,876.24	4,841.00	(35.24)	-0.7%	12.1	4,263.32	4,320.60	57.28	1.3%	10.8
20	45,000	5,473.27	5,433.63	(39.64)	-0.7%	12.1	4,783.74	4,848.18	64.44	1.3%	10.8
21	50,000	6,070.30	6,026.25	(44.05)	-0.7%	12.1	5,304.15	5,375.75	71.60	1.3%	10.8
22	60,000	7,264.36	7,211.50	(52.86)	-0.7%	12.0	6,344.98	6,430.90	85.92	1.4%	10.7
23	70,000	8,458.42	8,396.75	(61.67)	-0.7%	12.0	7,385.81	7,486.05	100.24	1.4%	10.7
24	80,000	9,652.48	9,582.00	(70.48)	-0.7%	12.0	8,426.64	8,541.20	114.56	1.4%	10.7
25	90,000	10,846.54	10,767.25	(79.29)	-0.7%	12.0	9,467.47	9,596.35	128.88	1.4%	10.7
26	100,000	12,040.60	11,952.50	(88.10)	-0.7%	12.0	10,508.30	10,651.50	143.20	1.4%	10.7
27	110,000	13,234.66	13,137.75	(96.91)	-0.7%	11.9	11,549.13	11,706.65	157.52	1.4%	10.6
28	120,000	14,428.72	14,323.00	(105.72)	-0.7%	11.9	12,589.96	12,761.80	171.84	1.4%	10.6
29	130,000	15,622.78	15,508.25	(114.53)	-0.7%	11.9	13,630.79	13,816.95	186.16	1.4%	10.6

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Demand GPD Voltage Level 1

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	26 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	MWh	$000	$000	$000	%	¢/kWh	$000	$000	$000	%	¢/kWh
1	100	7.50	7.65	0.15	2.0%	7.6	7.11	7.09	(0.03)	-0.4%	7.1
2	110	8.22	8.39	0.16	2.0%	7.6	7.81	7.78	(0.03)	-0.4%	7.1
3	120	8.95	9.13	0.18	2.0%	7.6	8.50	8.47	(0.03)	-0.4%	7.1
4	130	9.68	9.88	0.19	2.0%	7.6	9.19	9.16	(0.03)	-0.4%	7.0
5	140	10.41	10.62	0.21	2.0%	7.6	9.88	9.85	(0.04)	-0.4%	7.0
6	150	11.14	11.37	0.22	2.0%	7.6	10.57	10.53	(0.04)	-0.4%	7.0
7	200	14.79	15.09	0.30	2.0%	7.5	14.03	13.98	(0.05)	-0.4%	7.0
8	250	18.44	18.81	0.37	2.0%	7.5	17.49	17.42	(0.06)	-0.4%	7.0
9	300	22.09	22.54	0.45	2.0%	7.5	20.94	20.87	(0.08)	-0.4%	7.0
10	350	25.73	26.26	0.52	2.0%	7.5	24.40	24.31	(0.09)	-0.4%	6.9
11	400	29.38	29.98	0.60	2.0%	7.5	27.86	27.76	(0.10)	-0.4%	6.9
12	450	33.03	33.70	0.67	2.0%	7.5	31.32	31.20	(0.11)	-0.4%	6.9
13	500	36.68	37.43	0.75	2.0%	7.5	34.77	34.65	(0.13)	-0.4%	6.9
14	600	43.97	44.87	0.90	2.0%	7.5	41.69	41.54	(0.15)	-0.4%	6.9
15	700	51.27	52.32	1.05	2.0%	7.5	48.60	48.43	(0.18)	-0.4%	6.9
16	800	58.56	59.76	1.20	2.0%	7.5	55.52	55.32	(0.20)	-0.4%	6.9
17	900	65.86	67.21	1.35	2.0%	7.5	62.43	62.20	(0.23)	-0.4%	6.9
18	1,000	73.15	74.65	1.50	2.1%	7.5	69.35	69.09	(0.25)	-0.4%	6.9
19	1,500	109.63	111.88	2.25	2.1%	7.5	103.92	103.54	(0.38)	-0.4%	6.9
20	2,000	146.10	149.10	3.00	2.1%	7.5	138.50	137.99	(0.51)	-0.4%	6.9
21	2,500	182.58	186.33	3.75	2.1%	7.5	173.07	172.44	(0.63)	-0.4%	6.9
22	3,000	219.05	223.55	4.50	2.1%	7.5	207.64	206.88	(0.76)	-0.4%	6.9
23	3,500	255.53	260.78	5.25	2.1%	7.5	242.22	241.33	(0.89)	-0.4%	6.9
24	4,000	292.00	298.00	6.00	2.1%	7.5	276.79	275.78	(1.01)	-0.4%	6.9
25	4,500	328.48	335.23	6.75	2.1%	7.4	311.36	310.22	(1.14)	-0.4%	6.9
26	5,000	364.95	372.45	7.50	2.1%	7.4	345.94	344.67	(1.27)	-0.4%	6.9
27	5,500	401.43	409.68	8.25	2.1%	7.4	380.51	379.12	(1.39)	-0.4%	6.9
28	6,000	437.90	446.90	9.00	2.1%	7.4	415.09	413.57	(1.52)	-0.4%	6.9
29	6,500	474.38	484.13	9.75	2.1%	7.4	449.66	448.01	(1.65)	-0.4%	6.9

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Demand GPD Voltage Level 1
Primary Interruptible Provision GI

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	27 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	MWh	$000	$000	$000	%	¢/kWh	$000	$000	$000	%	¢/kWh
1	100	6.42	6.57	0.15	2.3%	6.6	6.19	6.17	(0.03)	-0.4%	6.2
2	110	7.04	7.21	0.16	2.3%	6.6	6.79	6.76	(0.03)	-0.4%	6.1
3	120	7.66	7.84	0.18	2.3%	6.5	7.39	7.36	(0.03)	-0.4%	6.1
4	130	8.28	8.48	0.19	2.4%	6.5	7.99	7.96	(0.03)	-0.4%	6.1
5	140	8.91	9.12	0.21	2.4%	6.5	8.59	8.55	(0.04)	-0.4%	6.1
6	150	9.53	9.75	0.22	2.4%	6.5	9.19	9.15	(0.04)	-0.4%	6.1
7	200	12.64	12.94	0.30	2.4%	6.5	12.18	12.13	(0.05)	-0.4%	6.1
8	250	15.75	16.12	0.37	2.4%	6.4	15.18	15.12	(0.06)	-0.4%	6.0
9	300	18.86	19.31	0.45	2.4%	6.4	18.18	18.10	(0.08)	-0.4%	6.0
10	350	21.97	22.49	0.52	2.4%	6.4	21.17	21.08	(0.09)	-0.4%	6.0
11	400	25.08	25.68	0.60	2.4%	6.4	24.17	24.07	(0.10)	-0.4%	6.0
12	450	28.18	28.86	0.67	2.4%	6.4	27.17	27.05	(0.11)	-0.4%	6.0
13	500	31.29	32.04	0.75	2.4%	6.4	30.16	30.03	(0.13)	-0.4%	6.0
14	600	37.51	38.41	0.90	2.4%	6.4	36.15	36.00	(0.15)	-0.4%	6.0
15	700	43.73	44.78	1.05	2.4%	6.4	42.15	41.97	(0.18)	-0.4%	6.0
16	800	49.95	51.15	1.20	2.4%	6.4	48.14	47.94	(0.20)	-0.4%	6.0
17	900	56.17	57.52	1.35	2.4%	6.4	54.13	53.90	(0.23)	-0.4%	6.0
18	1,000	62.39	63.89	1.50	2.4%	6.4	60.12	59.87	(0.25)	-0.4%	6.0
19	1,500	93.48	95.73	2.25	2.4%	6.4	90.08	89.70	(0.38)	-0.4%	6.0
20	2,000	124.58	127.58	3.00	2.4%	6.4	120.05	119.54	(0.51)	-0.4%	6.0
21	2,500	155.67	159.42	3.75	2.4%	6.4	150.01	149.37	(0.63)	-0.4%	6.0
22	3,000	186.77	191.26	4.50	2.4%	6.4	179.97	179.21	(0.76)	-0.4%	6.0
23	3,500	217.86	223.11	5.25	2.4%	6.4	209.93	209.04	(0.89)	-0.4%	6.0
24	4,000	248.95	254.95	6.00	2.4%	6.4	239.89	238.88	(1.01)	-0.4%	6.0
25	4,500	280.05	286.80	6.75	2.4%	6.4	269.85	268.71	(1.14)	-0.4%	6.0
26	5,000	311.14	318.64	7.50	2.4%	6.4	299.82	298.55	(1.27)	-0.4%	6.0
27	5,500	342.24	350.49	8.25	2.4%	6.4	329.78	328.38	(1.39)	-0.4%	6.0
28	6,000	373.33	382.33	9.00	2.4%	6.4	359.74	358.22	(1.52)	-0.4%	6.0
29	6,500	404.43	414.17	9.75	2.4%	6.4	389.70	388.05	(1.65)	-0.4%	6.0

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Demand GPD Voltage Level 2

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	28 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	MWh	$000	$000	$000	%	¢/kWh	$000	$000	$000	%	¢/kWh
1	100	8.85	9.05	0.21	2.3%	9.1	8.32	8.34	0.02	0.2%	8.3
2	110	9.71	9.94	0.23	2.4%	9.0	9.13	9.16	0.02	0.2%	8.3
3	120	10.58	10.82	0.25	2.4%	9.0	9.95	9.97	0.02	0.2%	8.3
4	130	11.44	11.71	0.27	2.4%	9.0	10.76	10.78	0.03	0.2%	8.3
5	140	12.30	12.60	0.29	2.4%	9.0	11.57	11.60	0.03	0.2%	8.3
6	150	13.17	13.48	0.31	2.4%	9.0	12.38	12.41	0.03	0.2%	8.3
7	200	17.49	17.91	0.42	2.4%	9.0	16.44	16.48	0.04	0.2%	8.2
8	250	21.82	22.33	0.52	2.4%	8.9	20.50	20.55	0.05	0.2%	8.2
9	300	26.14	26.76	0.62	2.4%	8.9	24.56	24.62	0.06	0.2%	8.2
10	350	30.46	31.19	0.73	2.4%	8.9	28.62	28.69	0.07	0.2%	8.2
11	400	34.78	35.62	0.83	2.4%	8.9	32.68	32.76	0.08	0.2%	8.2
12	450	39.11	40.04	0.94	2.4%	8.9	36.74	36.83	0.09	0.2%	8.2
13	500	43.43	44.47	1.04	2.4%	8.9	40.80	40.91	0.10	0.2%	8.2
14	600	52.08	53.32	1.25	2.4%	8.9	48.93	49.05	0.12	0.2%	8.2
15	700	60.72	62.18	1.45	2.4%	8.9	57.05	57.19	0.14	0.2%	8.2
16	800	69.37	71.03	1.66	2.4%	8.9	65.17	65.33	0.16	0.2%	8.2
17	900	78.02	79.89	1.87	2.4%	8.9	73.29	73.47	0.18	0.2%	8.2
18	1,000	86.66	88.74	2.08	2.4%	8.9	81.41	81.61	0.20	0.2%	8.2
19	1,500	129.89	133.01	3.12	2.4%	8.9	122.01	122.32	0.30	0.2%	8.2
20	2,000	173.12	177.28	4.16	2.4%	8.9	162.62	163.02	0.40	0.2%	8.2
21	2,500	216.35	221.55	5.20	2.4%	8.9	203.22	203.73	0.50	0.2%	8.1
22	3,000	259.58	265.82	6.23	2.4%	8.9	243.83	244.43	0.60	0.2%	8.1
23	3,500	302.81	310.09	7.27	2.4%	8.9	284.43	285.14	0.70	0.2%	8.1
24	4,000	346.05	354.36	8.31	2.4%	8.9	325.04	325.84	0.80	0.2%	8.1
25	4,500	389.28	398.63	9.35	2.4%	8.9	365.64	366.55	0.90	0.2%	8.1
26	5,000	432.51	442.90	10.39	2.4%	8.9	406.25	407.25	1.01	0.2%	8.1
27	5,500	475.74	487.17	11.43	2.4%	8.9	446.85	447.96	1.11	0.2%	8.1
28	6,000	518.97	531.44	12.47	2.4%	8.9	487.46	488.66	1.21	0.2%	8.1
29	6,500	562.20	575.71	13.51	2.4%	8.9	528.06	529.37	1.31	0.2%	8.1

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Demand GPD Voltage Level 2
Primary Interruptible Provision GI

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
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Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	MWh	$000	$000	$000	%	¢/kWh	$000	$000	$000	%	¢/kWh
1	100	7.57	7.78	0.21	2.7%	7.8	7.23	7.25	0.02	0.3%	7.2
2	110	8.31	8.53	0.23	2.8%	7.8	7.93	7.95	0.02	0.3%	7.2
3	120	9.04	9.29	0.25	2.8%	7.7	8.63	8.65	0.02	0.3%	7.2
4	130	9.78	10.05	0.27	2.8%	7.7	9.33	9.36	0.03	0.3%	7.2
5	140	10.52	10.81	0.29	2.8%	7.7	10.04	10.06	0.03	0.3%	7.2
6	150	11.25	11.56	0.31	2.8%	7.7	10.74	10.77	0.03	0.3%	7.2
7	200	14.94	15.35	0.42	2.8%	7.7	14.25	14.29	0.04	0.3%	7.1
8	250	18.62	19.14	0.52	2.8%	7.7	17.76	17.81	0.05	0.3%	7.1
9	300	22.30	22.93	0.62	2.8%	7.6	21.28	21.34	0.06	0.3%	7.1
10	350	25.99	26.72	0.73	2.8%	7.6	24.79	24.86	0.07	0.3%	7.1
11	400	29.67	30.50	0.83	2.8%	7.6	28.30	28.38	0.08	0.3%	7.1
12	450	33.36	34.29	0.94	2.8%	7.6	31.82	31.91	0.09	0.3%	7.1
13	500	37.04	38.08	1.04	2.8%	7.6	35.33	35.43	0.10	0.3%	7.1
14	600	44.41	45.66	1.25	2.8%	7.6	42.35	42.47	0.12	0.3%	7.1
15	700	51.78	53.23	1.45	2.8%	7.6	49.38	49.52	0.14	0.3%	7.1
16	800	59.15	60.81	1.66	2.8%	7.6	56.41	56.57	0.16	0.3%	7.1
17	900	66.51	68.38	1.87	2.8%	7.6	63.43	63.61	0.18	0.3%	7.1
18	1,000	73.88	75.96	2.08	2.8%	7.6	70.46	70.66	0.20	0.3%	7.1
19	1,500	110.72	113.84	3.12	2.8%	7.6	105.58	105.89	0.30	0.3%	7.1
20	2,000	147.57	151.72	4.16	2.8%	7.6	140.71	141.11	0.40	0.3%	7.1
21	2,500	184.41	189.60	5.20	2.8%	7.6	175.84	176.34	0.50	0.3%	7.1
22	3,000	221.25	227.48	6.23	2.8%	7.6	210.97	211.57	0.60	0.3%	7.1
23	3,500	258.09	265.36	7.27	2.8%	7.6	246.10	246.80	0.70	0.3%	7.1
24	4,000	294.93	303.24	8.31	2.8%	7.6	281.23	282.03	0.80	0.3%	7.1
25	4,500	331.77	341.12	9.35	2.8%	7.6	316.35	317.26	0.90	0.3%	7.1
26	5,000	368.61	379.01	10.39	2.8%	7.6	351.48	352.49	1.01	0.3%	7.0
27	5,500	405.46	416.89	11.43	2.8%	7.6	386.61	387.72	1.11	0.3%	7.0
28	6,000	442.30	454.77	12.47	2.8%	7.6	421.74	422.94	1.21	0.3%	7.0
29	6,500	479.14	492.65	13.51	2.8%	7.6	456.87	458.17	1.31	0.3%	7.0

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Demand GPD Voltage Level 3

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	30 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	MWh	$000	$000	$000	%	¢/kWh	$000	$000	$000	%	¢/kWh
1	100	9.35	9.64	0.30	3.2%	9.6	8.81	8.92	0.11	1.2%	8.9
2	110	10.26	10.59	0.33	3.2%	9.6	9.68	9.79	0.12	1.2%	8.9
3	120	11.18	11.53	0.36	3.2%	9.6	10.54	10.66	0.13	1.2%	8.9
4	130	12.09	12.48	0.39	3.2%	9.6	11.40	11.54	0.14	1.2%	8.9
5	140	13.01	13.42	0.42	3.2%	9.6	12.26	12.41	0.15	1.2%	8.9
6	150	13.92	14.37	0.45	3.2%	9.6	13.12	13.28	0.16	1.2%	8.9
7	200	18.49	19.09	0.59	3.2%	9.5	17.43	17.64	0.21	1.2%	8.8
8	250	23.07	23.81	0.74	3.2%	9.5	21.73	22.00	0.27	1.2%	8.8
9	300	27.64	28.53	0.89	3.2%	9.5	26.04	26.36	0.32	1.2%	8.8
10	350	32.21	33.25	1.04	3.2%	9.5	30.35	30.72	0.37	1.2%	8.8
11	400	36.79	37.98	1.19	3.2%	9.5	34.66	35.08	0.42	1.2%	8.8
12	450	41.36	42.70	1.34	3.2%	9.5	38.96	39.44	0.48	1.2%	8.8
13	500	45.93	47.42	1.49	3.2%	9.5	43.27	43.80	0.53	1.2%	8.8
14	600	55.08	56.86	1.78	3.2%	9.5	51.88	52.52	0.64	1.2%	8.8
15	700	64.23	66.31	2.08	3.2%	9.5	60.50	61.24	0.74	1.2%	8.7
16	800	73.37	75.75	2.38	3.2%	9.5	69.11	69.96	0.85	1.2%	8.7
17	900	82.52	85.20	2.68	3.2%	9.5	77.72	78.68	0.96	1.2%	8.7
18	1,000	91.67	94.64	2.97	3.2%	9.5	86.34	87.40	1.06	1.2%	8.7
19	1,500	137.40	141.86	4.46	3.2%	9.5	129.41	131.00	1.59	1.2%	8.7
20	2,000	183.13	189.08	5.95	3.2%	9.5	172.48	174.60	2.12	1.2%	8.7
21	2,500	228.87	236.30	7.43	3.2%	9.5	215.54	218.20	2.66	1.2%	8.7
22	3,000	274.60	283.52	8.92	3.2%	9.5	258.61	261.80	3.19	1.2%	8.7
23	3,500	320.33	330.74	10.41	3.2%	9.4	301.68	305.40	3.72	1.2%	8.7
24	4,000	366.06	377.96	11.90	3.2%	9.4	344.75	349.00	4.25	1.2%	8.7
25	4,500	411.80	425.18	13.38	3.2%	9.4	387.82	392.60	4.78	1.2%	8.7
26	5,000	457.53	472.40	14.87	3.2%	9.4	430.89	436.20	5.31	1.2%	8.7
27	5,500	503.26	519.62	16.36	3.2%	9.4	473.96	479.80	5.84	1.2%	8.7
28	6,000	549.00	566.84	17.84	3.3%	9.4	517.03	523.40	6.37	1.2%	8.7
29	6,500	594.73	614.06	19.33	3.3%	9.4	560.09	567.00	6.91	1.2%	8.7

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Demand GPD Voltage Level 3
Primary Interruptible Provision GI

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	31 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	MWh	$000	$000	$000	%	¢/kWh	$000	$000	$000	%	¢/kWh
1	100	8.08	8.38	0.30	3.7%	8.4	7.73	7.84	0.11	1.4%	7.8
2	110	8.87	9.20	0.33	3.7%	8.4	8.48	8.60	0.12	1.4%	7.8
3	120	9.66	10.01	0.36	3.7%	8.3	9.24	9.36	0.13	1.4%	7.8
4	130	10.45	10.83	0.39	3.7%	8.3	9.99	10.13	0.14	1.4%	7.8
5	140	11.23	11.65	0.42	3.7%	8.3	10.74	10.89	0.15	1.4%	7.8
6	150	12.02	12.47	0.45	3.7%	8.3	11.49	11.65	0.16	1.4%	7.8
7	200	15.96	16.56	0.59	3.7%	8.3	15.26	15.47	0.21	1.4%	7.7
8	250	19.90	20.65	0.74	3.7%	8.3	19.02	19.29	0.27	1.4%	7.7
9	300	23.84	24.74	0.89	3.7%	8.2	22.79	23.11	0.32	1.4%	7.7
10	350	27.79	28.83	1.04	3.7%	8.2	26.55	26.92	0.37	1.4%	7.7
11	400	31.73	32.92	1.19	3.7%	8.2	30.32	30.74	0.42	1.4%	7.7
12	450	35.67	37.01	1.34	3.8%	8.2	34.08	34.56	0.48	1.4%	7.7
13	500	39.61	41.09	1.49	3.8%	8.2	37.85	38.38	0.53	1.4%	7.7
14	600	47.49	49.27	1.78	3.8%	8.2	45.38	46.01	0.64	1.4%	7.7
15	700	55.37	57.45	2.08	3.8%	8.2	52.91	53.65	0.74	1.4%	7.7
16	800	63.25	65.63	2.38	3.8%	8.2	60.44	61.29	0.85	1.4%	7.7
17	900	71.13	73.81	2.68	3.8%	8.2	67.96	68.92	0.96	1.4%	7.7
18	1,000	79.02	81.99	2.97	3.8%	8.2	75.49	76.56	1.06	1.4%	7.7
19	1,500	118.42	122.88	4.46	3.8%	8.2	113.14	114.73	1.59	1.4%	7.6
20	2,000	157.83	163.78	5.95	3.8%	8.2	150.79	152.91	2.12	1.4%	7.6
21	2,500	197.24	204.67	7.43	3.8%	8.2	188.44	191.09	2.66	1.4%	7.6
22	3,000	236.65	245.57	8.92	3.8%	8.2	226.08	229.27	3.19	1.4%	7.6
23	3,500	276.05	286.46	10.41	3.8%	8.2	263.73	267.45	3.72	1.4%	7.6
24	4,000	315.46	327.36	11.90	3.8%	8.2	301.38	305.63	4.25	1.4%	7.6
25	4,500	354.87	368.25	13.38	3.8%	8.2	339.02	343.80	4.78	1.4%	7.6
26	5,000	394.28	409.15	14.87	3.8%	8.2	376.67	381.98	5.31	1.4%	7.6
27	5,500	433.68	450.04	16.36	3.8%	8.2	414.32	420.16	5.84	1.4%	7.6
28	6,000	473.09	490.93	17.84	3.8%	8.2	451.96	458.34	6.37	1.4%	7.6
29	6,500	512.50	531.83	19.33	3.8%	8.2	489.61	496.52	6.91	1.4%	7.6

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Time-of-Use GPTU Voltage Level 1

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
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Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	MWh	$000	$000	$000	%	¢/kWh	$000	$000	$000	%	¢/kWh
1	100	9.19	9.16	(0.02)	-0.3%	9.2	8.44	8.50	0.06	0.7%	8.5
2	110	10.09	10.06	(0.03)	-0.3%	9.1	9.26	9.33	0.06	0.7%	8.5
3	120	10.98	10.95	(0.03)	-0.3%	9.1	10.09	10.16	0.07	0.7%	8.5
4	130	11.88	11.85	(0.03)	-0.3%	9.1	10.91	10.99	0.07	0.7%	8.5
5	140	12.78	12.75	(0.03)	-0.3%	9.1	11.74	11.82	0.08	0.7%	8.4
6	150	13.68	13.64	(0.04)	-0.3%	9.1	12.56	12.65	0.09	0.7%	8.4
7	200	18.17	18.12	(0.05)	-0.3%	9.1	16.68	16.80	0.12	0.7%	8.4
8	250	22.67	22.61	(0.06)	-0.3%	9.0	20.80	20.95	0.14	0.7%	8.4
9	300	27.16	27.09	(0.07)	-0.3%	9.0	24.92	25.09	0.17	0.7%	8.4
10	350	31.65	31.57	(0.09)	-0.3%	9.0	29.04	29.24	0.20	0.7%	8.4
11	400	36.15	36.05	(0.10)	-0.3%	9.0	33.16	33.39	0.23	0.7%	8.3
12	450	40.64	40.53	(0.11)	-0.3%	9.0	37.28	37.54	0.26	0.7%	8.3
13	500	45.13	45.01	(0.12)	-0.3%	9.0	41.40	41.69	0.29	0.7%	8.3
14	600	54.12	53.97	(0.15)	-0.3%	9.0	49.64	49.99	0.35	0.7%	8.3
15	700	63.11	62.93	(0.17)	-0.3%	9.0	57.88	58.29	0.40	0.7%	8.3
16	800	72.10	71.90	(0.20)	-0.3%	9.0	66.13	66.59	0.46	0.7%	8.3
17	900	81.08	80.86	(0.22)	-0.3%	9.0	74.37	74.88	0.52	0.7%	8.3
18	1,000	90.07	89.82	(0.25)	-0.3%	9.0	82.61	83.18	0.58	0.7%	8.3
19	1,500	135.00	134.63	(0.37)	-0.3%	9.0	123.81	124.67	0.86	0.7%	8.3
20	2,000	179.94	179.44	(0.50)	-0.3%	9.0	165.01	166.16	1.15	0.7%	8.3
21	2,500	224.87	224.25	(0.62)	-0.3%	9.0	206.22	207.65	1.44	0.7%	8.3
22	3,000	269.81	269.06	(0.75)	-0.3%	9.0	247.42	249.15	1.73	0.7%	8.3
23	3,500	314.74	313.87	(0.87)	-0.3%	9.0	288.62	290.64	2.01	0.7%	8.3
24	4,000	359.68	358.69	(0.99)	-0.3%	9.0	329.83	332.13	2.30	0.7%	8.3
25	4,500	404.61	403.50	(1.12)	-0.3%	9.0	371.03	373.62	2.59	0.7%	8.3
26	5,000	449.55	448.31	(1.24)	-0.3%	9.0	412.23	415.11	2.88	0.7%	8.3
27	5,500	494.48	493.12	(1.37)	-0.3%	9.0	453.44	456.60	3.16	0.7%	8.3
28	6,000	539.42	537.93	(1.49)	-0.3%	9.0	494.64	498.09	3.45	0.7%	8.3
29	6,500	584.35	582.74	(1.62)	-0.3%	9.0	535.84	539.58	3.74	0.7%	8.3

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Time-of-Use GPTU Voltage Level 2

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	33 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	MWh	$000	$000	$000	%	¢/kWh	$000	$000	$000	%	¢/kWh
1	100	9.74	9.96	0.21	2.2%	10.0	9.06	9.21	0.15	1.6%	9.2
2	110	10.70	10.93	0.23	2.2%	9.9	9.94	10.11	0.16	1.6%	9.2
3	120	11.65	11.91	0.25	2.2%	9.9	10.83	11.01	0.18	1.6%	9.2
4	130	12.61	12.88	0.27	2.2%	9.9	11.71	11.91	0.19	1.7%	9.2
5	140	13.56	13.86	0.29	2.2%	9.9	12.60	12.81	0.21	1.7%	9.1
6	150	14.52	14.83	0.32	2.2%	9.9	13.49	13.71	0.22	1.7%	9.1
7	200	19.29	19.71	0.42	2.2%	9.9	17.91	18.21	0.30	1.7%	9.1
8	250	24.06	24.59	0.53	2.2%	9.8	22.34	22.72	0.37	1.7%	9.1
9	300	28.83	29.47	0.63	2.2%	9.8	26.77	27.22	0.45	1.7%	9.1
10	350	33.61	34.34	0.74	2.2%	9.8	31.20	31.72	0.52	1.7%	9.1
11	400	38.38	39.22	0.84	2.2%	9.8	35.63	36.22	0.60	1.7%	9.1
12	450	43.15	44.10	0.95	2.2%	9.8	40.06	40.73	0.67	1.7%	9.1
13	500	47.92	48.98	1.05	2.2%	9.8	44.49	45.23	0.74	1.7%	9.0
14	600	57.47	58.73	1.26	2.2%	9.8	53.34	54.24	0.89	1.7%	9.0
15	700	67.01	68.49	1.47	2.2%	9.8	62.20	63.24	1.04	1.7%	9.0
16	800	76.56	78.24	1.68	2.2%	9.8	71.06	72.25	1.19	1.7%	9.0
17	900	86.10	88.00	1.89	2.2%	9.8	79.92	81.26	1.34	1.7%	9.0
18	1,000	95.65	97.75	2.10	2.2%	9.8	88.77	90.26	1.49	1.7%	9.0
19	1,500	143.37	146.53	3.16	2.2%	9.8	133.06	135.29	2.23	1.7%	9.0
20	2,000	191.09	195.30	4.21	2.2%	9.8	177.35	180.32	2.98	1.7%	9.0
21	2,500	238.82	244.08	5.26	2.2%	9.8	221.63	225.35	3.72	1.7%	9.0
22	3,000	286.54	292.86	6.31	2.2%	9.8	265.92	270.39	4.47	1.7%	9.0
23	3,500	334.26	341.63	7.37	2.2%	9.8	310.20	315.42	5.21	1.7%	9.0
24	4,000	381.99	390.41	8.42	2.2%	9.8	354.49	360.45	5.96	1.7%	9.0
25	4,500	429.71	439.18	9.47	2.2%	9.8	398.78	405.48	6.70	1.7%	9.0
26	5,000	477.44	487.96	10.52	2.2%	9.8	443.06	450.51	7.44	1.7%	9.0
27	5,500	525.16	536.74	11.58	2.2%	9.8	487.35	495.54	8.19	1.7%	9.0
28	6,000	572.88	585.51	12.63	2.2%	9.8	531.64	540.57	8.93	1.7%	9.0
29	6,500	620.61	634.29	13.68	2.2%	9.8	575.92	585.60	9.68	1.7%	9.0

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Time-of-Use GPTU Voltage Level 3

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	34 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	MWh	$000	$000	$000	%	¢/kWh	$000	$000	$000	%	¢/kWh
1	100	10.81	11.15	0.34	3.1%	11.1	10.02	10.32	0.30	3.0%	10.3
2	110	11.87	12.24	0.37	3.1%	11.1	11.00	11.33	0.33	3.0%	10.3
3	120	12.93	13.34	0.40	3.1%	11.1	11.98	12.35	0.37	3.0%	10.3
4	130	13.99	14.43	0.44	3.1%	11.1	12.96	13.36	0.40	3.1%	10.3
5	140	15.05	15.53	0.47	3.1%	11.1	13.94	14.37	0.43	3.1%	10.3
6	150	16.12	16.62	0.51	3.1%	11.1	14.93	15.38	0.46	3.1%	10.3
7	200	21.42	22.09	0.67	3.1%	11.0	19.84	20.44	0.61	3.1%	10.2
8	250	26.73	27.57	0.84	3.2%	11.0	24.74	25.50	0.76	3.1%	10.2
9	300	32.03	33.04	1.01	3.2%	11.0	29.65	30.57	0.91	3.1%	10.2
10	350	37.34	38.52	1.18	3.2%	11.0	34.56	35.63	1.06	3.1%	10.2
11	400	42.64	43.99	1.35	3.2%	11.0	39.47	40.69	1.22	3.1%	10.2
12	450	47.95	49.46	1.52	3.2%	11.0	44.38	45.75	1.37	3.1%	10.2
13	500	53.25	54.94	1.69	3.2%	11.0	49.29	50.81	1.52	3.1%	10.2
14	600	63.86	65.88	2.02	3.2%	11.0	59.11	60.93	1.83	3.1%	10.2
15	700	74.47	76.83	2.36	3.2%	11.0	68.92	71.05	2.13	3.1%	10.2
16	800	85.08	87.78	2.70	3.2%	11.0	78.74	81.17	2.43	3.1%	10.1
17	900	95.69	98.73	3.04	3.2%	11.0	88.56	91.30	2.74	3.1%	10.1
18	1,000	106.30	109.67	3.37	3.2%	11.0	98.38	101.42	3.04	3.1%	10.1
19	1,500	159.35	164.41	5.06	3.2%	11.0	147.46	152.03	4.56	3.1%	10.1
20	2,000	212.40	219.15	6.75	3.2%	11.0	196.55	202.63	6.08	3.1%	10.1
21	2,500	265.45	273.88	8.43	3.2%	11.0	245.64	253.24	7.60	3.1%	10.1
22	3,000	318.50	328.62	10.12	3.2%	11.0	294.73	303.85	9.13	3.1%	10.1
23	3,500	371.55	383.36	11.80	3.2%	11.0	343.81	354.46	10.65	3.1%	10.1
24	4,000	424.60	438.09	13.49	3.2%	11.0	392.90	405.07	12.17	3.1%	10.1
25	4,500	477.65	492.83	15.18	3.2%	11.0	441.99	455.68	13.69	3.1%	10.1
26	5,000	530.70	547.57	16.86	3.2%	11.0	491.08	506.28	15.21	3.1%	10.1
27	5,500	583.75	602.30	18.55	3.2%	11.0	540.16	556.89	16.73	3.1%	10.1
28	6,000	636.80	657.04	20.24	3.2%	11.0	589.25	607.50	18.25	3.1%	10.1
29	6,500	689.85	711.78	21.92	3.2%	11.0	638.34	658.11	19.77	3.1%	10.1

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Energy Intensive EIP Voltage Level 1

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	35 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	MWh	$000	$000	$000	%	¢/kWh	$000	$000	$000	%	¢/kWh
1	100	6.94	7.85	0.91	13.2%	7.9	6.46	7.08	0.61	9.5%	7.1
2	110	7.61	8.62	1.00	13.2%	7.8	7.09	7.77	0.67	9.5%	7.1
3	120	8.28	9.38	1.10	13.2%	7.8	7.72	8.45	0.74	9.5%	7.0
4	130	8.96	10.15	1.19	13.2%	7.8	8.34	9.14	0.80	9.6%	7.0
5	140	9.63	10.91	1.28	13.3%	7.8	8.97	9.83	0.86	9.6%	7.0
6	150	10.31	11.68	1.37	13.3%	7.8	9.60	10.52	0.92	9.6%	7.0
7	200	13.67	15.50	1.83	13.3%	7.8	12.73	13.96	1.23	9.6%	7.0
8	250	17.04	19.33	2.28	13.4%	7.7	15.86	17.39	1.53	9.7%	7.0
9	300	20.41	23.15	2.74	13.4%	7.7	18.99	20.83	1.84	9.7%	6.9
10	350	23.78	26.98	3.19	13.4%	7.7	22.12	24.27	2.15	9.7%	6.9
11	400	27.15	30.80	3.65	13.4%	7.7	25.26	27.71	2.45	9.7%	6.9
12	450	30.52	34.63	4.11	13.5%	7.7	28.39	31.15	2.76	9.7%	6.9
13	500	33.89	38.45	4.56	13.5%	7.7	31.52	34.59	3.07	9.7%	6.9
14	600	40.62	46.10	5.48	13.5%	7.7	37.78	41.47	3.68	9.7%	6.9
15	700	47.36	53.75	6.39	13.5%	7.7	44.05	48.34	4.29	9.7%	6.9
16	800	54.10	61.40	7.30	13.5%	7.7	50.31	55.22	4.91	9.8%	6.9
17	900	60.84	69.05	8.21	13.5%	7.7	56.58	62.10	5.52	9.8%	6.9
18	1,000	67.57	76.70	9.13	13.5%	7.7	62.84	68.98	6.13	9.8%	6.9
19	1,500	101.26	114.95	13.69	13.5%	7.7	94.16	103.36	9.20	9.8%	6.9
20	2,000	134.95	153.20	18.25	13.5%	7.7	125.48	137.75	12.27	9.8%	6.9
21	2,500	168.64	191.45	22.81	13.5%	7.7	156.80	172.14	15.34	9.8%	6.9
22	3,000	202.32	229.70	27.38	13.5%	7.7	188.12	206.53	18.40	9.8%	6.9
23	3,500	236.01	267.95	31.94	13.5%	7.7	219.44	240.92	21.47	9.8%	6.9
24	4,000	269.70	306.20	36.50	13.5%	7.7	250.76	275.30	24.54	9.8%	6.9
25	4,500	303.39	344.45	41.06	13.5%	7.7	282.08	309.69	27.61	9.8%	6.9
26	5,000	337.07	382.70	45.63	13.5%	7.7	313.41	344.08	30.67	9.8%	6.9
27	5,500	370.76	420.95	50.19	13.5%	7.7	344.73	378.47	33.74	9.8%	6.9
28	6,000	404.45	459.20	54.75	13.5%	7.7	376.05	412.86	36.81	9.8%	6.9
29	6,500	438.14	497.45	59.31	13.5%	7.7	407.37	447.24	39.88	9.8%	6.9

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Energy Intensive EIP Voltage Level 2

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	36 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	MWh	$000	$000	$000	%	¢/kWh	$000	$000	$000	%	¢/kWh
1	100	8.63	9.90	1.27	14.7%	9.9	8.23	9.22	0.99	12.0%	9.2
2	110	9.48	10.87	1.40	14.7%	9.9	9.03	10.12	1.08	12.0%	9.2
3	120	10.32	11.84	1.52	14.7%	9.9	9.84	11.02	1.18	12.0%	9.2
4	130	11.16	12.81	1.65	14.8%	9.9	10.64	11.92	1.28	12.1%	9.2
5	140	12.01	13.78	1.78	14.8%	9.8	11.44	12.82	1.38	12.1%	9.2
6	150	12.85	14.75	1.90	14.8%	9.8	12.24	13.72	1.48	12.1%	9.1
7	200	17.07	19.60	2.54	14.9%	9.8	16.26	18.23	1.97	12.1%	9.1
8	250	21.28	24.45	3.17	14.9%	9.8	20.27	22.74	2.47	12.2%	9.1
9	300	25.50	29.30	3.80	14.9%	9.8	24.29	27.25	2.96	12.2%	9.1
10	350	29.72	34.15	4.44	14.9%	9.8	28.30	31.75	3.45	12.2%	9.1
11	400	33.93	39.01	5.07	15.0%	9.8	32.32	36.26	3.94	12.2%	9.1
12	450	38.15	43.86	5.71	15.0%	9.7	36.33	40.77	4.44	12.2%	9.1
13	500	42.37	48.71	6.34	15.0%	9.7	40.35	45.28	4.93	12.2%	9.1
14	600	50.80	58.41	7.61	15.0%	9.7	48.38	54.29	5.92	12.2%	9.0
15	700	59.23	68.11	8.88	15.0%	9.7	56.41	63.31	6.90	12.2%	9.0
16	800	67.66	77.81	10.15	15.0%	9.7	64.44	72.32	7.89	12.2%	9.0
17	900	76.10	87.51	11.41	15.0%	9.7	72.47	81.34	8.88	12.2%	9.0
18	1,000	84.53	97.21	12.68	15.0%	9.7	80.49	90.36	9.86	12.3%	9.0
19	1,500	126.70	145.72	19.02	15.0%	9.7	120.64	135.43	14.79	12.3%	9.0
20	2,000	168.86	194.23	25.37	15.0%	9.7	160.79	180.51	19.72	12.3%	9.0
21	2,500	211.03	242.73	31.71	15.0%	9.7	200.94	225.59	24.65	12.3%	9.0
22	3,000	253.19	291.24	38.05	15.0%	9.7	241.08	270.67	29.58	12.3%	9.0
23	3,500	295.36	339.75	44.39	15.0%	9.7	281.23	315.75	34.51	12.3%	9.0
24	4,000	337.52	388.25	50.73	15.0%	9.7	321.38	360.82	39.45	12.3%	9.0
25	4,500	379.69	436.76	57.07	15.0%	9.7	361.53	405.90	44.38	12.3%	9.0
26	5,000	421.85	485.27	63.41	15.0%	9.7	401.67	450.98	49.31	12.3%	9.0
27	5,500	464.02	533.77	69.76	15.0%	9.7	441.82	496.06	54.24	12.3%	9.0
28	6,000	506.18	582.28	76.10	15.0%	9.7	481.97	541.14	59.17	12.3%	9.0
29	6,500	548.35	630.79	82.44	15.0%	9.7	522.12	586.21	64.10	12.3%	9.0

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Energy Intensive EIP Voltage Level 3

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	37 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	MWh	$000	$000	$000	%	¢/kWh	$000	$000	$000	%	¢/kWh
1	100	10.62	11.62	1.00	9.4%	11.6	9.66	10.87	1.22	12.6%	10.9
2	110	11.67	12.77	1.10	9.4%	11.6	10.60	11.94	1.34	12.6%	10.9
3	120	12.71	13.91	1.20	9.4%	11.6	11.55	13.01	1.46	12.7%	10.8
4	130	13.75	15.05	1.30	9.5%	11.6	12.49	14.08	1.58	12.7%	10.8
5	140	14.79	16.19	1.40	9.5%	11.6	13.44	15.14	1.71	12.7%	10.8
6	150	15.84	17.34	1.50	9.5%	11.6	14.38	16.21	1.83	12.7%	10.8
7	200	21.05	23.05	2.00	9.5%	11.5	19.11	21.55	2.44	12.8%	10.8
8	250	26.26	28.76	2.50	9.5%	11.5	23.84	26.89	3.05	12.8%	10.8
9	300	31.47	34.47	3.00	9.5%	11.5	28.57	32.22	3.66	12.8%	10.7
10	350	36.69	40.19	3.50	9.5%	11.5	33.29	37.56	4.27	12.8%	10.7
11	400	41.90	45.90	4.00	9.5%	11.5	38.02	42.90	4.87	12.8%	10.7
12	450	47.11	51.61	4.50	9.6%	11.5	42.75	48.23	5.48	12.8%	10.7
13	500	52.32	57.32	5.00	9.6%	11.5	47.48	53.57	6.09	12.8%	10.7
14	600	62.75	68.75	6.00	9.6%	11.5	56.93	64.24	7.31	12.8%	10.7
15	700	73.17	80.17	7.00	9.6%	11.5	66.39	74.92	8.53	12.9%	10.7
16	800	83.60	91.59	8.00	9.6%	11.4	75.84	85.59	9.75	12.9%	10.7
17	900	94.02	103.02	9.00	9.6%	11.4	85.30	96.27	10.97	12.9%	10.7
18	1,000	104.44	114.44	10.00	9.6%	11.4	94.75	106.94	12.19	12.9%	10.7
19	1,500	156.57	171.56	15.00	9.6%	11.4	142.03	160.31	18.28	12.9%	10.7
20	2,000	208.69	228.69	20.00	9.6%	11.4	189.31	213.68	24.37	12.9%	10.7
21	2,500	260.81	285.81	25.00	9.6%	11.4	236.59	267.05	30.47	12.9%	10.7
22	3,000	312.93	342.93	30.00	9.6%	11.4	283.86	320.42	36.56	12.9%	10.7
23	3,500	365.05	400.05	35.00	9.6%	11.4	331.14	373.79	42.66	12.9%	10.7
24	4,000	417.18	457.17	40.00	9.6%	11.4	378.42	427.17	48.75	12.9%	10.7
25	4,500	469.30	514.29	45.00	9.6%	11.4	425.69	480.54	54.84	12.9%	10.7
26	5,000	521.42	571.42	50.00	9.6%	11.4	472.97	533.91	60.94	12.9%	10.7
27	5,500	573.54	628.54	55.00	9.6%	11.4	520.25	587.28	67.03	12.9%	10.7
28	6,000	625.66	685.66	60.00	9.6%	11.4	567.52	640.65	73.12	12.9%	10.7
29	6,500	677.78	742.78	65.00	9.6%	11.4	614.80	694.02	79.22	12.9%	10.7

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Secondary Energy-only GS
Retail Open Acess

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	38 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	250	31.17	35.01	3.83	12.3%	14.0	31.17	35.01	3.83	12.3%	14.0
2	500	42.35	50.01	7.67	18.1%	10.0	42.35	50.01	7.67	18.1%	10.0
3	750	53.52	65.02	11.50	21.5%	8.7	53.52	65.02	11.50	21.5%	8.7
4	1,000	64.69	80.02	15.33	23.7%	8.0	64.69	80.02	15.33	23.7%	8.0
5	1,500	87.04	110.03	23.00	26.4%	7.3	87.04	110.03	23.00	26.4%	7.3
6	2,000	109.38	140.05	30.66	28.0%	7.0	109.38	140.05	30.66	28.0%	7.0
7	2,500	131.73	170.06	38.33	29.1%	6.8	131.73	170.06	38.33	29.1%	6.8
8	3,000	154.08	200.07	45.99	29.9%	6.7	154.08	200.07	45.99	29.9%	6.7
9	3,500	176.42	230.08	53.66	30.4%	6.6	176.42	230.08	53.66	30.4%	6.6
10	4,000	198.77	260.09	61.32	30.9%	6.5	198.77	260.09	61.32	30.9%	6.5
11	4,500	221.11	290.10	68.99	31.2%	6.4	221.11	290.10	68.99	31.2%	6.4
12	5,000	243.46	320.12	76.66	31.5%	6.4	243.46	320.12	76.66	31.5%	6.4
13	6,000	288.15	380.14	91.99	31.9%	6.3	288.15	380.14	91.99	31.9%	6.3
14	7,000	332.84	440.16	107.32	32.2%	6.3	332.84	440.16	107.32	32.2%	6.3
15	8,000	377.54	500.18	122.65	32.5%	6.3	377.54	500.18	122.65	32.5%	6.3
16	9,000	422.23	560.21	137.98	32.7%	6.2	422.23	560.21	137.98	32.7%	6.2
17	10,000	466.92	620.23	153.31	32.8%	6.2	466.92	620.23	153.31	32.8%	6.2
18	15,000	690.38	920.35	229.97	33.3%	6.1	690.38	920.35	229.97	33.3%	6.1
19	20,000	913.84	1,220.46	306.62	33.6%	6.1	913.84	1,220.46	306.62	33.6%	6.1
20	25,000	1,137.30	1,520.58	383.28	33.7%	6.1	1,137.30	1,520.58	383.28	33.7%	6.1
21	30,000	1,360.76	1,820.69	459.93	33.8%	6.1	1,360.76	1,820.69	459.93	33.8%	6.1
22	35,000	1,584.22	2,120.81	536.59	33.9%	6.1	1,584.22	2,120.81	536.59	33.9%	6.1
23	40,000	1,807.68	2,420.92	613.24	33.9%	6.1	1,807.68	2,420.92	613.24	33.9%	6.1
24	45,000	2,031.14	2,721.04	689.90	34.0%	6.0	2,031.14	2,721.04	689.90	34.0%	6.0
25	50,000	2,254.60	3,021.15	766.55	34.0%	6.0	2,254.60	3,021.15	766.55	34.0%	6.0
26	55,000	2,478.06	3,321.27	843.21	34.0%	6.0	2,478.06	3,321.27	843.21	34.0%	6.0
27	60,000	2,701.52	3,621.38	919.86	34.0%	6.0	2,701.52	3,621.38	919.86	34.0%	6.0
28	65,000	2,924.98	3,921.50	996.52	34.1%	6.0	2,924.98	3,921.50	996.52	34.1%	6.0
29	70,000	3,148.44	4,221.61	1,073.17	34.1%	6.0	3,148.44	4,221.61	1,073.17	34.1%	6.0

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Secondary Demand GSD
Retail Open Acess

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	39 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	48.55	53.86	5.31	10.9%	10.8	48.55	53.86	5.31	10.9%	10.8
2	1,000	67.10	77.71	10.62	15.8%	7.8	67.10	77.71	10.62	15.8%	7.8
3	1,500	85.65	101.57	15.93	18.6%	6.8	85.65	101.57	15.93	18.6%	6.8
4	2,000	104.19	125.43	21.23	20.4%	6.3	104.19	125.43	21.23	20.4%	6.3
5	2,500	122.74	149.28	26.54	21.6%	6.0	122.74	149.28	26.54	21.6%	6.0
6	3,000	141.29	173.14	31.85	22.5%	5.8	141.29	173.14	31.85	22.5%	5.8
7	3,500	159.84	197.00	37.16	23.2%	5.6	159.84	197.00	37.16	23.2%	5.6
8	4,000	178.39	220.86	42.47	23.8%	5.5	178.39	220.86	42.47	23.8%	5.5
9	4,500	196.94	244.71	47.78	24.3%	5.4	196.94	244.71	47.78	24.3%	5.4
10	5,000	215.48	268.57	53.09	24.6%	5.4	215.48	268.57	53.09	24.6%	5.4
11	6,000	252.58	316.28	63.70	25.2%	5.3	252.58	316.28	63.70	25.2%	5.3
12	7,000	289.68	364.00	74.32	25.7%	5.2	289.68	364.00	74.32	25.7%	5.2
13	8,000	326.78	411.71	84.94	26.0%	5.1	326.78	411.71	84.94	26.0%	5.1
14	9,000	363.87	459.43	95.55	26.3%	5.1	363.87	459.43	95.55	26.3%	5.1
15	10,000	400.97	507.14	106.17	26.5%	5.1	400.97	507.14	106.17	26.5%	5.1
16	11,000	438.07	554.85	116.79	26.7%	5.0	438.07	554.85	116.79	26.7%	5.0
17	12,000	475.16	602.57	127.40	26.8%	5.0	475.16	602.57	127.40	26.8%	5.0
18	13,000	512.26	650.28	138.02	26.9%	5.0	512.26	650.28	138.02	26.9%	5.0
19	14,000	549.36	698.00	148.64	27.1%	5.0	549.36	698.00	148.64	27.1%	5.0
20	15,000	586.45	745.71	159.26	27.2%	5.0	586.45	745.71	159.26	27.2%	5.0
21	16,000	623.55	793.42	169.87	27.2%	5.0	623.55	793.42	169.87	27.2%	5.0
22	17,000	660.65	841.14	180.49	27.3%	4.9	660.65	841.14	180.49	27.3%	4.9
23	18,000	697.75	888.85	191.11	27.4%	4.9	697.75	888.85	191.11	27.4%	4.9
24	19,000	734.84	936.57	201.72	27.5%	4.9	734.84	936.57	201.72	27.5%	4.9
25	20,000	771.94	984.28	212.34	27.5%	4.9	771.94	984.28	212.34	27.5%	4.9
26	21,000	809.04	1,031.99	222.96	27.6%	4.9	809.04	1,031.99	222.96	27.6%	4.9
27	22,000	846.13	1,079.71	233.57	27.6%	4.9	846.13	1,079.71	233.57	27.6%	4.9
28	23,000	883.23	1,127.42	244.19	27.6%	4.9	883.23	1,127.42	244.19	27.6%	4.9
29	24,000	920.33	1,175.14	254.81	27.7%	4.9	920.33	1,175.14	254.81	27.7%	4.9

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Secondary Time-of-Use GSTU
Retail Open Acess

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	40 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	42.35	50.01	7.67	18.1%	10.0	42.35	50.01	7.67	18.1%	10.0
2	1,000	64.69	80.02	15.33	23.7%	8.0	64.69	80.02	15.33	23.7%	8.0
3	1,500	87.04	110.03	23.00	26.4%	7.3	87.04	110.03	23.00	26.4%	7.3
4	2,000	109.38	140.05	30.66	28.0%	7.0	109.38	140.05	30.66	28.0%	7.0
5	2,500	131.73	170.06	38.33	29.1%	6.8	131.73	170.06	38.33	29.1%	6.8
6	3,000	154.08	200.07	45.99	29.9%	6.7	154.08	200.07	45.99	29.9%	6.7
7	3,500	176.42	230.08	53.66	30.4%	6.6	176.42	230.08	53.66	30.4%	6.6
8	4,000	198.77	260.09	61.32	30.9%	6.5	198.77	260.09	61.32	30.9%	6.5
9	4,500	221.11	290.10	68.99	31.2%	6.4	221.11	290.10	68.99	31.2%	6.4
10	5,000	243.46	320.12	76.66	31.5%	6.4	243.46	320.12	76.66	31.5%	6.4
11	6,000	288.15	380.14	91.99	31.9%	6.3	288.15	380.14	91.99	31.9%	6.3
12	7,000	332.84	440.16	107.32	32.2%	6.3	332.84	440.16	107.32	32.2%	6.3
13	8,000	377.54	500.18	122.65	32.5%	6.3	377.54	500.18	122.65	32.5%	6.3
14	9,000	422.23	560.21	137.98	32.7%	6.2	422.23	560.21	137.98	32.7%	6.2
15	10,000	466.92	620.23	153.31	32.8%	6.2	466.92	620.23	153.31	32.8%	6.2
16	11,000	511.61	680.25	168.64	33.0%	6.2	511.61	680.25	168.64	33.0%	6.2
17	12,000	556.30	740.28	183.97	33.1%	6.2	556.30	740.28	183.97	33.1%	6.2
18	13,000	601.00	800.30	199.30	33.2%	6.2	601.00	800.30	199.30	33.2%	6.2
19	14,000	645.69	860.32	214.63	33.2%	6.1	645.69	860.32	214.63	33.2%	6.1
20	15,000	690.38	920.35	229.97	33.3%	6.1	690.38	920.35	229.97	33.3%	6.1
21	16,000	735.07	980.37	245.30	33.4%	6.1	735.07	980.37	245.30	33.4%	6.1
22	17,000	779.76	1,040.39	260.63	33.4%	6.1	779.76	1,040.39	260.63	33.4%	6.1
23	18,000	824.46	1,100.41	275.96	33.5%	6.1	824.46	1,100.41	275.96	33.5%	6.1
24	19,000	869.15	1,160.44	291.29	33.5%	6.1	869.15	1,160.44	291.29	33.5%	6.1
25	20,000	913.84	1,220.46	306.62	33.6%	6.1	913.84	1,220.46	306.62	33.6%	6.1
26	21,000	958.53	1,280.48	321.95	33.6%	6.1	958.53	1,280.48	321.95	33.6%	6.1
27	22,000	1,003.22	1,340.51	337.28	33.6%	6.1	1,003.22	1,340.51	337.28	33.6%	6.1
28	23,000	1,047.92	1,400.53	352.61	33.6%	6.1	1,047.92	1,400.53	352.61	33.6%	6.1
29	24,000	1,092.61	1,460.55	367.94	33.7%	6.1	1,092.61	1,460.55	367.94	33.7%	6.1

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Energy-only GP Voltage Level 1
Retail Open Acess

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	41 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	101.09	101.41	0.32	0.3%	20.3	101.09	101.41	0.32	0.3%	20.3
2	1,000	102.17	102.81	0.64	0.6%	10.3	102.17	102.81	0.64	0.6%	10.3
3	1,500	103.26	104.22	0.96	0.9%	6.9	103.26	104.22	0.96	0.9%	6.9
4	2,000	104.34	105.63	1.29	1.2%	5.3	104.34	105.63	1.29	1.2%	5.3
5	2,500	105.43	107.04	1.61	1.5%	4.3	105.43	107.04	1.61	1.5%	4.3
6	3,000	106.51	108.44	1.93	1.8%	3.6	106.51	108.44	1.93	1.8%	3.6
7	4,000	108.68	111.26	2.57	2.4%	2.8	108.68	111.26	2.57	2.4%	2.8
8	5,000	110.86	114.07	3.21	2.9%	2.3	110.86	114.07	3.21	2.9%	2.3
9	6,000	113.03	116.88	3.86	3.4%	1.9	113.03	116.88	3.86	3.4%	1.9
10	7,000	115.20	119.70	4.50	3.9%	1.7	115.20	119.70	4.50	3.9%	1.7
11	8,000	117.37	122.51	5.14	4.4%	1.5	117.37	122.51	5.14	4.4%	1.5
12	9,000	119.54	125.33	5.79	4.8%	1.4	119.54	125.33	5.79	4.8%	1.4
13	10,000	121.71	128.14	6.43	5.3%	1.3	121.71	128.14	6.43	5.3%	1.3
14	15,000	132.57	142.21	9.65	7.3%	0.9	132.57	142.21	9.65	7.3%	0.9
15	20,000	143.42	156.28	12.86	9.0%	0.8	143.42	156.28	12.86	9.0%	0.8
16	25,000	154.28	170.35	16.08	10.4%	0.7	154.28	170.35	16.08	10.4%	0.7
17	30,000	165.13	184.42	19.29	11.7%	0.6	165.13	184.42	19.29	11.7%	0.6
18	35,000	175.99	198.49	22.51	12.8%	0.6	175.99	198.49	22.51	12.8%	0.6
19	40,000	186.84	212.56	25.72	13.8%	0.5	186.84	212.56	25.72	13.8%	0.5
20	45,000	197.70	226.63	28.94	14.6%	0.5	197.70	226.63	28.94	14.6%	0.5
21	50,000	208.55	240.70	32.15	15.4%	0.5	208.55	240.70	32.15	15.4%	0.5
22	60,000	230.26	268.84	38.58	16.8%	0.4	230.26	268.84	38.58	16.8%	0.4
23	70,000	251.97	296.98	45.01	17.9%	0.4	251.97	296.98	45.01	17.9%	0.4
24	80,000	273.68	325.12	51.44	18.8%	0.4	273.68	325.12	51.44	18.8%	0.4
25	90,000	295.39	353.26	57.87	19.6%	0.4	295.39	353.26	57.87	19.6%	0.4
26	100,000	317.10	381.40	64.30	20.3%	0.4	317.10	381.40	64.30	20.3%	0.4
27	110,000	338.81	409.54	70.73	20.9%	0.4	338.81	409.54	70.73	20.9%	0.4
28	120,000	360.52	437.68	77.16	21.4%	0.4	360.52	437.68	77.16	21.4%	0.4
29	130,000	382.23	465.82	83.59	21.9%	0.4	382.23	465.82	83.59	21.9%	0.4

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Energy-only GP Voltage Level 2
Retail Open Acess

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	42 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	103.83	104.73	0.90	0.9%	20.9	103.83	104.73	0.90	0.9%	20.9
2	1,000	107.66	109.46	1.80	1.7%	10.9	107.66	109.46	1.80	1.7%	10.9
3	1,500	111.49	114.19	2.70	2.4%	7.6	111.49	114.19	2.70	2.4%	7.6
4	2,000	115.32	118.92	3.60	3.1%	5.9	115.32	118.92	3.60	3.1%	5.9
5	2,500	119.15	123.65	4.50	3.8%	4.9	119.15	123.65	4.50	3.8%	4.9
6	3,000	122.98	128.38	5.40	4.4%	4.3	122.98	128.38	5.40	4.4%	4.3
7	4,000	130.64	137.84	7.20	5.5%	3.4	130.64	137.84	7.20	5.5%	3.4
8	5,000	138.31	147.30	9.00	6.5%	2.9	138.31	147.30	9.00	6.5%	2.9
9	6,000	145.97	156.76	10.79	7.4%	2.6	145.97	156.76	10.79	7.4%	2.6
10	7,000	153.63	166.22	12.59	8.2%	2.4	153.63	166.22	12.59	8.2%	2.4
11	8,000	161.29	175.68	14.39	8.9%	2.2	161.29	175.68	14.39	8.9%	2.2
12	9,000	168.95	185.14	16.19	9.6%	2.1	168.95	185.14	16.19	9.6%	2.1
13	10,000	176.61	194.60	17.99	10.2%	1.9	176.61	194.60	17.99	10.2%	1.9
14	15,000	214.92	241.90	26.99	12.6%	1.6	214.92	241.90	26.99	12.6%	1.6
15	20,000	253.22	289.20	35.98	14.2%	1.4	253.22	289.20	35.98	14.2%	1.4
16	25,000	291.53	336.50	44.98	15.4%	1.3	291.53	336.50	44.98	15.4%	1.3
17	30,000	329.83	383.80	53.97	16.4%	1.3	329.83	383.80	53.97	16.4%	1.3
18	35,000	368.14	431.10	62.97	17.1%	1.2	368.14	431.10	62.97	17.1%	1.2
19	40,000	406.44	478.40	71.96	17.7%	1.2	406.44	478.40	71.96	17.7%	1.2
20	45,000	444.75	525.70	80.96	18.2%	1.2	444.75	525.70	80.96	18.2%	1.2
21	50,000	483.05	573.00	89.95	18.6%	1.1	483.05	573.00	89.95	18.6%	1.1
22	60,000	559.66	667.60	107.94	19.3%	1.1	559.66	667.60	107.94	19.3%	1.1
23	70,000	636.27	762.20	125.93	19.8%	1.1	636.27	762.20	125.93	19.8%	1.1
24	80,000	712.88	856.80	143.92	20.2%	1.1	712.88	856.80	143.92	20.2%	1.1
25	90,000	789.49	951.40	161.91	20.5%	1.1	789.49	951.40	161.91	20.5%	1.1
26	100,000	866.10	1,046.00	179.90	20.8%	1.0	866.10	1,046.00	179.90	20.8%	1.0
27	110,000	942.71	1,140.60	197.89	21.0%	1.0	942.71	1,140.60	197.89	21.0%	1.0
28	120,000	1,019.32	1,235.20	215.88	21.2%	1.0	1,019.32	1,235.20	215.88	21.2%	1.0
29	130,000	1,095.93	1,329.80	233.87	21.3%	1.0	1,095.93	1,329.80	233.87	21.3%	1.0

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Energy-only GP Voltage Level 3
Retail Open Acess

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	43 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	kWh	$	$	$	%	¢/kWh	$	$	$	%	¢/kWh
1	500	108.74	110.83	2.09	1.9%	22.2	108.74	110.83	2.09	1.9%	22.2
2	1,000	117.47	121.66	4.18	3.6%	12.2	117.47	121.66	4.18	3.6%	12.2
3	1,500	126.21	132.49	6.27	5.0%	8.8	126.21	132.49	6.27	5.0%	8.8
4	2,000	134.95	143.31	8.37	6.2%	7.2	134.95	143.31	8.37	6.2%	7.2
5	2,500	143.69	154.14	10.46	7.3%	6.2	143.69	154.14	10.46	7.3%	6.2
6	3,000	152.42	164.97	12.55	8.2%	5.5	152.42	164.97	12.55	8.2%	5.5
7	4,000	169.90	186.63	16.73	9.8%	4.7	169.90	186.63	16.73	9.8%	4.7
8	5,000	187.37	208.29	20.92	11.2%	4.2	187.37	208.29	20.92	11.2%	4.2
9	6,000	204.84	229.94	25.10	12.3%	3.8	204.84	229.94	25.10	12.3%	3.8
10	7,000	222.32	251.60	29.28	13.2%	3.6	222.32	251.60	29.28	13.2%	3.6
11	8,000	239.79	273.26	33.46	14.0%	3.4	239.79	273.26	33.46	14.0%	3.4
12	9,000	257.27	294.91	37.65	14.6%	3.3	257.27	294.91	37.65	14.6%	3.3
13	10,000	274.74	316.57	41.83	15.2%	3.2	274.74	316.57	41.83	15.2%	3.2
14	15,000	362.11	424.86	62.74	17.3%	2.8	362.11	424.86	62.74	17.3%	2.8
15	20,000	449.48	533.14	83.66	18.6%	2.7	449.48	533.14	83.66	18.6%	2.7
16	25,000	536.85	641.43	104.58	19.5%	2.6	536.85	641.43	104.58	19.5%	2.6
17	30,000	624.22	749.71	125.49	20.1%	2.5	624.22	749.71	125.49	20.1%	2.5
18	35,000	711.59	858.00	146.41	20.6%	2.5	711.59	858.00	146.41	20.6%	2.5
19	40,000	798.96	966.28	167.32	20.9%	2.4	798.96	966.28	167.32	20.9%	2.4
20	45,000	886.33	1,074.57	188.24	21.2%	2.4	886.33	1,074.57	188.24	21.2%	2.4
21	50,000	973.70	1,182.85	209.15	21.5%	2.4	973.70	1,182.85	209.15	21.5%	2.4
22	60,000	1,148.44	1,399.42	250.98	21.9%	2.3	1,148.44	1,399.42	250.98	21.9%	2.3
23	70,000	1,323.18	1,615.99	292.81	22.1%	2.3	1,323.18	1,615.99	292.81	22.1%	2.3
24	80,000	1,497.92	1,832.56	334.64	22.3%	2.3	1,497.92	1,832.56	334.64	22.3%	2.3
25	90,000	1,672.66	2,049.13	376.47	22.5%	2.3	1,672.66	2,049.13	376.47	22.5%	2.3
26	100,000	1,847.40	2,265.70	418.30	22.6%	2.3	1,847.40	2,265.70	418.30	22.6%	2.3
27	110,000	2,022.14	2,482.27	460.13	22.8%	2.3	2,022.14	2,482.27	460.13	22.8%	2.3
28	120,000	2,196.88	2,698.84	501.96	22.8%	2.2	2,196.88	2,698.84	501.96	22.8%	2.2
29	130,000	2,371.62	2,915.41	543.79	22.9%	2.2	2,371.62	2,915.41	543.79	22.9%	2.2

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Demand GPD Voltage Level 1
Retail Open Acess

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	44 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	MWh	$000	$000	$000	%	¢/kWh	$000	$000	$000	%	¢/kWh
1	100	0.34	0.39	0.04	12.6%	0.4	0.34	0.39	0.04	12.6%	0.4
2	110	0.36	0.41	0.05	13.4%	0.4	0.36	0.41	0.05	13.4%	0.4
3	120	0.37	0.43	0.05	14.0%	0.4	0.37	0.43	0.05	14.0%	0.4
4	130	0.39	0.44	0.06	14.6%	0.3	0.39	0.44	0.06	14.6%	0.3
5	140	0.40	0.46	0.06	15.2%	0.3	0.40	0.46	0.06	15.2%	0.3
6	150	0.42	0.48	0.07	15.7%	0.3	0.42	0.48	0.07	15.7%	0.3
7	200	0.49	0.58	0.09	17.8%	0.3	0.49	0.58	0.09	17.8%	0.3
8	250	0.56	0.67	0.11	19.4%	0.3	0.56	0.67	0.11	19.4%	0.3
9	300	0.63	0.76	0.13	20.6%	0.3	0.63	0.76	0.13	20.6%	0.3
10	350	0.70	0.86	0.15	21.6%	0.2	0.70	0.86	0.15	21.6%	0.2
11	400	0.78	0.95	0.17	22.4%	0.2	0.78	0.95	0.17	22.4%	0.2
12	450	0.85	1.05	0.20	23.1%	0.2	0.85	1.05	0.20	23.1%	0.2
13	500	0.92	1.14	0.22	23.6%	0.2	0.92	1.14	0.22	23.6%	0.2
14	600	1.07	1.33	0.26	24.5%	0.2	1.07	1.33	0.26	24.5%	0.2
15	700	1.21	1.51	0.30	25.2%	0.2	1.21	1.51	0.30	25.2%	0.2
16	800	1.35	1.70	0.35	25.7%	0.2	1.35	1.70	0.35	25.7%	0.2
17	900	1.50	1.89	0.39	26.2%	0.2	1.50	1.89	0.39	26.2%	0.2
18	1,000	1.64	2.08	0.44	26.5%	0.2	1.64	2.08	0.44	26.5%	0.2
19	1,500	2.36	3.02	0.65	27.6%	0.2	2.36	3.02	0.65	27.6%	0.2
20	2,000	3.09	3.96	0.87	28.2%	0.2	3.09	3.96	0.87	28.2%	0.2
21	2,500	3.81	4.89	1.09	28.6%	0.2	3.81	4.89	1.09	28.6%	0.2
22	3,000	4.53	5.83	1.31	28.8%	0.2	4.53	5.83	1.31	28.8%	0.2
23	3,500	5.25	6.77	1.52	29.0%	0.2	5.25	6.77	1.52	29.0%	0.2
24	4,000	5.97	7.71	1.74	29.2%	0.2	5.97	7.71	1.74	29.2%	0.2
25	4,500	6.69	8.65	1.96	29.3%	0.2	6.69	8.65	1.96	29.3%	0.2
26	5,000	7.41	9.59	2.18	29.4%	0.2	7.41	9.59	2.18	29.4%	0.2
27	5,500	8.13	10.53	2.39	29.4%	0.2	8.13	10.53	2.39	29.4%	0.2
28	6,000	8.86	11.47	2.61	29.5%	0.2	8.86	11.47	2.61	29.5%	0.2
29	6,500	9.58	12.41	2.83	29.6%	0.2	9.58	12.41	2.83	29.6%	0.2

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Demand GPD Voltage Level 2
Retail Open Acess

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	45 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	MWh	$000	$000	$000	%	¢/kWh	$000	$000	$000	%	¢/kWh
1	100	0.75	0.88	0.13	17.1%	0.9	0.75	0.88	0.13	17.1%	0.9
2	110	0.80	0.94	0.14	17.5%	0.9	0.80	0.94	0.14	17.5%	0.9
3	120	0.86	1.01	0.15	17.9%	0.8	0.86	1.01	0.15	17.9%	0.8
4	130	0.91	1.08	0.17	18.2%	0.8	0.91	1.08	0.17	18.2%	0.8
5	140	0.97	1.15	0.18	18.5%	0.8	0.97	1.15	0.18	18.5%	0.8
6	150	1.02	1.21	0.19	18.7%	0.8	1.02	1.21	0.19	18.7%	0.8
7	200	1.30	1.55	0.26	19.7%	0.8	1.30	1.55	0.26	19.7%	0.8
8	250	1.57	1.89	0.32	20.3%	0.8	1.57	1.89	0.32	20.3%	0.8
9	300	1.85	2.23	0.38	20.8%	0.7	1.85	2.23	0.38	20.8%	0.7
10	350	2.12	2.57	0.45	21.1%	0.7	2.12	2.57	0.45	21.1%	0.7
11	400	2.39	2.91	0.51	21.4%	0.7	2.39	2.91	0.51	21.4%	0.7
12	450	2.67	3.24	0.58	21.6%	0.7	2.67	3.24	0.58	21.6%	0.7
13	500	2.94	3.58	0.64	21.7%	0.7	2.94	3.58	0.64	21.7%	0.7
14	600	3.49	4.26	0.77	22.0%	0.7	3.49	4.26	0.77	22.0%	0.7
15	700	4.04	4.93	0.89	22.2%	0.7	4.04	4.93	0.89	22.2%	0.7
16	800	4.59	5.61	1.02	22.3%	0.7	4.59	5.61	1.02	22.3%	0.7
17	900	5.14	6.29	1.15	22.4%	0.7	5.14	6.29	1.15	22.4%	0.7
18	1,000	5.68	6.96	1.28	22.5%	0.7	5.68	6.96	1.28	22.5%	0.7
19	1,500	8.43	10.34	1.92	22.8%	0.7	8.43	10.34	1.92	22.8%	0.7
20	2,000	11.17	13.73	2.56	22.9%	0.7	11.17	13.73	2.56	22.9%	0.7
21	2,500	13.91	17.11	3.20	23.0%	0.7	13.91	17.11	3.20	23.0%	0.7
22	3,000	16.65	20.49	3.83	23.0%	0.7	16.65	20.49	3.83	23.0%	0.7
23	3,500	19.40	23.87	4.47	23.1%	0.7	19.40	23.87	4.47	23.1%	0.7
24	4,000	22.14	27.25	5.11	23.1%	0.7	22.14	27.25	5.11	23.1%	0.7
25	4,500	24.88	30.63	5.75	23.1%	0.7	24.88	30.63	5.75	23.1%	0.7
26	5,000	27.62	34.02	6.39	23.1%	0.7	27.62	34.02	6.39	23.1%	0.7
27	5,500	30.37	37.40	7.03	23.2%	0.7	30.37	37.40	7.03	23.2%	0.7
28	6,000	33.11	40.78	7.67	23.2%	0.7	33.11	40.78	7.67	23.2%	0.7
29	6,500	35.85	44.16	8.31	23.2%	0.7	35.85	44.16	8.31	23.2%	0.7

Schedule F-4.0

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Comparison of Present and Proposed Monthly Bills

Primary Demand GPD Voltage Level 3
Retail Open Acess

Case No.:	U-21389
Exhibit No.:	A-16 (AMG-4)
Schedule	F-4.0
Page	46 of 46
Witness:	AMGast
Date:	May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
		Summer (June - Sept.)					Winter (Oct. - May)				
Line	Monthly	Monthly Bills		Difference		Proposed	Monthly Bills		Difference		Proposed
No.	Use	Present	Proposed	Amount	Percent	Unit Cost	Present	Proposed	Amount	Percent	Unit Cost
	MWh	$000	$000	$000	%	¢/kWh	$000	$000	$000	%	¢/kWh
1	100	1.60	1.88	0.28	17.3%	1.9	1.60	1.88	0.28	17.3%	1.9
2	110	1.74	2.05	0.30	17.5%	1.9	1.74	2.05	0.30	17.5%	1.9
3	120	1.88	2.21	0.33	17.7%	1.8	1.88	2.21	0.33	17.7%	1.8
4	130	2.02	2.38	0.36	17.8%	1.8	2.02	2.38	0.36	17.8%	1.8
5	140	2.16	2.55	0.39	18.0%	1.8	2.16	2.55	0.39	18.0%	1.8
6	150	2.30	2.72	0.42	18.1%	1.8	2.30	2.72	0.42	18.1%	1.8
7	200	3.00	3.56	0.55	18.5%	1.8	3.00	3.56	0.55	18.5%	1.8
8	250	3.70	4.39	0.69	18.7%	1.8	3.70	4.39	0.69	18.7%	1.8
9	300	4.40	5.23	0.83	18.9%	1.7	4.40	5.23	0.83	18.9%	1.7
10	350	5.10	6.07	0.97	19.0%	1.7	5.10	6.07	0.97	19.0%	1.7
11	400	5.80	6.91	1.11	19.1%	1.7	5.80	6.91	1.11	19.1%	1.7
12	450	6.50	7.75	1.25	19.2%	1.7	6.50	7.75	1.25	19.2%	1.7
13	500	7.20	8.59	1.39	19.2%	1.7	7.20	8.59	1.39	19.2%	1.7
14	600	8.60	10.27	1.66	19.3%	1.7	8.60	10.27	1.66	19.3%	1.7
15	700	10.00	11.94	1.94	19.4%	1.7	10.00	11.94	1.94	19.4%	1.7
16	800	11.40	13.62	2.22	19.4%	1.7	11.40	13.62	2.22	19.4%	1.7
17	900	12.80	15.30	2.49	19.5%	1.7	12.80	15.30	2.49	19.5%	1.7
18	1,000	14.21	16.98	2.77	19.5%	1.7	14.21	16.98	2.77	19.5%	1.7
19	1,500	21.21	25.37	4.16	19.6%	1.7	21.21	25.37	4.16	19.6%	1.7
20	2,000	28.21	33.75	5.54	19.7%	1.7	28.21	33.75	5.54	19.7%	1.7
21	2,500	35.21	42.14	6.93	19.7%	1.7	35.21	42.14	6.93	19.7%	1.7
22	3,000	42.22	50.53	8.32	19.7%	1.7	42.22	50.53	8.32	19.7%	1.7
23	3,500	49.22	58.92	9.70	19.7%	1.7	49.22	58.92	9.70	19.7%	1.7
24	4,000	56.22	67.31	11.09	19.7%	1.7	56.22	67.31	11.09	19.7%	1.7
25	4,500	63.22	75.70	12.47	19.7%	1.7	63.22	75.70	12.47	19.7%	1.7
26	5,000	70.23	84.08	13.86	19.7%	1.7	70.23	84.08	13.86	19.7%	1.7
27	5,500	77.23	92.47	15.24	19.7%	1.7	77.23	92.47	15.24	19.7%	1.7
28	6,000	84.23	100.86	16.63	19.7%	1.7	84.23	100.86	16.63	19.7%	1.7
29	6,500	91.23	109.25	18.02	19.7%	1.7	91.23	109.25	18.02	19.7%	1.7

EXHIBIT A-87 (AMG-5)
IS CONFIDENTIAL AND BEING FILED
UNDER SEAL WITH THE MPSC

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Demand Response (DR) Surcharge

Case No.: U-21389
Exhibit No.: A-88 (AMG-6)
Page: 1 of 1
Witness: AMGast
Date: May 2023

Line No.	(a) Description	(b) Program plus Cust. Credits (1)	(c) Financial Incentive (1)	(d) Reconciled Balance (1)	(e) Total	(f) Units
	FULL SERVICE					
	Residential Class					
1	Summer On-peak RSP	0.002426	0.000174	(0.000377)	0.002223	per kWh
2	Smart Hours RSH	0.002426	0.000174	(0.000377)	0.002223	per kWh
3	Night Time Savers RPM	0.002426	0.000174	(0.000377)	0.002223	per kWh
4	Non-Transmitting Meters RSM	0.002426	0.000174	(0.000377)	0.002223	per kWh
	Secondary Class					
5	Energy-only GS	0.002326	0.000167	(0.000362)	0.002131	per kWh
6	Time-of-Use GSTU	0.002326	0.000167	(0.000362)	0.002131	per kWh
7	Demand GSD	0.75	0.05	(0.12)	0.68	per Peak kW
	Primary Class					
	Energy-only GP					
8	Voltage Level 1	0.002011	0.000144	(0.000313)	0.001842	per kWh
9	Voltage Level 2	0.002034	0.000146	(0.000317)	0.001863	per kWh
10	Voltage Level 3	0.002057	0.000147	(0.000320)	0.001884	per kWh
	Demand GPD					
11	Voltage Level 1	0.85	0.06	(0.13)	0.78	per On-Peak kW
12	Voltage Level 2	0.86	0.06	(0.13)	0.79	per On-Peak kW
13	Voltage Level 3	0.88	0.06	(0.13)	0.81	per On-Peak kW
	Time-of-Use GPTU					
14	Voltage Level 1	0.001816	0.000130	(0.000282)	0.001664	per kWh
15	Voltage Level 2	0.001837	0.000132	(0.000285)	0.001684	per kWh
16	Voltage Level 3	0.001857	0.000133	(0.000288)	0.001702	per kWh
	Energy Intensive EIP					
17	Voltage Level 1	0.001532	0.000110	(0.000238)	0.001404	per kWh
18	Voltage Level 2	0.001550	0.000111	(0.000241)	0.001420	per kWh
19	Voltage Level 3	0.001567	0.000113	(0.000243)	0.001437	per kWh
	Lighting & Unmetered Class					
20	Metered Lighting GML	0.000556	0.000040	(0.000086)	0.000510	per kWh
21	Universal Unmetered Lighting UUL	0.000544	0.000039	(0.000085)	0.000498	per kWh
22	Unmetered GU	0.001504	0.000108	(0.000234)	0.001378	per kWh
	ROA SERVICE					
	Secondary Class					
23	Energy-only GS	NA	NA	NA	NA	
24	Demand GSD	NA	NA	NA	NA	
	Primary Class					
	Energy-only GP					
25	Voltage Level 1	NA	NA	NA	NA	
26	Voltage Level 2	NA	NA	NA	NA	
27	Voltage Level 3	NA	NA	NA	NA	
	Demand GPD					
28	Voltage Level 1	NA	NA	NA	NA	
29	Voltage Level 2	NA	NA	NA	NA	
30	Voltage Level 3	NA	NA	NA	NA	

(1) WP-AMG-19

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Electric Rate Case (ERC) Deferral Surcharge

Case No.:	U-21389
Exhibit No.:	A-89 (AMG-7)
Page:	1 of 1
Witness:	AMGast
Date:	May 2023

Line No.	(a) Description	(b) Test-year Sales (MWh)	(c) ERC Deferral [1] ($000)	(d) ERC Deferral Surcharge ($ / kWh)
	FULL SERVICE			
1	Residential Class	12,559,141	$ 5,400	0.000430
	Secondary Class			
2	Energy-only GS	3,996,698	1,367	0.000342
3	Time-of-Use GSTU	27,489	9	0.000342
4	Demand GSD	2,949,510	708	0.000240
	Primary Class			
	Energy-only GP			
5	Voltage Level 1	15,684	0	0.000021
6	Voltage Level 2	31,696	2	0.000068
7	Voltage Level 3	758,276	85	0.000112
	Demand GPD			
8	Voltage Level 1	1,033,644	16	0.000015
9	Voltage Level 2	1,448,667	71	0.000049
10	Voltage Level 3	2,098,603	168	0.000080
	Time-of-Use GPTU			
11	Voltage Level 1	397,758	6	0.000015
12	Voltage Level 2	574,708	28	0.000049
13	Voltage Level 3	3,709,392	297	0.000080
	Energy Intensive EIP			
14	Voltage Level 1	374,401	6	0.000015
15	Voltage Level 2	64,003	3	0.000049
16	Voltage Level 3	9,214	1	0.000080
	Lighting & Unmetered Class			
17	Metered Lighting GML	12,195	5	0.000424
18	Universal Unmetered Lighting UUL	71,839	153	0.002131
19	Unmetered GU	93,426	12	0.000133
	Self-generation Class			
20	Large Self-generation GSG-2			
21	Voltage Level 1	46,664	1	0.000015
22	Voltage Level 2	54,438	3	0.000049
23	Voltage Level 3	592	0	0.000080
24	Total Full Service		$ 8,341	

Line No.	(e) Description	(f) Test-year Sales (MWh)	(g) ERC Deferral [1] ($000)	(h) ERC Deferral Surcharge ($ / kWh)
	ROA SERVICE			
1	Residential Class	-	$ -	0.000430
	Secondary Class			
2	Energy-only GS	23,026	8	0.000342
3	Time-of-Use GSTU	-	-	0.000342
4	Demand GSD	172,462	41	0.000240
	Primary Class			
	Energy-only GP			
5	Voltage Level 1	-	-	0.000021
6	Voltage Level 2	2,770	0	0.000068
7	Voltage Level 3	72,834	8	0.000112
	Demand GPD			
8	Voltage Level 1	1,130,638	17	0.000015
9	Voltage Level 2	1,351,423	66	0.000049
10	Voltage Level 3	960,761	77	0.000080
11	Total ROA Service		$ 218	
12	Total Surcharge Revenue Collected		$ 8,558	
13	Rounding		(3)	
14	Total Surcharge Revenue Target		$ 8,556	

(1) A-81 (EAD-5), line 15

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Investment Recovery Mechanism (IRM) Surcharge
Year 1 - 12 months ending February 28, 2025

Case No.: U-21389
Exhibit No.: A-90 (AMG-8)
Page: 1 of 3
Witness: AMGast
Date: May 2023

Line No.	(a) Description	(b) Test-year Sales (MWh)	(c) IRM Revenue [1] ($000)	(d) IRM Surcharge ($ / kWh)
	FULL SERVICE			
1	Residential Class	12,559,141	$ 3,956	0.000315
	Secondary Class			
2	Energy-only GS	3,996,698	999	0.000250
3	Time-of-Use GSTU	27,489	7	0.000250
4	Demand GSD	2,949,510	519	0.000176
	Primary Class			
	Energy-only GP			
5	Voltage Level 1	15,684	0	0.000015
6	Voltage Level 2	31,696	2	0.000049
7	Voltage Level 3	758,276	61	0.000080
	Demand GPD			
8	Voltage Level 1	1,033,644	11	0.000011
9	Voltage Level 2	1,448,667	52	0.000036
10	Voltage Level 3	2,098,603	124	0.000059
	Time-of-Use GPTU			
11	Voltage Level 1	397,758	4	0.000011
12	Voltage Level 2	574,708	21	0.000036
13	Voltage Level 3	3,709,392	219	0.000059
	Energy Intensive EIP			
14	Voltage Level 1	374,401	4	0.000011
15	Voltage Level 2	64,003	2	0.000036
16	Voltage Level 3	9,214	1	0.000059
	Lighting & Unmetered Class			
17	Metered Lighting GML	12,195	4	0.000310
18	Universal Unmetered Lighting UUL	71,839	112	0.001560
19	Unmetered GU	93,426	9	0.000098
	Self-generation Class			
20	Large Self-generation GSG-2			
21	Voltage Level 1	46,664	1	0.000011
22	Voltage Level 2	54,438	2	0.000036
23	Voltage Level 3	592	0	0.000059
24	Total Full Service		$ 6,109	

Line No.	(e) Description	(f) Test-year Sales (MWh)	(g) IRM Revenue [1] ($000)	(h) IRM Surcharge ($ / kWh)
	ROA SERVICE			
1	Residential Class	-	$ -	0.000315
	Secondary Class			
2	Energy-only GS	23,026	6	0.000250
3	Time-of-Use GSTU	-	-	0.000250
4	Demand GSD	172,462	30	0.000176
	Primary Class			
	Energy-only GP			
5	Voltage Level 1	-	-	0.000015
6	Voltage Level 2	2,770	0	0.000049
7	Voltage Level 3	72,834	6	0.000080
	Demand GPD			
8	Voltage Level 1	1,130,638	12	0.000011
9	Voltage Level 2	1,351,423	49	0.000036
10	Voltage Level 3	960,761	57	0.000059
11	Total ROA Service		$ 160	
12	Total Surcharge Revenue Collected		$ 6,269	
13	Rounding		(6)	
14	Total Surcharge Revenue Target		$ 6,263	

(1) A-81 (EAD-5), line 15

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Investment Recovery Mechanism (IRM) Surcharge
Year 2 - 12 months ending February 28, 2026

Case No.: U-21389
Exhibit No.: A-90 (AMG-8)
Page: 2 of 3
Witness: AMGast
Date: May 2023

Line No.	(a) Description	(b) Test-year Sales (MWh)	(c) IRM Revenue [1] ($000)	(d) IRM Surcharge ($ / kWh)
	FULL SERVICE			
1	Residential Class	12,559,141	$ 11,203	0.000892
	Secondary Class			
2	Energy-only GS	3,996,698	2,834	0.000709
3	Time-of-Use GSTU	27,489	19	0.000709
4	Demand GSD	2,949,510	1,469	0.000498
	Primary Class			
	Energy-only GP			
5	Voltage Level 1	15,684	1	0.000044
6	Voltage Level 2	31,696	5	0.000143
7	Voltage Level 3	758,276	178	0.000235
	Demand GPD			
8	Voltage Level 1	1,033,644	32	0.000031
9	Voltage Level 2	1,448,667	145	0.000100
10	Voltage Level 3	2,098,603	346	0.000165
	Time-of-Use GPTU			
11	Voltage Level 1	397,758	12	0.000031
12	Voltage Level 2	574,708	57	0.000100
13	Voltage Level 3	3,709,392	612	0.000165
	Energy Intensive EIP			
14	Voltage Level 1	374,401	12	0.000031
15	Voltage Level 2	64,003	6	0.000100
16	Voltage Level 3	9,214	2	0.000165
	Lighting & Unmetered Class			
17	Metered Lighting GML	12,195	11	0.000879
18	Universal Unmetered Lighting UUL	71,839	318	0.004420
19	Unmetered GU	93,426	26	0.000277
	Self-generation Class			
20	Large Self-generation GSG-2			
21	Voltage Level 1	46,664	1	0.000031
22	Voltage Level 2	54,438	5	0.000100
23	Voltage Level 3	592	0	0.000165
24	Total Full Service		$ 17,294	

Line No.	(e) Description	(f) Test-year Sales (MWh)	(g) IRM Revenue [1] ($000)	(h) IRM Surcharge ($ / kWh)
	ROA SERVICE			
1	Residential Class	-	$ -	0.000892
	Secondary Class			
2	Energy-only GS	23,026	16	0.000709
3	Time-of-Use GSTU	-	-	0.000709
4	Demand GSD	172,462	86	0.000498
	Primary Class			
	Energy-only GP			
5	Voltage Level 1	-	-	0.000044
6	Voltage Level 2	2,770	0	0.000143
7	Voltage Level 3	72,834	17	0.000235
	Demand GPD			
8	Voltage Level 1	1,130,638	35	0.000031
9	Voltage Level 2	1,351,423	135	0.000100
10	Voltage Level 3	960,761	159	0.000165
11	Total ROA Service		$ 448	
12	Total Surcharge Revenue Collected		$ 17,742	
13	Rounding		5.56	
14	Total Surcharge Revenue Target		$ 17,748	

(1) A-81 (EAD-5), line 15

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Investment Recovery Mechanism (IRM) Surcharge
Year 3 - 12 months ending February 28, 2027

Case No.: U-21389
Exhibit No.: A-90 (AMG-8)
Page: 3 of 3
Witness: AMGast
Date: May 2023

Line No.	(a) Description	(b) Test-year Sales (MWh)	(c) IRM Revenue [1] ($000)	(d) IRM Surcharge ($ / kWh)
	FULL SERVICE			
1	Residential Class	12,559,141	$ 18,424	0.001467
	Secondary Class			
2	Energy-only GS	3,996,698	4,668	0.001168
3	Time-of-Use GSTU	27,489	32	0.001168
4	Demand GSD	2,949,510	2,416	0.000819
	Primary Class			
	Energy-only GP			
5	Voltage Level 1	15,684	1	0.000072
6	Voltage Level 2	31,696	7	0.000233
7	Voltage Level 3	758,276	291	0.000384
	Demand GPD			
8	Voltage Level 1	1,033,644	53	0.000051
9	Voltage Level 2	1,448,667	239	0.000165
10	Voltage Level 3	2,098,603	571	0.000272
	Time-of-Use GPTU			
11	Voltage Level 1	397,758	20	0.000051
12	Voltage Level 2	574,708	95	0.000165
13	Voltage Level 3	3,709,392	1,009	0.000272
	Energy Intensive EIP			
14	Voltage Level 1	374,401	19	0.000051
15	Voltage Level 2	64,003	11	0.000165
16	Voltage Level 3	9,214	3	0.000272
	Lighting & Unmetered Class			
17	Metered Lighting GML	12,195	18	0.001446
18	Universal Unmetered Lighting UUL	71,839	523	0.007274
19	Unmetered GU	93,426	43	0.000456
	Self-generation Class			
20	Large Self-generation GSG-2			
21	Voltage Level 1	46,664	2	0.000051
22	Voltage Level 2	54,438	9	0.000165
23	Voltage Level 3	592	0	0.000272
24	Total Full Service		$ 28,453	

Line No.	(e) Description	(f) Test-year Sales (MWh)	(g) IRM Revenue [1] ($000)	(h) IRM Surcharge ($ / kWh)
	ROA SERVICE			
1	Residential Class	-	$ -	0.001467
	Secondary Class			
2	Energy-only GS	23,026	27	0.001168
3	Time-of-Use GSTU	-	-	0.001168
4	Demand GSD	172,462	141	0.000819
	Primary Class			
	Energy-only GP			
5	Voltage Level 1	-	-	0.000072
6	Voltage Level 2	2,770	1	0.000233
7	Voltage Level 3	72,834	28	0.000384
	Demand GPD			
8	Voltage Level 1	1,130,638	58	0.000051
9	Voltage Level 2	1,351,423	223	0.000165
10	Voltage Level 3	960,761	261	0.000272
11	Total ROA Service		$ 739	
12	Total Surcharge Revenue Collected		$ 29,192	
13	Rounding		16	
14	Total Surcharge Revenue Target		$ 29,208	

(1) A-81 (EAD-5), line 15

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electric utility and for other relief.	))))))	Case No. U-21389

EXHIBITS

OF

KENDRA K. GROB

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual and Projected Employee Benefits O&M Expenses
For the Years 2022, 2023, 2024 and Test Year Twelve Months ending February 28, 2025
($000)

Case No.: U-21389
Exhibit No.: A-91 (KKG-1)
Page: 1 of 2
Witness: KKGrob
Date: May 2023

Line No.	(a) Description	(b) Actual 12 mos. ended 12/31/2022	(c) Projected 12 mos. Ending 12/31/2023	(d) Projected 12 mos. Ending 12/31/2024	(e) Projected 12 mos. Ending 2/28/25
1	Pension Plans A/B	**($29,860)**	**($41,041)**	**($43,416)**	**($43,327)**
2	Defined Company Contribution Plan	**14,105**	**14,512**	**14,831**	**14,883**
3	401 (k) Employees' Savings Plan	**12,974**	**13,343**	**13,637**	**13,684**
4	Active Health Care/Life Insurance/LTD	**26,332**	**26,442**	**27,667**	**27,881**
5	Retiree Health Care and Life Insurance	**(69,030)**	**(42,416)**	**(39,229)**	**(39,608)**
6	Other Benefits	**3,279**	**3,407**	**3,482**	**3,494**
7	**Total Expense**	**($42,200)**	**($25,753)**	**($23,028)**	**($22,993)**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of O&M Expenses Projected Using Merit and Inflation
Actual and Projected Employee Benefits O&M Expenses
($000)

Case No.: U-21389
Exhibit No.: A-91 (KKG-1)
Page: 2 of 2
Witness: KKGrob
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No.	Description	2022 Actual	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2022	Merit & Inflation 12 Mos Ending Dec 31, 2023	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2023	Merit & Inflation 12 Mos Ending Dec 31, 2024	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2024	Merit & Inflation 2 Mos Ending 2/28/2025	Other Adjustments	Projected O&M 12 Mos Ending 2/28/2025
				(c) * Inflation Rate		(e) * Inflation Rate		(g) * Inflation Rate		(b) + (d) + (f) + (h) + (i)
1	**Pension Plans A/B**	**$ (29,860)**	**$ (29,860)**	**$ (1,165)**	**$ (31,025)**	**$ (683)**	**$ (31,707)**	**$ (111)**	**($11,509)**	**$ (43,327)**
2	**Defined Company Contribution Plan**	**$ 14,105**	**$ 14,105**	**$ 550**	**$ 14,655**	**$ 322**	**$ 14,978**	**$ 52**	**$ (147)**	**$ 14,883**
3	**401 (k) Employees' Savings Plan**	**$ 12,974**	**$ 12,974**	**$ 506**	**$ 13,480**	**$ 297**	**$ 13,777**	**$ 48**	**$ (141)**	**$ 13,684**
4	**Active Health Care/Life Insurance/LTD**	**$ 26,332**	**$ 26,332**	**$ 1,027**	**$ 27,359**	**$ 602**	**$ 27,961**	**$ 98**	**$ (178)**	**$ 27,881**
5	**Retiree Health Care and Life Insurance**	**$ (69,030)**	**$ (69,030)**	**$ (2,692)**	**$ (71,722)**	**$ (1,578)**	**$ (73,300)**	**$ (257)**	**$ 33,949**	**$ (39,608)**
6	**Other Benefits**	**$ 3,279**	**$ 3,279**	**$ 128**	**$ 3,407**	**$ 75**	**$ 3,482**	**$ 12**	**$ -**	**$ 3,494**
	Other Benefits non labor	**2,073**	**2,073**	**81**	**2,154**	**47**	**2,201**	**8**	**-**	**2,209**
	Other Benefits labor	**1,206**	**1,206**	**47**	**1,253**	**28**	**1,281**	**4**	**-**	**1,285**
7	**Total Employee Benefits O&M Expenses**	**$ (42,200)**	**$ (42,200)**	**$ (1,646)**	**$ (43,846)**	**$ (965)**	**$ (44,810)**	**$ (157)**	**$ 21,974**	**$ (22,993)**

***Pension and Retiree HC are based on AON actuarial studies.**
****DCCP, 401k, and Active HC are based on projected participation by employees**

Notes

		2023	2024	2025
8	Annual merit increase (testimony of Company witness Amy M. Conrad)			
	Annual merit increase	3.9%	2.2%	2.1%
	Number of months in the period	12	12	2
	Pro-rated inflation rate	3.9%	2.2%	0.4%
9	Annual inflation rates per WP-JCA-51			
	Annual inflation rates	3.9%	2.2%	2.1%
	Number of months in the period	12	12	2
	Pro-rated inflation rate	3.9%	2.2%	0.4%

Prepared on January 18, 2023

CMS Energy - Pension Plan A

ASC 715 Pension Expense Estimates ($ millions)
Minimum Required Contributions - Baseline Scenario

	2022	2023	2024	2025	2026	2027	2028	2029	2030
Funding Target	$ 1,034.2	$ 1,026.6	$ 1,078.2	$ 1,084.3	$ 1,124.2	$ 1,160.0	$ 1,195.1	$ 1,226.2	$ 1,254.4
Value of Plan Assets	$ 1,985.3	$ 1,797.3	$ 1,806.4	$ 1,684.8	$ 1,719.6	$ 1,755.0	$ 1,791.1	$ 1,826.2	$ 1,860.7
Funding Balance	$ 1,116.6	$ 878.3	$ 872.3	$ 817.4	$ 793.4	$ 764.1	$ 731.3	$ 699.5	$ 668.9
Funded %	84.0%	89.5%	86.6%	80.0%	82.4%	85.4%	88.7%	91.9%	95.0%
Effective Interest Rate	5.46%	5.29%	5.16%	5.38%	5.32%	5.30%	5.30%	5.30%	5.30%
Contribution by Plan Year									
Utility	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
Nonutility	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
At-Risk?	No	No	No	No	No	No	No	No	No
Benefit Restrictions?	No	No	No	No	No	No	No	No	No
Participant Count	3,004	2,799	2,726	2,659	2,586	2,520	2,459	2,399	2,343
PBGC Liability	$ 1,413.3	$ 1,304.9	$ 1,109.9	$ 1,016.6	$ 1,050.8	$ 1,086.3	$ 1,121.8	$ 1,154.5	$ 1,184.0
Market Value of Assets	$ 2,100.0	$ 1,633.9	$ 1,670.9	$ 1,710.0	$ 1,747.2	$ 1,784.8	$ 1,822.0	$ 1,857.8	$ 1,892.9
PBGC Flat Rate Premium	$ 0.3	$ 0.3	$ 0.3	$ 0.3	$ 0.3	$ 0.2	$ 0.2	$ 0.2	$ 0.2
PBGC Variable Rate Premium	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total PBGC Premium	$ 0.3	$ 0.3	$ 0.3	$ 0.3	$ 0.3	$ 0.2	$ 0.2	$ 0.2	$ 0.2
Projected Benefit Obligation	$ 1,872.0	$ 1,238.2	$ 1,249.0	$ 1,260.0	$ 1,265.9	$ 1,268.5	$ 1,267.0	$ 1,259.5	$ 1,247.1
Market Value of Assets	2,100.0	1,633.9	1,670.9	1,710.0	1,747.2	1,784.8	1,822.0	1,857.8	1,892.9
Funded Status	$ (228.0)	$ (395.7)	$ (421.9)	$ (450.0)	$ (481.3)	$ (516.3)	$ (555.0)	$ (598.3)	$ (645.8)
ASC 715 Funded %	112.2%	132.0%	133.8%	135.7%	138.0%	140.7%	143.8%	147.5%	151.8%
ASC 715 Accounting Expense									
Utility	$ (6.6)	$ (32.6)	$ (35.5)	$ (36.7)	$ (34.9)	$ (30.4)	$ (34.3)	$ (40.6)	$ (45.5)
Nonutility	(0.2)	(0.9)	(1.0)	(1.0)	(0.9)	(0.8)	(0.9)	(1.1)	(1.2)
Total ASC 715 Accounting Expense	$ (6.8)	$ (33.5)	$ (36.5)	$ (37.7)	$ (35.8)	$ (31.2)	$ (35.2)	$ (41.7)	$ (46.7)
2022 Settlement Accounting Nonutility	$ 0.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2020 Settlement Accounting Utility Amortization1	$ 5.3	$ 5.3	$ 5.3	$ 5.3	$ 5.3	$ 5.3	$ 5.3	$ 1.5	$ 0.0
2021 Settlement Accounting Utility Amortization2	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	0.1
2022 Settlement Accounting Utility Amortization3	0.9	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.0
Total Expense	2.6	(22.9)	(25.9)	(27.1)	(25.2)	(20.6)	(24.6)	(34.9)	(44.6)
Components of Total Expense									
Service Cost	$ 37.0	$ 27.9	$ 26.0	$ 25.0	$ 23.7	$ 22.4	$ 20.7	$ 19.4	$ 18.7
Interest Cost	$ 55.2	$ 61.4	$ 62.0	$ 62.4	$ 62.7	$ 62.7	$ 62.5	$ 62.1	$ 61.3
Expected Return on Assets	(119.2)	(127.1)	(128.8)	(128.8)	(126.7)	(126.7)	(128.8)	(130.9)	(133.2)
Amortization of Outstanding Components	20.2	4.3	4.3	3.7	4.5	10.4	10.4	7.7	6.5
Total ASC 715 Accounting Expense	(6.8)	(33.5)	(36.5)	(37.7)	(35.8)	(31.2)	(35.2)	(41.7)	(46.7)
2022 Settlement Accounting Nonutility	$ 0.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2020 Settlement Accounting Utility Amortization1	$ 5.3	$ 5.3	$ 5.3	$ 5.3	$ 5.3	$ 5.3	$ 5.3	$ 1.5	$ 0.0
2021 Settlement Accounting Utility Amortization2	$ 2.6	$ 2.6	$ 2.6	$ 2.6	$ 2.6	$ 2.6	$ 2.6	$ 2.6	$ 0.1
2022 Settlement Accounting Utility Amortization3	0.9	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.0
Total Expense	2.6	(22.9)	(25.9)	(27.1)	(25.2)	(20.6)	(24.6)	(34.9)	(44.6)
Market Related Value of Assets	$ 1,928.2	$ 1,804.2	$ 1,827.3	$ 1,828.8	$ 1,801.6	$ 1,801.9	$ 1,833.3	$ 1,864.7	$ 1,897.4
Assumptions									
Discount Rate	3.02% & 3.76%	5.24%	5.24%	5.24%	5.24%	5.24%	5.24%	5.24%	5.24%
Expected Return on Assets	6.50%	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%
Salary Increases	3.60%	3.55%	3.55%	3.55%	3.55%	3.55%	3.55%	3.55%	3.55%

1 The information related to the 2020 Settlement Accounting Utility Amortization was provided directly by CMS and was not calculated or reviewed by Aon. The amortization was set up as a regulatory asset for the utility portion of the 2020 settlement loss of $35.5 million at August 31, 2020. As provided by CMS, the amortizations starts in September 2020 over service life of 8.55 years. Additionally, the settlement attributable to the utility portion on December 31, 2020 is $9.8 million, which is also amortized over service of 8.55 years beginning in January 2021. Nonutility portions of the settlement loss are $0.9 million and $0.3 million for August 31, 2020 and December 31, 2020 respectively.

2 The information related to the 2021 Settlement Accounting Utility Amortization was provided directly by CMS and was not calculated or reviewed by Aon. The amortization was set up as a regulatory asset for the utility portion of the 2021 settlement loss of $17.6 million at October 31, 2021. As provided by CMS, the amortizations starts in November 2021 over service life of 8.19 years. Additionally, the settlement attributable to the utility portion on December 31, 2021 is $3.3 million, which is also amortized over service of 8.19 years beginning in January 2022. Nonutility portions of the settlement loss are $0.5 million and $0.1 million for October 31, 2021 and December 31, 2021 respectively.

3 The information related to the 2022 Settlement Accounting Utility Amortization was provided directly by CMS and was not calculated or reviewed by Aon. The amortizations were set up as regulatory assets for the utility portions of the 2022 settlement losses. The settlements attributable to the utility portions are $3.9 million, $3.7 million, $11.5 million, and $2.5 million as of March 31, 2022, June 30, 2022, September 30, 2022, and December 31, 2022 respectively. As provided by CMS, the amortizations are amortized over service life of 8.11 years beginning in April 2022, July 2022, October 2022, and January 2023 respectively. Nonutility portions of the settlement loss are $0.1 million, $0.1 million, $0.3 million, and $0.1 million for March 31, 2022, June 30, 2022, September 30, 2022, and December 31, 2022 respectively.

Prepared on January 18, 2023

CMS Energy - Pension Plan B

ASC 715 Pension Expense Estimates ($ millions)
Minimum Required Contributions - Baseline Scenario

	2022	2023	2024	2025	2026	2027	2028	2029	2030
Funding Target	$ 954.4	$ 933.2	$ 907.1	$ 848.9	$ 816.3	$ 781.0	$ 744.5	$ 707.6	$ 670.7
Value of Plan Assets	$ 1,418.6	$ 1,304.1	$ 1,278.8	$ 1,167.3	$ 1,167.7	$ 1,170.0	$ 1,174.9	$ 1,182.1	$ 1,191.7
Funding Balance	$ 136.8	$ 115.3	$ 123.6	$ 132.5	$ 142.0	$ 152.2	$ 163.2	$ 174.9	$ 187.5
Funded %	134.3%	127.4%	127.4%	121.9%	125.7%	130.3%	135.9%	142.3%	149.7%
Effective Interest Rate	5.31%	5.14%	5.01%	5.33%	5.28%	5.26%	5.26%	5.25%	5.25%
Contribution by Plan Year									
Utility	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
Nonutility	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
At-Risk?	No	No	No	No	No	No	No	No	No
Benefit Restrictions?	No	No	No	No	No	No	No	No	No
Participant Count	7,692	7,529	7,359	7,182	6,998	6,808	6,611	6,409	6,203
PBGC Liability	$ 1,207.0	$ 1,121.4	$ 944.8	$ 837.4	$ 802.4	$ 766.9	$ 731.3	$ 695.2	$ 659.1
Market Value of Assets	$ 1,499.5	$ 1,185.6	$ 1,184.7	$ 1,185.1	$ 1,186.8	$ 1,190.2	$ 1,195.5	$ 1,202.8	$ 1,212.6
PBGC Flat Rate Premium	$ 0.7	$ 0.7	$ 0.7	$ 0.7	$ 0.7	$ 0.7	$ 0.7	$ 0.7	$ 0.7
PBGC Variable Rate Premium	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total PBGC Premium	$ 0.7	$ 0.7	$ 0.7	$ 0.7	$ 0.7	$ 0.7	$ 0.7	$ 0.7	$ 0.7
Projected Benefit Obligation	$ 1,198.6	$ 930.5	$ 894.8	$ 858.7	$ 822.0	$ 785.0	$ 747.8	$ 710.3	$ 672.8
Market Value of Assets	1,499.5	1,185.6	1,184.7	1,185.1	1,186.8	1,190.2	1,195.5	1,202.8	1,212.6
Funded Status	$ (300.9)	$ (255.1)	$ (289.9)	$ (326.4)	$ (364.8)	$ (405.2)	$ (447.7)	$ (492.5)	$ (539.8)
ASC 715 Funded %	125.1%	127.4%	132.4%	138.0%	144.4%	151.6%	159.9%	169.3%	180.2%
ASC 715 Accounting Expense									
Utility	$ (32.4)	$ (32.1)	$ (34.1)	$ (32.5)	$ (28.7)	$ (22.7)	$ (24.6)	$ (27.0)	$ (29.6)
Nonutility	(3.4)	(3.3)	(3.6)	(3.4)	(3.0)	(2.4)	(2.6)	(2.8)	(3.1)
Total	$ (35.8)	$ (35.4)	$ (37.7)	$ (35.9)	$ (31.7)	$ (25.1)	$ (27.2)	$ (29.8)	$ (32.7)
Components of Total Expense									
Service Cost	$ 3.5	$ 1.5	$ 1.5	$ 1.5	$ 1.6	$ 1.6	$ 1.6	$ 1.7	$ 1.7
Interest Cost	25.5	45.0	43.3	41.5	39.6	37.8	36.0	34.1	32.3
Expected Return on Assets	(86.3)	(93.1)	(93.6)	(91.9)	(88.9)	(84.5)	(84.5)	(84.8)	(85.3)
Amortization of Outstanding Components	21.5	11.2	11.1	13.0	16.0	20.0	19.7	19.2	18.6
Total Expense	$ (35.8)	$ (35.4)	$ (37.7)	$ (35.9)	$ (31.7)	$ (25.1)	$ (27.2)	$ (29.8)	$ (32.7)
Market Related Value of Assets	$ 1,368.2	$ 1,333.7	$ 1,340.0	$ 1,315.3	$ 1,272.5	$ 1,211.2	$ 1,210.4	$ 1,212.9	$ 1,219.7
Assumptions									
Discount Rate	2.79%	5.14%	5.14%	5.14%	5.14%	5.14%	5.14%	5.14%	5.14%
Expected Return on Assets	6.50%	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%
Salary Increases	3.90%	3.60%	3.60%	3.60%	3.60%	3.60%	3.60%	3.60%	3.60%

2023-2030 projections reflect the following:

- January 1, 2022 census data.
- PBO discount rate of 5.24% (Plan A) and 5.14% (Plan B) in fiscal 2023+, based on December 31, 2022 yield curve anlaysis.
- Service Cost effective interest rate of 5.27% (Plan A) and 5.28% (Plan B) in fiscal 2023+, based on December 31, 2022 yield curve analysis.
- Interest Cost effective interest rate of 5.12% (Plan A) and 5.06% (Plan B) in fiscal 2023+, based on December 31, 2022 yield curve analysis.
- Expense is allocated to Utility/Non Utility based on PBO using the allocation percentages for 2023 expense.
- Contributions are allocated to Utility/Non Utility based on the most recent allocation percentages provided by CMS for the December 2020 contributions.
- December 31, 2022 market assets provided by CMS, with expected returns thereafter.
- Expected and actual asset returns of 7.20% in fiscal 2023+.
- The plans will waive Funding Balance when necessary, in order to maintain a Funded Percentage of at least 80%.
- Other provisions, assumptions and methods are the same as those used for the December 31, 2022 ASC 715 disclosures.

CMS Energy

ASC 715 OPEB Expense Estimates ($ millions)

Prepared on January 18, 2023

	2022	2023	2024	2025	2026	2027	2028	2029
Funded Status, January 1								
Accumulated Postretirement Benefit Obligation	$ (1,165.8)	$ (889.4)	$ (891.1)	$ (890.8)	$ (889.0)	$ (885.4)	$ (880.2)	(873.30)
Plan Assets at Fair Value	$ 1,787.4	$ 1,446.5	$ 1,493.9	$ 1,542.8	$ 1,594.1	$ 1,647.6	$ 1,703.8	1,762.90
Funded Status	$ 621.6	$ 557.1	$ 602.8	$ 652.0	$ 705.1	$ 762.2	$ 823.6	889.60
ASC 715 Accounting Expense								
Utility	$ (112.8)	$ (70.2)	$ (64.8)	$ (69.0)	$ (72.3)	$ (62.8)	$ (55.6)	(61.20)
Nonutility	$ (7.5)	$ (6.0)	$ (5.9)	$ (6.1)	$ (6.4)	$ (6.3)	$ (6.2)	(6.60)
Total	$ (120.3)	$ (76.2)	$ (70.7)	$ (75.1)	$ (78.7)	$ (69.1)	$ (61.8)	(67.80)
Components of Total Expense								
Service Cost	$ 17.3	$ 11.6	$ 11.3	$ 11.0	$ 10.7	$ 10.5	$ 10.2	10.00
Interest Cost	$ 27.9	$ 44.0	$ 44.0	$ 44.0	$ 43.8	$ 43.6	$ 43.3	43.00
Expected Return on Assets	$ (114.6)	$ (102.3)	$ (105.5)	$ (109.0)	$ (112.6)	$ (116.5)	$ (120.4)	(124.80)
Amortization of Net (Gain) or Loss	$ 0.6	$ 11.7	$ 10.3	$ 8.9	$ 7.6	$ 6.3	$ 5.1	4.00
Amortization of Prior Service Cost	$ (51.5)	$ (41.2)	$ (30.8)	$ (30.0)	$ (28.2)	$ (13.0)	$ -	-
Total Expense	$ (120.3)	$ (76.2)	$ (70.7)	$ (75.1)	$ (78.7)	$ (69.1)	$ (61.8)	(67.80)
Assumptions								
APBO Discount Rate	2.99%	5.21%	5.21%	5.21%	5.21%	5.21%	5.21%	5.21%
Service Cost Effective Interest Rate	3.23%	5.31%	5.31%	5.31%	5.31%	5.31%	5.31%	5.31%
Interest Cost Effective Interest Rate	2.45%	5.10%	5.10%	5.10%	5.10%	5.10%	5.10%	5.10%
Expected Return on Assets	6.50%	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%	7.20%
Trend Rate—Initial Pre-65	6.00%	6.25%	6.00%	6.00%	5.75%	5.50%	5.50%	5.25%
Trend Rate—Initial Post-65	6.50%	6.50%	6.25%	6.25%	6.00%	5.75%	5.50%	5.25%
Trend Rate—Ultimate	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%
Trend Rate—Ultimate Year Pre-65	2028	2032	2032	2032	2032	2032	2032	2032
Trend Rate—Ultimate Year Post-65	2028	2032	2032	2032	2032	2032	2032	2032
Expected Contribution	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	0

2023-2029 expense projections reflect the following:
-January 1, 2022 census data.
-APBO discount rate of 5.21% in fiscal 2023+, based on December 31, 2022 yield curve.
-Service Cost effective interest rate of 5.31% in fiscal 2023+, based on December 31, 2022 yield curve.
-Interest Cost effective interest rate of 5.10% in fiscal 2023+, based on December 31, 2022 yield curve.
-December 31, 2022 market assets provided by CMS.
-Other provisions, assumptions and methods are the same as those used for December 31, 2022 ASC 715 disclosures.

EXHIBIT A-94 (KKG-4)
IS CONFIDENTIAL AND BEING FILED
UNDER SEAL WITH THE MPSC

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **CONSUMERS ENERGY COMPANY** for authority to increase its rates for the generation and distribution of electricity and for other relief.	))))))	Case No. U-21389

EXHIBITS

OF

QUENTIN A. GUINN

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

Schedule: B-5.5

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual and Projected Capital Expenditures
Operations Support
($000)

Case No.: U-21389
Exhibit No.: A-12 (QAG-1)
Schedule: B-5.5
Page: 1 of 2
Witness: QAGuinn
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
		Historical Year	**Projected Bridge Period**			**Projected Test Year**
Line No	**Description**	**12 Mos Ended 12/31/2022**	**12 Mos Ended 12/31/2023**	**2 Mos Ending 2/29/2024**	**14 Mos Ending 2/29/2024**	**12 Mos Ending 2/28/2025**
1	Asset Preservation	27,318	21,621	3,397	25,017	35,083
2	Other Equipment	862	671	-	671	690
3	**Total Capital**	28,181	22,292	3,397	25,688	35,773

		Projected			
		2 Mos Ending 2/28/2023	**12 Mos Ending 2/29/2024**	**12 Mos Ending 2/28/2025**	**26 Mos Ending 2/28/2025**
4	Asset Preservation	1,719	23,298	35,083	60,101
5	Other Equipment	-	671	690	1,361
6	**Total Capital**	1,719	23,969	35,773	61,462

Schedule: B-5.5

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Actual and Projected Capital Expenditures
Operations Support
($000)

Case No.: U-21389
Exhibit No.: A-12 (QAG-1)
Schedule: B-5.5
Page: 2 of 2
Witness: QAGuinn
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
		Historical Year	**Projected Bridge Period**			**Projected Test Year**
Line No	**Description**	**12 Mos Ended 12/31/2022**	**12 Mos Ended 12/31/2023**	**2 Mos Ending 2/29/2024**	**14 Mos Ending 2/29/2024**	**12 Mos Ending 2/28/2025**
1	**Asset Preservation**	**27,318**	**21,621**	**3,397**	**25,017**	**35,083**
	Contractor	22,901	17,640	2,771	20,412	28,624
	Labor	1,393	1,094	172	1,265	1,775
	Materials	1,841	1,673	263	1,936	2,715
	Business Expenses	74	67	10	77	108
	Contingency	-	-	-	-	-
	Other (Loadings, Chargebacks)	1,109	1,147	180	1,327	1,862
2	**Other Equipment**	**862**	**671**	**-**	**671**	**690**
	Contractor	26	20	-	20	21
	Labor	-	-	-	-	-
	Materials	836	651	-	651	669
	Business Expenses	-	-	-	-	-
	Contingency	-	-	-	-	-
	Other (Loadings, Chargebacks)	-	-	-	-	-
3	**Total Capital**	**28,181**	**22,292**	**3,397**	**25,688**	**35,773**

		Projected			
		2 Mos Ending 2/28/2023	**12 Mos Ending 2/29/2024**	**12 Mos Ending 2/28/2025**	**26 Mos Ending 2/28/2025**
4	**Asset Preservation**	**1,719**	**23,298**	**35,083**	**60,101**
	Contractor	1,403	19,009	28,624	49,036
	Labor	87	1,178	1,775	3,040
	Materials	133	1,803	2,715	4,651
	Business Expenses	5	72	108	185
	Contingency	-	-	-	-
	Other (Loadings, Chargebacks)	91	1,236	1,862	3,189
5	**Other Equipment**	**-**	**671**	**690**	**1,361**
	Contractor	-	20	21	41
	Labor	-	-	-	-
	Materials	-	651	669	1,320
	Business Expenses	-	-	-	-
	Contingency	-	-	-	-
	Other (Loadings, Chargebacks)	-	-	-	-
6	**Total Capital**	**1,719**	**23,969**	**35,773**	**61,462**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
Operations Support
($000)

Case No.: U-21389
Exhibit No.: A-95 (QAG-2)
Page: 1 of 2
Witness: QAGuinn
Date: May 2023

Line No.	(a) Description	(b) 2022 Actual	(c) Projected 12-Mos Ending 2/28/2025
1	**Facilities**	**14,134**	**12,762**
	Labor	3,958	4,501
	Non-Labor Other	10,177	8,261
2	**Real Estate**	**2,613**	**2,351**
	Labor	1,803	1,866
	Non-Labor Other	810	485
3	**Supply Chain**	**904**	**1,073**
	Labor	90	83
	Non-Labor Other	813	990
4	**Total Operations Support of Area O&M Expenses**	**$ 17,651**	**$ 16,186**
	Labor	5,761	6,367
	Non-Labor Other	10,987	8,746

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of O&M Expenses Projected Using Inflation
For the year 2022 and Test year 12 Months ending February 28th, 2025
($000)

Case No.: U-21389
Exhibit No.: A-95 (QAG-2)
Page: 2 of 2
Witness: QAGuinn
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No.	Description	2022 Actual	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2022	Merit & Inflation 12 Mos Ending Dec 31, 2023	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2023	Merit & Inflation 12 Mos Ending Dec 31, 2024	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2024	Merit & Inflation 2 Mos Ending 2/28/2025	Other Adjustments	Projected O&M 12 Mos Ending 2/28/2025
				(c) * Inflation Rate		(e) * Inflation Rate		(g) * Inflation Rate		(b) + (d) + (f) + (h) + (i)
1	**Facilities**	**14,134**	**2,177**	**85**	**12,762**	**54**	**12,762**	**9**	**-1,520**	**12,762**
	Labor	3,958	2,177	85	2,475	54	2,475	9	395	4,501
	Non-Labor Other	10,177		0		0		0	-1,916	8,261
2	**Real Estate**	**2,613**	**1,803**	**70**	**2,351**	**41**	**2,351**	**7**	**-380**	**2,351**
	Labor	1,803	1,803	70	1,866	41	1,866	7	-55	1,866
	Non-Labor Other	810		0		0		0	-325	485
3	**Supply Chain**	**904**	**90**	**4**	**1,073**	**2**	**1,073**	**0**	**164**	**1,073**
	Labor	90	90	4	83	2	83	0	-13	83
	Non-Labor Other	813		0		0		0	177	990
4	**Total Operations Support O&M Expenses**	**$ 17,651**	**$ 4,070**	**$ 159**	**$ 16,186**	**$ 97**	**$ 16,186**	**$ 15**	**$ (1,736)**	**$ 16,186**
	Labor	5,851	4,070	159	4,425	97	4,425	15	327	6,450
	Non-Labor Other	11,800	0	0	0	0	0	0	-2,064	9,736

Michigan Public Service Commission
Consumers Energy Company
Detailed List of Projected Electric Capital Expenditures
Operations Support
(000's)

Case No: U-21389
Exhibit No: A-96 (QAG-3)
Page: 1 of 3
Witness: QAGuinn
Date: May 2023

Line No		Historical Year 12 Mos Ended 12/31/2022	Projected Bridge Period 12 Mos Ended 12/31/2023	Projected Bridge Period 2 Mos Ending 2/29/2024	Projected Bridge Period 14 Mos Ending 2/29/2024	Projected Test Year 12 Mos Ending 2/28/2025
		Electric	Electric	Electric	Electric	Electric
1	**Other Equipment**	**862**	**671**	**-**	**671**	**690**
2	Wellness Equip	98	51	-	51	52
3	Computer Equipment	18	17	-	17	17
4	Print Equipment	-	43	-	43	44
5	Real Estate Tools & Equipment	18	10	-	10	10
6	Supply Chain Tools & Equipment	727	507	-	507	522
7	Facilities Tools	-	43	-	43	43
8	**Emergent Repairs**	**1,523**	**1,932**	**152**	**2,084**	**1,856**
9	Asset Preservation - Unplanned Repair	1,523	1,932	152	2,084	1,856
10	**Asset Replacement**	**16,020**	**9,949**	**958**	**10,906**	**10,998**
11	Statewide Paving	3,755	1,998	107	2,105	1,327
12	Statewide Roofing	6,533	1,576	295	1,872	3,366
13	Statewide Mechanical/Electrical	3,846	5,107	342	5,449	3,975
14	Statewide Elevators	1,318	1,091	30	1,121	365
15	Marshall Roadway Paving	26	40	171	211	1,829
16	Furniture	541	136	12	147	136
17	**New Construction**	**3,054**	**3,760**	**684**	**4,443**	**8,539**
18	Lansing Service Center	311	3,146	523	3,669	6,402
19	Hastings Service Center	3	543	37	580	815
20	Greenville Cold Storage Building	-	-	27	27	289
21	Ludington Cold Storage Bldg	-	50	96	146	1,032
23	Hardy Headquarter Building	2,740	21	-	21	-
24	**Renovations**	**5,017**	**5,980**	**1,603**	**7,583**	**13,690**
25	Kalamazoo Service Center	182	848	452	1,300	5,513
26	Parnall Renovations (P1-3)	2,715	214	-	214	
27	Jackson Dispatch	292	543	-	543	
29	Midland Building	85	-	-	-	-
30	Grand Rapids LVD-UG	1,545	1,386	-	1,386	-
31	Control/Dispatch Center	81	1,551	903	2,454	5,500
32	South Monroe Interior Renovation	5	200	248	448	2,677
33	EV Infrastructure	113	1,238	-	1,238	-
34	Miscellaneous	**1,705**	**-**	**-**	**-**	**-**
35	**Total Capital**	**28,181**	**22,292**	**3,397**	**25,688**	**35,773**

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company

Case No.: U-21389
Exhibit No.: A-96 (QAG-3)
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Witness: QAGUINN
Date: May 2023

New Construction & Renovations - Current Construction Cost

	Location	Type of Operations	Electric Allocation	Gas Allocation	Total Historical Cost 2022	Allocated Electric Cost 2022	Allocated Gas Cost 2022	Total Plan Cost 2023	Allocated Electric Cost 2023	Allocated Gas Cost 2023	Total Plan Cost 2024	Allocated Electric Cost 2024	Allocated Gas Cost 2024	Total Plan Cost 2025	Allocated Electric Cost 2025	Allocated Gas Cost 2025	Total Plan Cost 2026	Allocated Electric Cost 2026	Allocated Gas Cost 2026	Total Plan Cost 2027	Allocated Electric Cost 2027	Allocated Gas Cost 2027	Total Electric Cost	Total Gas Cost	Total Cost
New Construction	Lansing SC	Common	54%	46%	$572,250	$310,674	$261,575	$5,797,757	$3,145,863	$2,651,894	$11,260,988	$6,110,212	$5,150,776	$17,548,363	$9,521,742	$8,026,621	$11,601,397	$6,294,918	$5,306,479	$0	$0	$0	$25,383,409	$21,397,345	$46,780,755
New Construction	Hastings SC	Common	54%	46%	$5,304	$2,880	$2,425	$1,000,000	$542,600	$457,400	$800,000	$434,080	$365,920	$9,000,000	$4,883,400	$4,116,600	$6,200,000	$3,364,120	$2,835,880	$0	$0	$0	$9,227,080	$7,778,225	$17,005,304
New Construction	Greenville Cold Storage	Common	54%	46%	$0	$0	$0	$0	$0	$0	$583,094	$316,387	$266,707	$0	$0	$0	$0	$0	$0	$0	$0	$0	$316,387	$266,707	$583,094
New Construction	Ludington Cold Storage	Electric	100%	0%	$0	$0	$0	$50,000	$50,000	$0	$1,119,655	$1,119,655	$0	$100,000	$100,000	$0	$0	$0	$0	$0	$0	$0	$1,269,655	$0	$1,269,655
New Construction	Hardy Headquarters	Generation	100%	0%	$2,740,459	$2,740,459	$0	$21,135	$21,135	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,761,594	$0	$2,761,594
Renovations	Kalamazoo SC	Common	54%	46%	$334,472	$181,585	$152,887	$1,562,989	$848,078	$714,911	$9,716,090	$5,271,950	$4,444,140	$14,891,512	$8,080,134	$6,811,378	$7,338,061	$3,981,632	$3,356,429	$51,273	$27,821	$23,452	$18,391,200	$15,503,197	$33,894,397
Renovations	Parnall Renovations (P1-3)	Corporate	54%	46%	$5,000,228	$2,714,624	$2,285,604	$394,893	$214,269	$180,624	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,928,893	$2,466,228	$5,395,121
Renovations	Jackson Dispatch	Common	54%	46%	$537,536	$291,828	$245,708	$1,000,000	$542,600	$457,400	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$834,428	$703,108	$1,537,536
Renovations	Midland Building	Electric	54%	46%	$156,830	$85,143	$71,687	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$85,143	$71,687	$156,830
Renovations	Grand Rapids LVD-UG	Electric	100%	0%	$1,545,013	$1,545,013	$0	$1,386,430	$1,386,430	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,931,443	$0	$2,931,443
Renovations	Control/Dispatch Center	Corporate	100%	0%	$80,871	$80,871	$0	$1,551,138	$1,551,138	$0	$5,417,740	$5,417,740	$0	$5,909,820	$5,909,820	$0	$1,921,902	$1,921,902	$0	$0	$0	$0	$14,881,471	$0	$14,881,471
Renovations	South Monroe Interior Renovation	Electric	100%	0%	$5,185	$5,185	$0	$200,000	$200,000	$0	$2,900,000	$2,900,000	$0	$300,000	$300,000	$0	$0	$0	$0	$0	$0	$0	$3,405,185	$0	$3,405,185
Renovations	EV Infrastructure	Common	Varies based on site location		$133,721	$112,661	$21,060	$1,864,471	$1,237,833	$626,638	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,350,494	$647,698	$1,998,192

Location		Historical Cost 2022	Plan Cost 2023	Plan Cost 2024	Plan Cost 2025	Plan Cost 2026	Plan Cost 2027	Total Cost
Lansing SC	Master Planning							$0
	Programming	$161,054						$161,054
	Land Acquisition							$0
	Engineering	$411,196	$1,950,000	$100,000	$100,000			$2,561,196
	Construction		$3,847,757	$11,160,988	$17,448,363	$9,426,397		$41,883,505
	Furnishings					$1,750,000		$1,750,000
	Commissioning					$425,000		$425,000
Hastings SC	Master Planning	$5,304						$5,304
	Programming		$25,000					$25,000
	Land Acquisition		$975,000					$975,000
	Engineering			$800,000				$800,000
	Construction				$9,000,000	$5,130,000		$14,130,000
	Furnishings					$750,000		$750,000
	Commissioning					$320,000		$320,000
Greenville Cold Storage	Master Planning							$0
	Programming							$0
	Land Acquisition							$0
	Engineering							$0
	Construction			$568,206				$568,206
	Furnishings			$14,888				$14,888
	Commissioning							$0
Ludington Cold Storage	Master Planning							$0
	Programming							$0
	Land Acquisition							$0
	Engineering		$50,000					$50,000
	Construction			$1,119,655	$85,000			$1,204,655
	Furnishings				$15,000			$15,000
	Commissioning							$0
Hardy Headquarters	Master Planning							$0
	Programming							$0
	Land Acquisition							$0
	Engineering							$0
	Construction	$2,587,068	$21,135					$2,608,203
	Furnishings	$84,073						$84,073
	Commissioning	$69,318						$69,318
Kalamazoo SC	Master Planning							$0
	Programming	$334,472						$334,472
	Land Acquisition							$0
	Engineering		$1,562,989					$1,562,989
	Construction			$9,166,090	$14,541,512	$6,988,061		$30,695,663
	Furnishings			$500,000	$250,000	$250,000		$1,000,000
	Commissioning			$50,000	$100,000	$100,000	$51,273	$301,273
Parnall Renovations (P1-3)	Master Planning							$0
	Programming							$0
	Land Acquisition							$0
	Engineering							$0
	Construction	$4,363,445	$284,893					$4,648,338
	Furnishings	$636,783						$636,783
	Commissioning		$110,000					$110,000
Jackson Dispatch	Master Planning							$0
	Programming							$0
	Land Acquisition							$0
	Engineering	$75,000						$75,000
	Construction	$301,147	$970,000					$1,271,147
	Furnishings	$161,389						$161,389
	Commissioning		$30,000					$30,000
Midland Building	Master Planning							$0
	Programming	$18,130						$18,130
	Land Acquisition							$0
	Engineering	$138,700						$138,700
	Construction							$0
	Furnishings							$0
	Commissioning							$0
Grand Rapids LVD-UG	Master Planning							$0
	Programming							$0
	Land Acquisition							$0
	Engineering	$64,000						$64,000
	Construction	$1,360,107	$1,386,430					$2,746,537
	Furnishings	$120,906						$120,906
	Commissioning							$0
Control/Dispatch Center	Master Planning	$80,871						$80,871
	Programming		$65,000					$65,000
	Land Acquisition							$0
	Engineering		$353,460		$57,540			$411,000
	Construction		$1,027,678	$5,287,740	$3,437,280	$1,711,802		$11,464,500
	Furnishings		$105,000		$2,415,000	$105,000		$2,625,000
	Commissioning			$130,000		$105,100		$235,100
South Monroe Interior Renovation	Master Planning							$0
	Programming	$5,185						$5,185
	Land Acquisition							$0
	Engineering		$200,000					$200,000
	Construction			$2,900,000	$162,500			$3,062,500
	Furnishings				$75,000			$75,000
	Commissioning				$62,500			$62,500
EV Infrastructure	Master Planning							$0
	Programming							$0
	Land Acquisition							$0
	Engineering	$6,500	$93,225					$99,725
	Construction	$127,221	$1,771,246					$1,898,467
	Furnishings							$0
	Commissioning							$0
Location		Historical Cost 2022	Plan Cost 2023	Plan Cost 2024	Plan Cost 2025	Plan Cost 2026	Plan Cost 2027	Total Cost

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company

Case No.: U-21389
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Witness: QAGUINN
Date: May 2023

Lansing/Hastings/Kalamazoo Service Centers - Current Construction Cost

	Location	Type of Operations	Electric Allocation	Gas Allocation	Total Historical Cost 2022	Allocated Electric Cost 2022	Allocated Gas Cost 2022	Total Plan Cost 2023	Allocated Electric Cost 2023	Allocated Gas Cost 2023	Total Plan Cost 2024	Allocated Electric Cost 2024	Allocated Gas Cost 2024	Total Plan Cost 2025	Allocated Electric Cost 2025	Allocated Gas Cost 2025	Total Plan Cost 2026	Allocated Electric Cost 2026	Allocated Gas Cost 2026	Total Plan Cost 2027	Allocated Electric Cost 2027	Allocated Gas Cost 2027	Total Electric Cost	Total Gas Cost	Total Cost
New Construction	Lansing SC	Common	54%	46%	$572,250	$310,674	$261,575	$5,797,757	$3,145,863	$2,651,894	$11,260,988	$6,110,212	$5,150,776	$17,548,363	$9,521,742	$8,026,621	$11,601,397	$6,294,918	$5,306,479	$0	$0	$0	$25,383,409	$21,397,345	$46,780,755
New Construction	Hastings SC	Common	54%	46%	$5,304	$2,880	$2,425	$1,000,000	$542,600	$457,400	$800,000	$434,080	$365,920	$9,000,000	$4,883,400	$4,116,600	$6,200,000	$3,364,120	$2,835,880	$0	$0	$0	$9,227,080	$7,778,225	$17,005,304
Renovations	Kalamazoo SC	Common	54%	46%	$334,472	$181,585	$152,887	$1,562,989	$848,078	$714,911	$9,716,090	$5,271,950	$4,444,140	$14,891,512	$8,080,134	$6,811,378	$7,338,061	$3,981,632	$3,356,429	$51,273	$27,821	$23,452	$18,391,200	$15,503,197	$33,894,397

	Location		Total Historical Cost 2022	Total Plan Cost 2023	Total Plan Cost 2024	Total Plan Cost 2025	Total Plan Cost 2026	Total Plan Cost 2027	Total Cost
New Construction	Lansing SC	Master Planning							$0
		Programming	$161,054						$161,054
		Land Acquisition							$0
		Engineering	$411,196	$1,950,000	$100,000	$100,000			$2,561,196
		Construction		$3,847,757	$11,160,988	$17,448,363	$9,426,397		$41,883,505
		Furnishings					$1,750,000		$1,750,000
		Commissioning					$425,000		$425,000
New Construction	Hastings SC	Master Planning	$5,304						$5,304
		Programming		$25,000					$25,000
		Land Acquisition		$975,000					$975,000
		Engineering			$800,000				$800,000
		Construction				$9,000,000	$5,130,000		$14,130,000
		Furnishings					$750,000		$750,000
		Commissioning					$320,000		$320,000
	Kalamazoo SC	Master Planning							$0
		Programming	$334,472						$334,472
		Land Acquisition							$0
		Engineering		$1,562,989					$1,562,989
		Construction			$9,166,090	$14,541,512	$6,988,061		$30,695,663
		Furnishings			$500,000	$250,000	$250,000		$1,000,000
		Commissioning			$50,000	$100,000	$100,000	$51,273	$301,273
	Location		**Total Plan Cost 2022**	**Total Plan Cost 2023**	**Total Plan Cost 2024**	**Total Plan Cost 2025**	**Total Plan Cost 2026**	**Total Plan Cost 2027**	**Total Cost**

Lansing/Hastings/Kalamazoo Service Centers - Construction Cost As Filed in U-20963

Location	Existing Floor Area	Number of Employees	Type of Operations	Electric Allocation	Gas Allocation	Projected Total Plan Cost 2020	Projected Electric Cost 2020	Projected Gas Cost 2020	Projected Total Plan Cost 2021	Projected Electric Cost 2021	Projected Gas Cost 2021	Projected Total Plan Cost 2022	Projected Electric Cost 2022	Projected Gas Cost 2022	Projected Total Plan Cost 2023	Projected Electric Cost 2023	Projected Gas Cost 2023	Projected Total Cost
Lansing SC	150,594 SF	412	Electric Operations, Gas Operations	54%	46%	$1,782,689	$966,574	$816,115	$4,000,000	$2,168,800	$1,831,200	$25,000,000	$13,555,000	$11,445,000	$24,000,000	$13,012,800	$10,987,200	$54,782,689
Kalamazoo SC	140,884 SF	248	Electric Operations, Gas Operations	54%	46%	$1,618	$877	$741	$2,063,673	$1,118,924	$944,749	$28,637,665	$15,527,342	$13,110,323	$21,307,751	$11,553,063	$9,754,688	$52,010,707
Hastings SC	12,317 SF	44	Electric Operations, Gas Operations	54%	46%	$4,574	$2,480	$2,094	$1,000,000	$542,200	$457,800	$10,500,000	$5,693,100	$4,806,900	$9,000,000	$4,879,800	$4,120,200	$20,504,574

Location	Item	Total Plan Cost 2020	Total Plan Cost 2021	Total Plan Cost 2022	Total Plan Cost 2023	Total Cost
Lansing SC	Engineering		$1,500,000			
	Land Acquisition	$1,782,689				
	Construction		$2,500,000	$25,000,000	$20,750,000	
	Furnishings				$3,000,000	
	Commissioning				$250,000	$54,782,689
Kalamazoo SC	Engineering	$1,618	$2,063,673			
	Land Acquisition					
	Construction			$28,637,665	$18,057,751	
	Furnishings				$3,000,000	
	Commissioning				$250,000	$52,010,707
Hastings SC	Engineering	$4,574				
	Land Acquisition		$1,000,000			
	Construction			$10,500,000	$7,400,000	
	Furnishings				$1,500,000	
	Commissioning				$100,000	$20,504,574

Marshall Roadway Paving

Plan Summary

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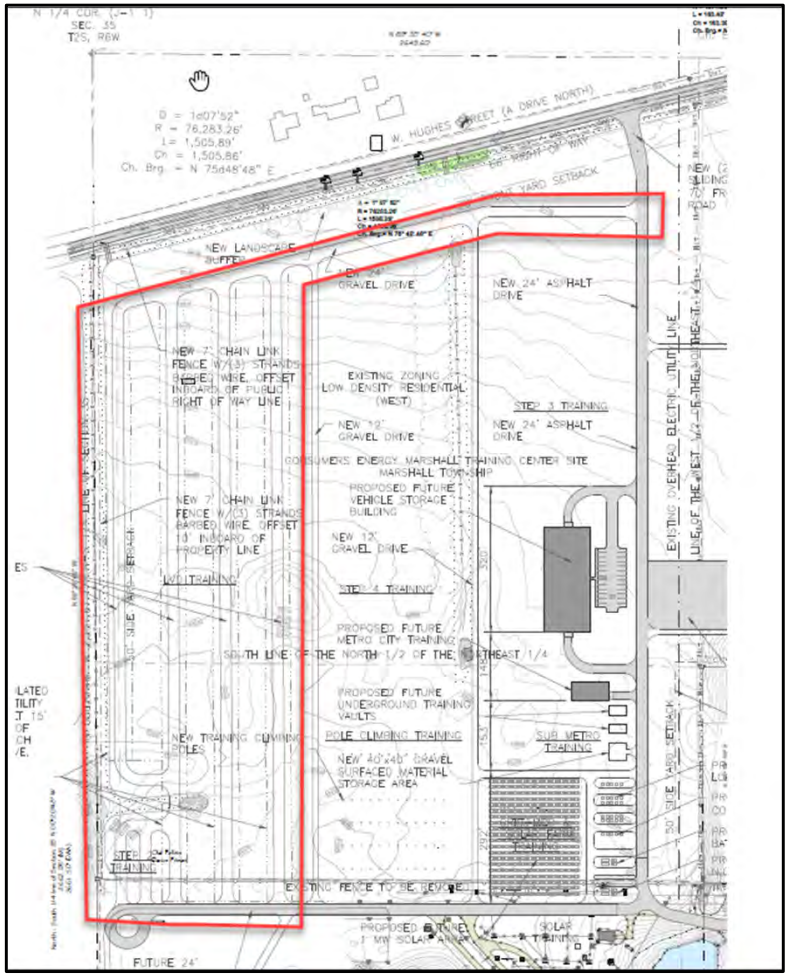
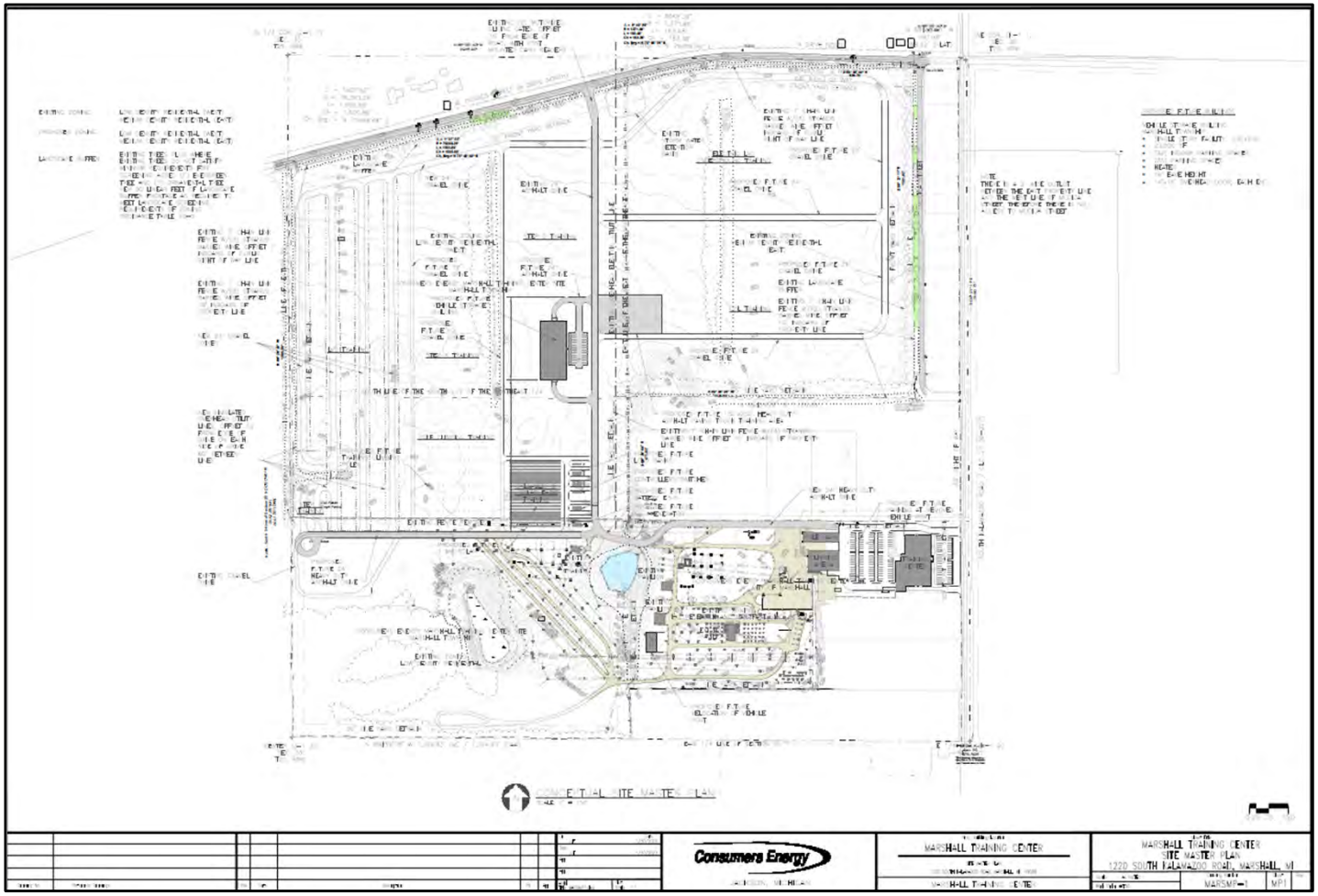
Marshall Roadway Paving: Conceptual Plan Gravel Roadways



Marshall Roadway Paving: Conceptual Site Master Plan Including Gravel Roadways



Lansing Service Center

Plan Summary

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Lansing Service Center – Health Assessment

Facility Assessment - Lansing Service Center

Location	Lansing	Maximum Possible Points (80)	Servicable > 48 Points	Poor < 48 Points	Good > 64 Points
Zone	MMOM				
Safety					
Compatible Use	0	5	3	2	4
Site Conditions	3	5	3	2	4
Traffic/Site Flow	1	5	3	2	4
Environmental Hazard	1	5	3	2	4
Quality					
Branding	2	5	3	2	4
Workplace Efficiency	3	5	3	2	4
Years since last major systems upgrade	0	5	3	2	4
Cost					
Facility Operating Costs	4	5	3	2	4
Non Facility Cost Impact	4	5	3	2	4
Space Optimization	3	5	3	2	4
Delivery					
Drive Time	3	5	3	2	4
Customer Response	4	5	3	2	4
Sustainability	1	5	3	2	4
Morale					
Employee Pride	2	5	3	2	4
Retention	3	5	3	2	4
Wellness	5	5	3	2	4
Total	***39***	***80***	***48***	***32***	***64***

Lansing Service Center – Health Assessment Scoring Criteria

Safety (20 Points)	Comments	Pro	Con	Score 0 Does not satisfy criteria	Score 1 Does not satisfy most listed criteria	Score 2 Does not satisfy some listed criteria	Score 3 Satisfies minimal criteria	Score 4 Satisfies most listed criteria	Score 5 Satisfies all listed criteria
Compatible Use	Use of property is compatible with adjoining properties and surrounding area.	Industrial zoning and use	Residential use, retail use, criminal activity	Residential zoning, high crime area	Residential zoning	Mixed Commercial / Residential zoning	Commercial zoning for Service Centers, mixed Commercial / Industrial zoning for non-Service Centers	Industrial zoning for Service Centers, Commercial zoning for non-Service Centers	Industrial zoning for Service Centers, Central Business District zoning for non-Service Centers
Site Conditions	Physical condition of site	Full utilities, good paving, fencing, drainage	No utilities, poor paving, fencing, drainage	Site not adequate to support operational requirements, located in flood plain,	Site not adequate to support operational requirements	significant upgrades, such as storm water detention, fire water, potable water, sanitary sewer, paving, etc.	Site in serviceable condition with full utilities or good condition with partial utilities	Site in good condition, full utilities	Site in good condition with undeveloped space to accommodate future growth
Traffic/Site Flow	Road network, site access drive, vehicle turning space	Close to highway, access from two roads, space for truck trailer to pull off road, one way gates	Secondary road, no truck pull off space at gate, two way gates, insufficient turning space	Unimproved road frontage / site traffic flows crossing	Non Class A road frontage / Site heavy traffic and light traffic flows crossing	with impediments, railroad tracks, intersections, etc. / Site traffic flows crossing	Class A road frontage / Site traffic flows mixed	Class A road frontage with secondary frontage / Site traffic flows separated	with secondary frontage and nearby highway access / Site traffic flows separated
Environmental Hazard	Environmental hazards	LEED certification, no environmental hazards	Former MGP site, soil contamination, abandoned underground fuel tanks, abandoned transformer storage, asbestos fire proofing, asbestos duct wrap, asbestos pipe wrap, lead paint,	Immediate hazards to employees present during normal use of site	Hazardous materials present, with reoccurring or continuous exposure hazard, former MGP site, current 201 site	Hazardous materials present in manageable form, former MGP site, current 201 site	Hazardous materials present in manageable form	No environmental impacts, hazardous materials abated or encapsulated	LEED Certified facility with no environmental impacts

Quality (15 Points)	***Employee/Customer Engagement***	Pro	Con	Score 0 Does not satisfy criteria	Score 1 Does not satisfy most listed criteria	Score 2 Does not satisfy some listed criteria	Score 3 Satisfies minimal criteria	Score 4 Satisfies most listed criteria	Score 5 Satisfies all listed criteria
Branding	Projects positive image to community and potential employees	Well cared for facility, curb appeal, neat landscaping, coordinated site signage	Dilapidated facility, dated appearance, overgrown landscaping, mismatched site signage	damaged or deteriorated structures, landscape materials overgrown or absent, failed pavement, etc.	Structures deteriorated, landscape materials overgrown or absent, failing paving, no signage	Structures poorly maintained, landscape materials overgrown or absent, poor signage	for, landscape materials in serviceable condition, uncoordinated signage	Structures well cared for, landscape materials in good condition, coordinated signage	New facility, landscape materials in good condition, coordinated signage
Workplace Efficiency	Space is fully utilized	Space provided for all operational functions, space size meets needs, proper inventory stored	Space not provided for all operational functions, space oversized, space not fully utilized, unused materials (junk) stored	Space inadequate for intended occupancy	Hard wall offices, empty or vacant spaces	Hard wall offices, fully utilized	Mix of hard wall offices and systems furniture, fully utilized	Modular systems furniture, fully utilized	Flexible, open and collaborative workspaces, modular systems furniture, fully utilized
Years since last major systems upgrade	Condition of facility is code compliant, building systems are within normal operational life cycle and supports working environment	New construction or recently completed full renovation	Building old and unrenovated or only minimal or partial renovation work completed	initial construction or last major systems upgrade	initial construction or last major systems uprade	initial construction or last major systems uprade	initial construction or last major systems uprade	initial construction or last major systems uprade	initial construction or last major systems uprade

Lansing Service Center – Health Assessment Scoring Criteria

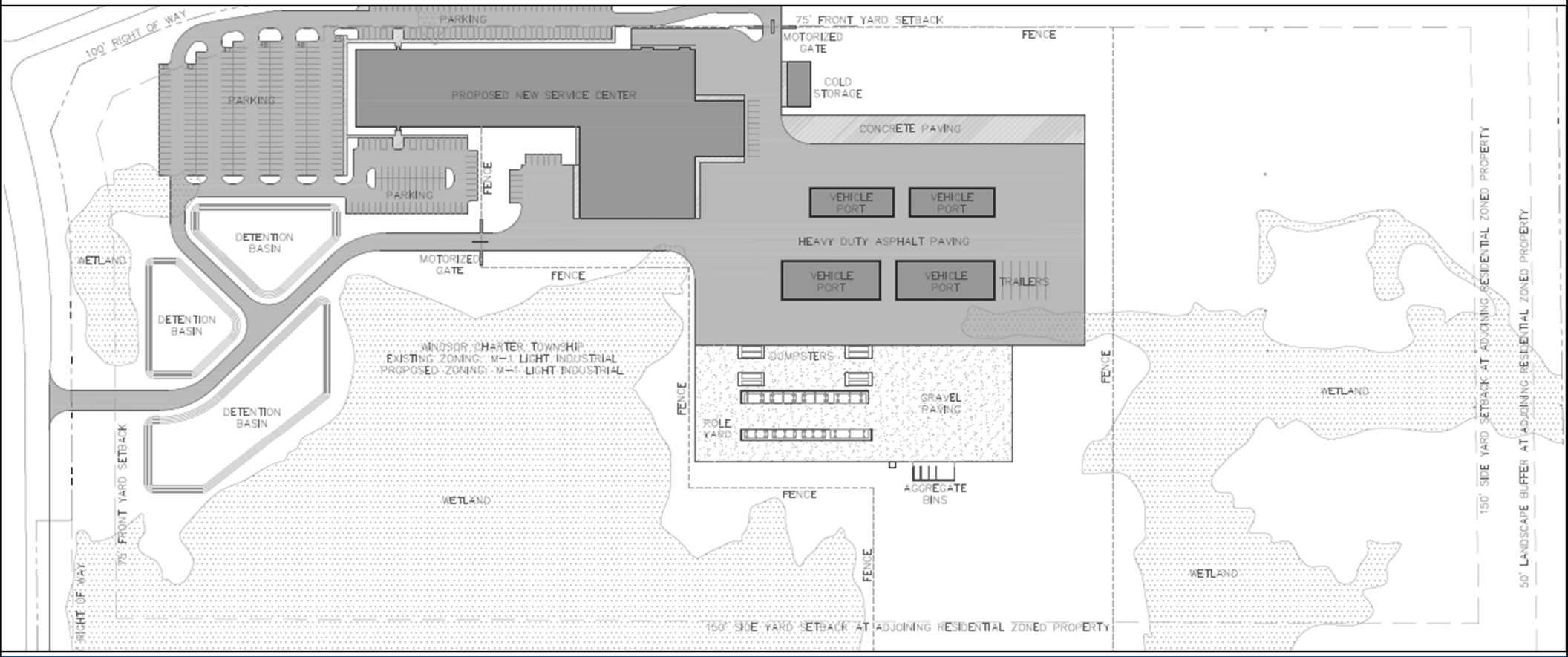
Cost (15 Points)		Pro	Con	Score 0 Does not satisfy criteria	Score 1 Does not satisfy most listed criteria	Score 2 Does not satisfy some listed criteria	Score 3 Satisfies minimal criteria	Score 4 Satisfies most listed criteria	Score 5 Satisfies all listed criteria
Facility Operating Costs	O&M costs to operate and maintain facility	Cost per square foot for facility less than statewide average cost per square foot ($5.31)	Cost per square foot for facility more than statewide average cost per square foot ($5.31)	costs greater than $10.00 per square foot	costs between $8.00 to $10.00 per square foot	costs between $7.25 to $7.99 per square foot	costs between $7.00 to $7.24 per square foot	costs between $5.75 to $6.99 per square foot	Combined operating costs less than $5.75 per square foot
Non Facility Cost Impact	O&M cost impacts to operations	Building correct size, centrally located within customer base area, able to accommodate necessary materials, able to maneuver onsite	Building too large, eccentrically located within customer base area, unable to accommodate necessary materials, difficult to maneuver onsite	Building eccentrically located within service territory, inadequate space	Building eccentrically located within service territory, underutilized space	Building eccentrically located within service territory	Building centrally located within service territory	Building accommodates operational needs, centrally located within service territory	Building accommodates operational need, space utilized efficiently, centrally located within service territory
Space Optimization	Reduce excess square footage	Space fully utilized, space utilized efficiently	Space under utilized, space utilized inefficiently, indoor parking area	Building vacant	Building partially occupied or partially vacant	Building occupied inefficiently, includes IPA	Building fully occupied, includes IPA	Building fully occupied, no IPA	occupied, no IPA, includes cold storage

Delivery (15 Points)	Customer Service	Pro	Con	Score 0 Does not satisfy criteria	Score 1 Does not satisfy most listed criteria	Score 2 Does not satisfy some listed criteria	Score 3 Satisfies minimal criteria	Score 4 Satisfies most listed criteria	Score 5 Satisfies all listed criteria
Drive Time	Service territory area of proper size	Centrally located within service area(s), drive time balanced across territory and within targeted limits	Eccentrically located within service area(s), drive time unbalanced across territory and/or exceeds targeted limits	service territory and size of service territory allows drive time >1:20 Gas and >1:30 Electric	service territory and size of service territory allows drive time < 1:20 Gas and <1:30 Electric	service territory and size of service territory allows drive time < 1:10 Gas and <1:15 Electric	service territory and size of service territory allows drive time < 1:00 Gas and <1:00 Electric	service territory and size of service territory allows drive time < 0:50 Gas and <0:45 Electric	service territory and size of service territory allows drive time < 0:40 Gas and <0:30 Electric
Customer Response	Meets needs of customers	Customer response time metrics fall below targets	Customer response times exceed targets	response times meet target <90% of time, Electric CAIDI >215 minutes	response times meet target >90% of time, Electric CAIDI <215 minutes	response times meet target >95% of time, Electric CAIDI <195 minutes	response times meet target >97% of time, Electric CAIDI <180 minutes	response times meet target >98% of time, Electric CAIDI <165 minutes	response times meet target >99% of time, Electric CAIDI <150 minutes
Sustainability	Facility incproprates reduced energy utiliztion and minimizes environmental impact	Facility constructed in accordance with recent Energy Codes, includes onsite stormwater treatment, Green building certification	Facility constructed with no insulation, utilizes enegy intensive equipment, no onsite storm water treatment	Minimal roofing insulation	Upgraded roofing insulation	Upgraded roofing insulation and windows	Upgraded roofing insulation, windows and building envelope	insulation, windows, and building envelope with onsite storm water treatment	LEED Certified (or higher LEED rated) facility

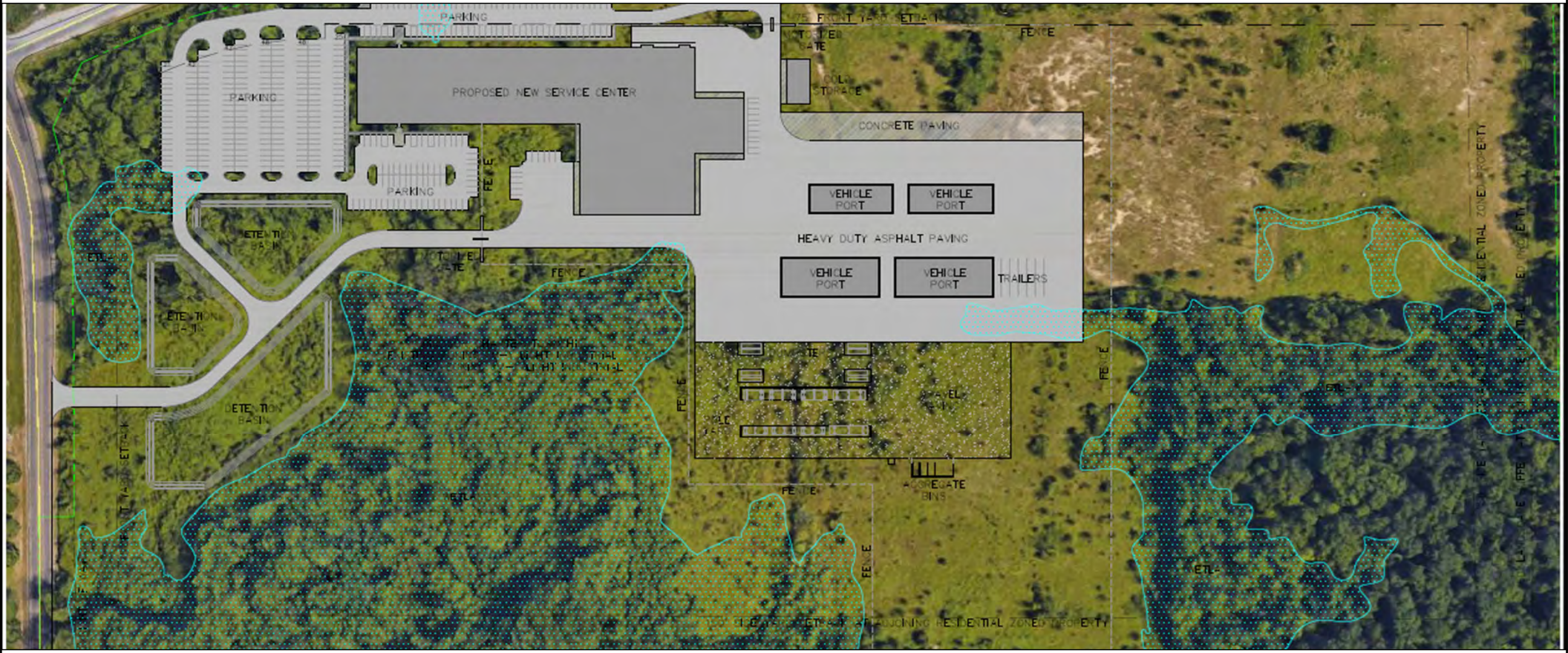
Lansing Service Center – Health Assessment Scoring Criteria

Morale (15 Points)	Employee Wellness	Pro	Con	Score 0 Does not satisfy criteria	Score 1 Does not satisfy most listed criteria	Score 2 Does not satisfy some listed criteria	Score 3 Satisfies minimal criteria	Score 4 Satisfies most listed criteria	Score 5 Satisfies all listed criteria
Employee Pride	Employees are engaged	Employee engagement scores > company average	Employee engagement scores < company average	Deteriorated facility	Deteriorated or dated facility with limited amenities	Dated facility with minimal amenities	Dated facility with full amenities and onsite parking	Modern facility with full amenities	Modern facility with full amenities, onsite parking
Retention	Facilities located in a desirable area, space is attractive to Millennials and supports millennial work styles	Downtown location, local amenities available, space supports varied work styles	Remote location, few local amenities, fixed work space	Remote location, no local amenities	some amenities available within 20 minutes driving distance	Remote location, amenities available within 20 minutes driving distance	Remote location, amenities available within 15 minutes driving distance	Diverse location, amenities available within 10 minutes driving distance	Diverse location, amenities available within walking distance
Wellness	Wellness facilities	Wellness room, space for trainer, drinking fountain, shower facilities nearby, space for wellness classes, well maintained exercise equipment, mirrors, lockers	Wellness room combined with non-compatible uses (i.e.: conference room), aged exercise equipment, poorly maintained exercise equipment, remote shower facilities	No shower, drinking fountain, Wellness or Nursing Mother Room, no additional space available	Shower and drinking fountain, no Wellness or Nursing Mother Room, no additional space available	Wellness Room or Nursing Mother Room, shower and drinking fountain, no additional space available	Nursing Mother Room, shower and drinking fountain, with space available to add Wellness or NMR	Wellness Room and Nursing Mother room, shower and drinking fountain, with space available for Trainer	Wellness room, Trainer room, Nursing Mother Room, shower and drinking fountain nearby

Lansing Service Center – Conceptual Site Plan



Lansing Service Center – Conceptual Site Plan



Lansing Service Center – Alternatives Matrix

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Alternative Scenario Evaluation Matrix - Lansing Service Center Major Systems Upgrade

	Weight	Build on New Site Score	Renov. Existing Score	Do Nothing Score	Score	COMMENTS
Section 1 - Affordable (50%)						
Operating cost per square foot below statewide average	40%	4.0	3.0	2.0		Current facility operating cost for Lansing is $6.97 per square foot, versus statewide average operating cost of $5.31 per square foot.
Construction cost	10%	1.0	4.0	5.0		
Section 1 - Scenario Average Weighted Score Total (Best = 5):		1.7	1.6	1.3	0.0	
Section 2 - Safe (25%)						
Hazardous Material Abatement (asbestos, lead paint)	5.0%	4.0	3.0	1.0		
Site located outside high crime area	5.0%	4.0	1.0	1.0		
Pedestrian traffic route separated from truck traffic route	2.5%	4.0	1.0	1.0		
Site located outside defined FEMA 100 year flood elevation	10.0%	4.0	1.0	1.0		Current location is 3' below FEMA 100 year flood elev.
Site soils not impacted by previous use (Manufactured Gas Plant)	2.5%	4.0	1.0	1.0		Current location is former Manufactured Gas Plant site
Section 2 - Scenario Average Score Total (Best = 5):		1.0	0.4	0.3	0.0	
Section 3 - Reliable (17.5%)						
Overall score above 72 as measured by Facilites Scorecard	2.5%	4.0	3.0	1.0		Current overall facility score for Lansing is 39
Building size matches operational needs	5.0%	4.0	2.0	2.0		Building fully occupied currently (pre COVID-19)
Improve CAIDI Score > 3%	4.0%	4.0	1.0	1.0		
On Premise start times improved by 5 to 10 minutes	5.0%	4.0	2.0	1.0		Improved material flow and vehicle loading
Drive through vehicle repair bays	2.5%	4.0	2.0	2.0		Improved vehicle repair time, reduced vehicle damage
Section 3 - Scenario Weighted Score Total (Best = 5):		0.6	0.3	0.2	0.0	
Section 4 - Clean (7.5%)						
LEED V4.1 Certification	2.5%	4.0	3.0	1.0		
Stormwater detention and treatment	2.5%	4.0	1.0	1.0		Stormwater currently direct discharge to Grand River
Onsite solar power generation	1.0%	4.0	1.0	1.0		
Section 3 - Scenario Weighted Score Total (Best = 5):		0.2	0.1	0.1	0.0	
TOTAL WEIGHTED VALUE SCORE: (BEST = 5)	100%	3.5	2.4	1.8	0.0	

Lansing Service Center – Alternatives Matrix Criteria

Safe
Hazardous Material Abatement (asbestos, lead paint)
Site located outside high crime area
Pedestrian traffic route separated from truck traffic route
Site located outside defined FEMA 100 year flood elevation
Site soils not impacted by previous use
Affordable
Operating cost per square foot below statewide average
Construction cost
Reliable
Overall score above 72 as measured by Facilites Scorecard
Building size matches operational needs
Improve CAIDI Score > 3%
On Premise start times improved by 5 to 10 minutes
Drive through vehicle repair bays
Clean
LEED V4.1 Certification
Stormwater detention and treatment
Onsite solar power generation
Non-Monetary Considerations
Other Risks & Barriers
Regulatory
Technical/Engineering
Aesthetics
People
Process
Technology
Customer Requirements
Real Estate
Municipality Requirements

New Lansing Service Center – Potential Locations

Property Details	Site A	Site B	Site C
Site Address	6964 N. Canal Rd. Dimondale, MI 48821	401 N. Verlinden Ave. Lansing, MI 48915	S. Waverly Rd & W. Miller Rd. Lansing, MI 48911
County	Eaton	Ingham	Ingham
Municipality	Windsor Township	City of Lansing	City of Lansing
Acreage	77.67	57	50

New Lansing Service Center – Potential Locations

Site Characteristics	Site A	Site B	Site C
Site Address	6964 N. Canal Rd. Dimondale, MI 48821	401 N. Verlinden Ave. Lansing, MI 48915	S. Waverly Rd. & W. Miller Rd. Lansing, MI 48911
Internal CE Security Assessment	Low Risk	High Risk	Medium Risk
Distance to Highways	Less than 1 mile to I-96	¼ Mile from M43; 2 miles to I-496	1.5 miles to I-96
Zoning	✓ M1 Industrial	✓ Industrial	✗ Residential
3 Phase	✓ Yes	✓ Yes	✗ No
Natural Gas	✓ Yes	✓ Yes	✓ Yes
Water	✗ No; water main extension pending	✓ Yes	✓ Yes
Sewer	✓ Yes	✓ Yes	✓ Yes
Fiber	✗ No	✗ No	✗ No
Wetlands Identified	Yes; 60 usable acres	No; 57 usable acres	Yes; 40 usable acres
Known Environmental Contamination	✓ No	✗ Yes	✓ No

New Lansing Service Center – Potential Locations – Gas / Electric Customer Response Time Comparisons

Electric work order x minutes
Number of Work Orders and Time

Verlinden Site Option	Electric		
10 minutes	17,984	179,840	
20 minutes	63,792	1,275,840	
30 minutes	15,949	478,470	
40 minutes	972	38,880	
50 minutes			
Total	98,697	1,973,030	Best Electric but worst Gas
Waverly Site Option	**Electric**		
10 minutes	7,505	75,050	
20 minutes	52,207	1,044,140	
30 minutes	31,058	931,740	
40 minutes	7,841	313,640	
50 minutes	86	4,300	
Total	98,697	2,368,870	Worst Electric but best Gas
Canal Site Option	**Electric**		
10 minutes	8,464	84,640	
20 minutes	56,349	1,126,980	
30 minutes	28,126	843,780	
40 minutes	5,742	229,680	
50 minutes	16	800	
Total	98,697	2,285,880	Mid for both Electric and Gas

Gas work order x minutes
Number of Work Orders and Time

Verlinden Site Option	Gas		
10 minutes	41,742	417,420	
20 minutes	62,020	1,240,400	
30 minutes	22,865	685,950	
40 minutes	1,939	77,560	
50 minutes			
Total	128,566	2,421,330	Worst Gas but best Electric
Waverly Site Option	**Gas**		
10 minutes	26,982	269,820	
20 minutes	77,463	1,549,260	
30 minutes	19,380	581,400	
40 minutes	4,741	189,640	
50 minutes			
Total	128,566	2,590,120	Best Gas but worst Electric
Canal Site Option	**Gas**		
10 minutes	21,801	218,010	
20 minutes	85,674	1,713,480	
30 minutes	17,453	523,590	
40 minutes	3,638	145,520	
50 minutes			
Total	128,566	2,600,600	Mid for both Gas and Electric

New Lansing Service Center – Potential Locations within City of Lansing

401 N. Verlinden Ave. Lansing, MI 48915

Positives:

- Low purchase price
- Potential tax incentives available
- Utilities available

Limitations:

- Environmental concerns
- Unknown abandon utilities and tunnels under surface
- LBWL substation on site along with HVD line but unable to serve ourselves with electric
- Fiber would need to be ran to site
- Medium-risk security assessment needed

S. Waverly Rd. & W. Miller Rd. Lansing, MI 48911

Positives:

- Potential assistance with site preparation
- Potential assistance with demo of asbestos

Limitations:

- Wetlands and possibly not enough usable property
- Potentially unable to have a drive on S. Waverly due to hill and high speeds coming northbound on Waverly - both drives would have to be off of W. Miller Rd
- Length of time to potentially acquire site
- Demo of houses with asbestos
- Probably unable to serve ourselves with electric
- Fiber is currently some distance away – would need to be ran to site
- Currently zoned residential and would need to be rezoned to light industrial
- Medium-risk security assessment needed
- Unknown purchase price

New Lansing Service Center – Potential Locations within City of Lansing

South of Grand River, Ave.

Positives:

- Utilities available (Water & Sewer)

Limitations:

- Fuel station across the street
- Possible wetlands
- Further north
- Lots of traffic on road

*No other data was collected regarding this location

New Lansing Service Center Potential Location

401 N. Verlinden Ave. Lansing - Site Characteristics

57 acres

Response Time:	• 87% of reported outages are reached in 30 minutes timeframe • 100% of reported outages are reached within 45 minutes
Ease of Travel:	CE Operations: • Difficulty with turning and maneuvering trucks and trailers through city streets and blocks • Travel impediment due to foot and bike traffic, CATA bus stops, railroad crossing and street parking in residential areas • Difficult to access highways through residential areas: 2 miles to I-496
Security:	• **CE Security Risk Assessment Rating – HIGH** • Crimes occurring within 1-mile radius of parcel within 12/26/19-01/23/20: Assault – 15; Weapon Offenses – 6; Larceny – 6; Vandalism – 4; Burglary – 4; Motor Vehicle Theft – 3; Robbery – 1 • 74 sex offenders in registry within 1-mile radius
Wetlands identified:	• No identified wetlands on the parcel
Environmental concerns:	• Significant concern regarding existing contamination and abandoned underground utility facilities on the property. Further due diligence would be required if site is selected to evaluate impact to service center construction and operations.

New Lansing Service Center Potential Location

S. Waverly & W. Miller Rd, Lansing - Site Characteristics

33 usable acres

Response Time:	• 88% of reported outages are reached in the 30 minutes • 100% of reported outages are reached within 50 minutes
Ease of Travel:	CE Operations: • Difficulty with turning and maneuvering trucks and trailers through city streets and blocks • Travel impediment due to foot and bike traffic, CATA bus stops and street parking in residential areas • Difficult to access highways through residential areas: 1.5 miles to I-96
Security:	• **CE Security Risk Assessment Rating – MEDIUM** • Crimes occurring within 1-mile radius of parcel within 12/26/19-01/23/20: Assault – 6; Vandalism – 1; Larceny – 1; Motor Vehicle Theft – 1 • 16 sex offenders in registry within 1-mile radius
Wetlands identified:	• The State's National Wetland Inventory map indicates 17 acres of regulated wetlands of the 50-acre parcel • CE would not be able to use 17 acres without costly wetland mitigation. Would limit or possibly eliminate future expansion on site.
Environmental concerns:	• LEAP reports asbestos abatement needed prior to demolition of existing houses on parcel • CE Environmental reports existing contaminated site on the adjacent property to the east

New Lansing Service Center Potential Location

6964 N. Canal Rd, Dimondale - Site Characteristics

60 usable acres

Response Time:	• 91% of reported outages are reached in the 30 minute timeframe • 100% of reported outages are reached within 45 minutes
Ease of Travel:	CE Operations: • Located in the industrial area of Windsor Commerce Parkway. Roads and intersections provide for wider turns for maneuvering trucks and trailers • Access to highways through commercial areas: 0.75 miles to I-96; 1.35 miles to I-69 • Limited foot and bike traffic and no parking on roads
Security:	• **CE Security Risk Assessment Rating – LOW** • Crimes occurring within 1-mile radius of parcel within 12/26/19-01/23/20: Assault – 0 • 4 sex offenders in registry within 1-mile radius • High police presence due to Michigan State Police within 0.6 miles from parcel
Wetlands identified:	• The State's National Wetland Inventory map indicates 7.29 acres of regulated wetlands on the 77.67-acre parcel • Property size allows for CE use to be designed to avoid wetland areas and allow for future expansion.
Environmental concerns:	• No known environmental concerns

New Lansing Service Center – Gas Benefits

New Lansing Service Center - Gas Customer Benefits

Gas work order x minutes

Number of Work Orders x Travel Time

Canal - New Site	Gas	WO x Min.
10 minutes	21,801	218,010
20 minutes	85,674	1,713,480
30 minutes	17,453	523,590
40 minutes	3,638	145,520
50 minutes		
Total	128,566	2,600,600

Willow - Current Site	Gas	Adjust.
10 minutes	25,726	257,260
20 minutes	62,260	1,245,200
30 minutes	30,560	916,800
40 minutes	9,489	379,560
50 minutes	531	26,550
Total	128,566	2,825,370

Difference:	224,770	Minutes reduction in travel time to customer sites compared to Willow Road
	8.0%	Reduction in travel time to customer sites compared to Willow Road
Cost Savings:	$309,059	Productivity recaptured annually based on $2.75 per minute per employee

Gas Response Time Improvement: 224,770

New Lansing Service Center – Electric Benefits

New Lansing Service Center - Electric Customer Benefits

Electric work order x minutes
Number of Work Orders x Travel Time

Canal - New Site	Electric	WO x Min.
10 minutes	8,464	84,640
20 minutes	56,349	1,126,980
30 minutes	28,126	843,780
40 minutes	5,742	229,680
50 minutes	16	800
Total	98,697	2,285,880

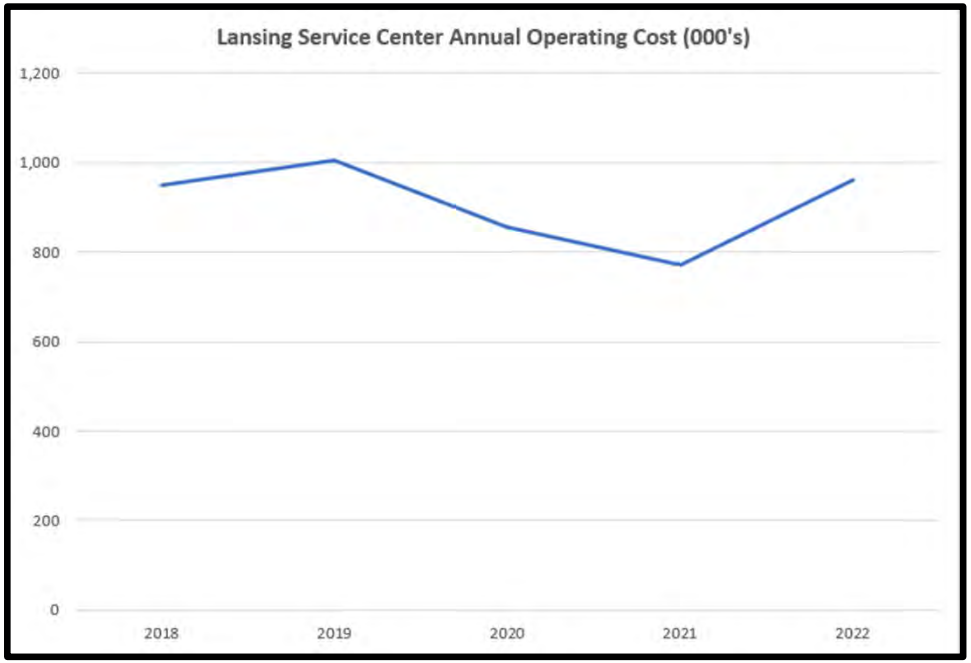
Willow - Current Site	Electric	WO x Min.
10 minutes	2,142	21,420
20 minutes	58,784	1,175,680
30 minutes	31,496	944,880
40 minutes	6,239	249,560
50 minutes	36	1,800
Total	98,697	2,393,340

2018 Electric Outages	**50,135**	**Customers**
2019 Electric Outages	**56,670**	**Customers**
Total Electric Outages	**106,805**	**Customers**
Avg Annual Outages	**53,403**	**Customers**

Difference:	**107,460**	**Minutes reduction in travel time to customer sites compared to Willow Road**
	4.5%	**Reduction in travel time to customer sites compared to Willow Road**
Cost Savings:	**$185,906**	**Productivity recaptured annually based on $3.46 per minute per employee**

Electric CAIDI Improvement:	**53,730**	**Annual reduction in travel minutes**
	4,478	**Monthly reduction in travel minutes**

Lansing Service Center – Operating Costs



Service Center	Existing Building Area	Existing Building 2022 Annual Operating Cost	Existing Building Cost Per Square Foot	New Building Estimated Cost Per Square Foot	New Building Area - Current Conceptual	New Building Estimated Annual Cost
Lansing	150,594 SF	$960,864	$6.38	$5.75	125,000 SF	$718,750

Hastings Service Center

Plan Summary

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Hastings Service Center – Health Assessment

Facility Assessment - Hastings Service Center					
Location	Hastings	Maximum Possible Points (80)	Servicable > 48 Points	Poor < 48 Points	Good > 64 Points
Zone	SWOM				
Safety					
Compatible Use	4	5	3	2	4
Site Conditions	4	5	3	2	4
Traffic/Site Flow	2	5	3	2	4
Environmental Hazard	3	5	3	2	4
Quality					
Branding	3	5	3	2	4
Workplace Efficiency	3	5	3	2	4
Years since last major systems upgrade	1	5	3	2	4
Cost					
Facility Operating Costs	0	5	3	2	4
Non Facility Cost Impact	4	5	3	2	4
Space Optimization	2	5	3	2	4
Delivery					
Drive Time	4	5	3	2	4
Customer Response	3	5	3	2	4
Sustainability	3	5	3	2	4
Morale					
Employee Pride	1	5	3	2	4
Retention	3	5	3	2	4
Wellness	1	5	3	2	4
Total	***41***	***80***	***48***	***32***	***64***

Hastings Service Center – Health Assessment Scoring Criteria

Safety (20 Points)	Comments	Pro	Con	Score 0 Does not satisfy criteria	Score 1 Does not satisfy most listed criteria	Score 2 Does not satisfy some listed criteria	Score 3 Satisfies minimal criteria	Score 4 Satisfies most listed criteria	Score 5 Satisfies all listed criteria
Compatible Use	Use of property is compatible with adjoining properties and surrounding area.	Industrial zoning and use	Residential use, retail use, criminal activity	Residential zoning, high crime area	Residential zoning	Mixed Commercial / Residential zoning	Commercial zoning for Service Centers, mixed Commercial / Industrial zoning for non-Service Centers	Industrial zoning for Service Centers, Commercial zoning for non-Service Centers	Industrial zoning for Service Centers, Central Business District zoning for non-Service Centers
Site Conditions	Physical condition of site	Full utilities, good paving, fencing, drainage	No utilities, poor paving, fencing, drainage	Site not adequate to support operational requirements, located in flood plain,	Site not adequate to support operational requirements	significant upgrades, such as storm water detention, fire water, potable water, sanitary sewer, paving, etc.	Site in serviceable condition with full utilities or good condition with partial utilities	Site in good condition, full utilities	Site in good condition with undeveloped space to accommodate future growth
Traffic/Site Flow	Road network, site access drive, vehicle turning space	Close to highway, access from two roads, space for truck trailer to pull off road, one way gates	Secondary road, no truck pull off space at gate, two way gates, insufficient turning space	Unimproved road frontage / site traffic flows crossing	Non Class A road frontage / Site heavy traffic and light traffic flows crossing	with impediments, railroad tracks, intersections, etc. / Site traffic flows crossing	Class A road frontage / Site traffic flows mixed	Class A road frontage with secondary frontage / Site traffic flows separated	with secondary frontage and nearby highway access / Site traffic flows separated
Environmental Hazard	Environmental hazards	LEED certification, no environmental hazards	Former MGP site, soil contamination, abandoned underground fuel tanks, abandoned transformer storage, asbestos fire proofing, asbestos duct wrap, asbestos pipe wrap, lead paint,	Immediate hazards to employees present during normal use of site	Hazardous materials present, with reoccurring or continuous exposure hazard, former MGP site, current 201 site	Hazardous materials present in manageable form, former MGP site, current 201 site	Hazardous materials present in manageable form	No environmental impacts, hazardous materials abated or encapsulated	LEED Certified facility with no environmental impacts

Quality (15 Points)	*Employee/Customer Engagement*	Pro	Con	Score 0 Does not satisfy criteria	Score 1 Does not satisfy most listed criteria	Score 2 Does not satisfy some listed criteria	Score 3 Satisfies minimal criteria	Score 4 Satisfies most listed criteria	Score 5 Satisfies all listed criteria
Branding	Projects positive image to community and potential employees	Well cared for facility, curb appeal, neat landscaping, coordinated site signage	Dilapidated facility, dated appearance, overgrown landscaping, mismatched site signage	damaged or deteriorated structures, landscape materials overgrown or absent, failed pavement, etc.	Structures deteriorated, landscape materials overgrown or absent, failing paving, no signage	Structures poorly maintained, landscape materials overgrown or absent, poor signage	for, landscape materials in serviceable condition, uncoordinated signage	Structures well cared for, landscape materials in good condition, coordinated signage	New facility, landscape materials in good condition, coordinated signage
Workplace Efficiency	Space is fully utilized	Space provided for all operational functions, space size meets needs, proper inventory stored	Space not provided for all operational functions, space oversized, space not fully utilized, unused materials (junk) stored	Space inadequate for intended occupancy	Hard wall offices, empty or vacant spaces	Hard wall offices, fully utilized	Mix of hard wall offices and systems furniture, fully utilized	Modular systems furniture, fully utilized	Flexible, open and collaborative workspaces, modular systems furniture, fully utilized
Years since last major systems upgrade	Condition of facility is code compliant, building systems are within normal operational life cycle and supports working environment	New construction or recently completed full renovation	Building old and unrenovated or only minimal or partial renovation work completed	initial construction or last major systems upgrade	initial construction or last major systems uprade	initial construction or last major systems uprade	initial construction or last major systems uprade	initial construction or last major systems uprade	initial construction or last major systems uprade

Hastings Service Center – Health Assessment Scoring Criteria

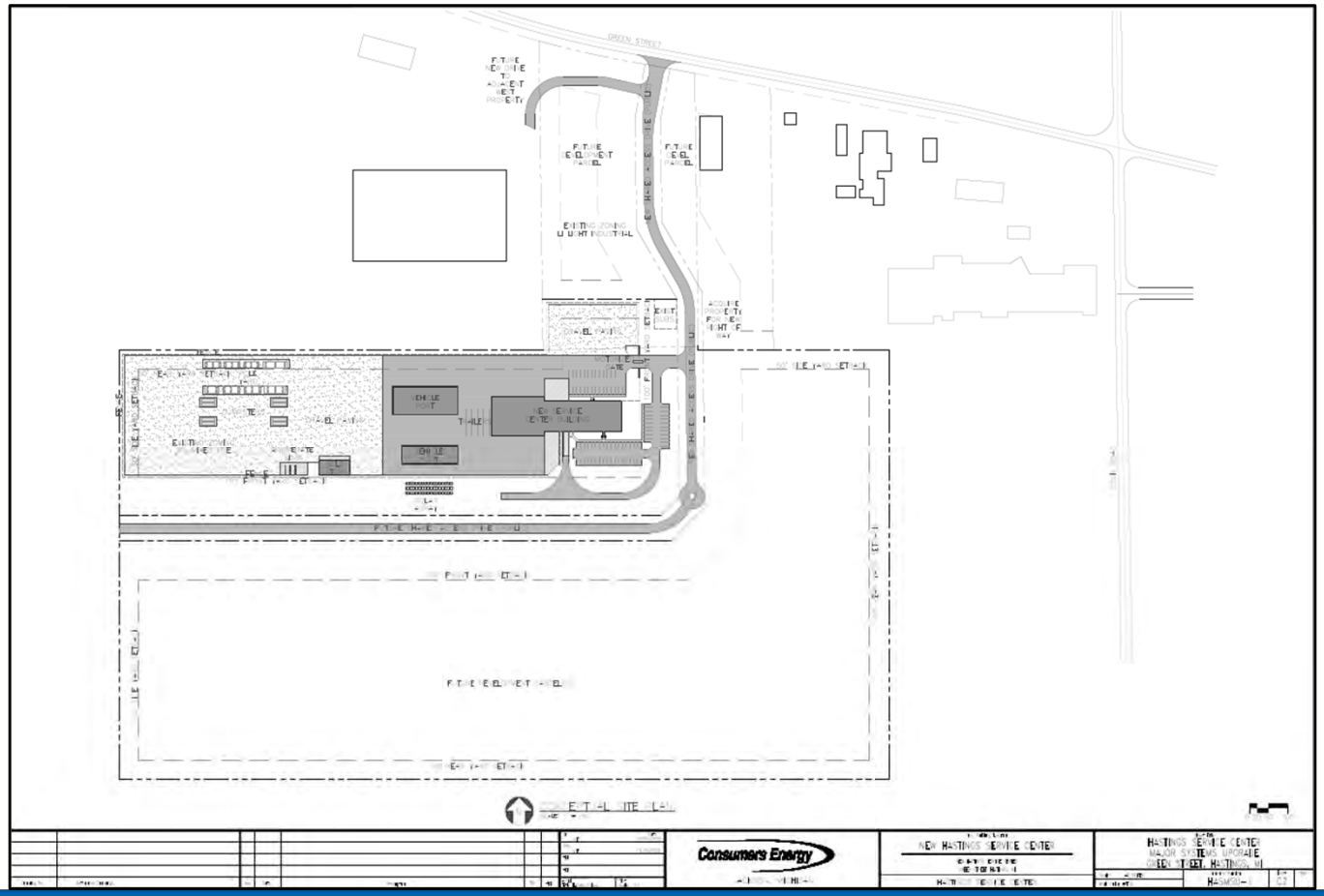
Cost (15 Points)		Pro	Con	Score 0 Does not satisfy criteria	Score 1 Does not satisfy most listed criteria	Score 2 Does not satisfy some listed criteria	Score 3 Satisfies minimal criteria	Score 4 Satisfies most listed criteria	Score 5 Satisfies all listed criteria
Facility Operating Costs	O&M costs to operate and maintain facility	Cost per square foot for facility less than statewide average cost per square foot ($5.31)	Cost per square foot for facility more than statewide average cost per square foot ($5.31)	costs greater than $10.00 per square foot	costs between $8.00 to $10.00 per square foot	costs between $7.25 to $7.99 per square foot	costs between $7.00 to $7.24 per square foot	costs between $5.75 to $6.99 per square foot	Combined operating costs less than $5.75 per square foot
Non Facility Cost Impact	O&M cost impacts to operations	Building correct size, centrally located within customer base area, able to accommodate necessary materials, able to maneuver onsite	Building too large, eccentrically located within customer base area, unable to accommodate necessary materials, difficult to maneuver onsite	Building eccentrically located within service territory, inadequate space	Building eccentrically located within service territory, underutilized space	Building eccentrically located within service territory	Building centrally located within service territory	Building accommodates operational needs, centrally located within service territory	Building accommodates operational need, space utilized efficiently, centrally located within service territory
Space Optimization	Reduce excess square footage	Space fully utilized, space utilized efficiently	Space under utilized, space utilized inefficiently, indoor parking area	Building vacant	Building partially occupied or partially vacant	Building occupied inefficiently, includes IPA	Building fully occupied, includes IPA	Building fully occupied, no IPA	occupied, no IPA, includes cold storage

Delivery (15 Points)	Customer Service	Pro	Con	Score 0 Does not satisfy criteria	Score 1 Does not satisfy most listed criteria	Score 2 Does not satisfy some listed criteria	Score 3 Satisfies minimal criteria	Score 4 Satisfies most listed criteria	Score 5 Satisfies all listed criteria
Drive Time	Service territory area of proper size	Centrally located within service area(s), drive time balanced across territory and within targeted limits	Eccentrically located within service area(s), drive time unbalanced across territory and/or exceeds targeted limits	service territory and size of service territory allows drive time >1:20 Gas and >1:30 Electric	service territory and size of service territory allows drive time < 1:20 Gas and <1:30 Electric	service territory and size of service territory allows drive time < 1:10 Gas and <1:15 Electric	service territory and size of service territory allows drive time < 1:00 Gas and <1:00 Electric	service territory and size of service territory allows drive time < 0:50 Gas and <0:45 Electric	service territory and size of service territory allows drive time < 0:40 Gas and <0:30 Electric
Customer Response	Meets needs of customers	Customer response time metrics fall below targets	Customer response times exceed targets	response times meet target <90% of time, Electric CAIDI >215 minutes	response times meet target >90% of time, Electric CAIDI <215 minutes	response times meet target >95% of time, Electric CAIDI <195 minutes	response times meet target >97% of time, Electric CAIDI <180 minutes	response times meet target >98% of time, Electric CAIDI <165 minutes	response times meet target >99% of time, Electric CAIDI <150 minutes
Sustainability	Facility incproprates reduced energy utiliztion and minimizes environmental impact	Facility constructed in accordance with recent Energy Codes, includes onsite stormwater treatment, Green building certification	Facility constructed with no insulation, utilizes enegy intensive equipment, no onsite storm water treatment	Minimal roofing insulation	Upgraded roofing insulation	Upgraded roofing insulation and windows	Upgraded roofing insulation, windows and building envelope	insulation, windows, and building envelope with onsite storm water treatment	LEED Certified (or higher LEED rated) facility

Hastings Service Center – Health Assessment Scoring Criteria

Morale (15 Points)	Employee Wellness	Pro	Con	Score 0 Does not satisfy criteria	Score 1 Does not satisfy most listed criteria	Score 2 Does not satisfy some listed criteria	Score 3 Satisfies minimal criteria	Score 4 Satisfies most listed criteria	Score 5 Satisfies all listed criteria
Employee Pride	Employees are engaged	Employee engagement scores > company average	Employee engagement scores < company average	Deteriorated facility	Deteriorated or dated facility with limited amenities	Dated facility with minimal amenities	Dated facility with full amenities and onsite parking	Modern facility with full amenities	Modern facility with full amenities, onsite parking
Retention	Facilities located in a desirable area, space is attractive to Millennials and supports millennial work styles	Downtown location, local amenities available, space supports varied work styles	Remote location, few local amenities, fixed work space	Remote location, no local amenities	some amenities available within 20 minutes driving distance	Remote location, amenities available within 20 minutes driving distance	Remote location, amenities available within 15 minutes driving distance	Diverse location, amenities available within 10 minutes driving distance	Diverse location, amenities available within walking distance
Wellness	Wellness facilities	Wellness room, space for trainer, drinking fountain, shower facilities nearby, space for wellness classes, well maintained exercise equipment, mirrors, lockers	Wellness room combined with non-compatible uses (i.e.: conference room), aged exercise equipment, poorly maintained exercise equipment, remote shower facilities	No shower, drinking fountain, Wellness or Nursing Mother Room, no additional space available	Shower and drinking fountain, no Wellness or Nursing Mother Room, no additional space available	Wellness Room or Nursing Mother Room, shower and drinking fountain, no additional space available	Nursing Mother Room, shower and drinking fountain, with space available to add Wellness or NMR	Wellness Room and Nursing Mother room, shower and drinking fountain, with space available for Trainer	Wellness room, Trainer room, Nursing Mother Room, shower and drinking fountain nearby

Hastings Service Center – Conceptual Site Plan



Hastings Service Center – Alternatives Matrix

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Alternative Scenario Evaluation Matrix - Hastings Service Center Major Systems Upgrade

	Weight	Build on New Site Score	Build on Ex. Site Score	Renov. Existing Score	Do Nothing Score	COMMENTS
Section 1 - Affordable (50%)						
Operating cost per square foot below statewide average	40%	4.0	4.0	2.0	1.0	Current facility operating cost for Hastings is $13.85 per square foot, versus statewide average operating cost of $5.31 per square foot.
Construction cost	10%	2.0	2.0	3.0	4.0	
Section 1 - Scenario Average Weighted Score Total (Best = 5):		1.8	1.8	1.1	0.8	
Section 2 - Safe (12.5%)						
Hazardous Material Abatement (asbestos, lead paint)	2.5%	4.00	4.0	3.0	2.0	
Reduced site congestion and improved vehicular traffic flow	10%	4.00	3.00	1.00	1.00	
Section 2 - Scenario Average Score Total (Best = 5):		0.5	0.4	0.2	0.2	
Section 3 - Reliable (25%)						
Overall score above 72 as measured by Facilites Scorecard	5%	4.0	4.0	3.0	1.0	Current overall facility score for Hastings is 41
On Premise start times improved by 5 to 10 minutes	10%	4.0	4.0	2.0	1.0	Improved material flow and vehicle loading
Drive through vehicle repair bays	5%	4.0	4.0	3.0	3.0	Improved vehicle repair time, reduced vehicle damage
Temporary relocation of operations	5%	4.0	1.0	2.0	4.0	
Section 3 - Scenario Weighted Score Total (Best = 5):		1.0	0.9	0.6	0.5	
Section 4 - Clean (12.5%)						
LEED V4.1 Certification	2.5%	4.0	4.0	2.0	1.0	
Stormwater detention and treatment	2.5%	4.0	4.0	3.0	1.0	Stormwater currently discharged to ditch
Onsite solar power generation	2.5%	4.0	4.0	1.0	1.0	
Municipal Utilities Available	5%	1.0	4.0	4.0	4.0	Available parcels are located outside Hastings urban area, private well and septic will be required
Section 3 - Scenario Weighted Score Total (Best = 5):		0.4	0.5	0.4	0.3	
TOTAL WEIGHTED VALUE SCORE: (BEST = 5)	100%	3.7	3.6	2.2	1.7	

Hastings Service Center – Alternatives Matrix Criteria

Safe
Hazardous Material Abatement (asbestos, lead paint)
Reduced site congestion and improved vehicular traffic flow
Affordable
Operating cost per square foot below statewide average
Construction cost
Reliable
Overall score above 72 as measured by Facilites Scorecard
On Premise start times improved by 5 to 10 minutes
Temporary relocation of operations
Drive through vehicle repair bays
Clean
LEED V4.1 Certification
Stormwater detention and treatment
Onsite solar power generation
Municipal Utilities Available
Non-Monetary Considerations
Other Risks & Barriers
Regulatory
Technical/Engineering
Aesthetics
People
Process
Technology
Customer Requirements
Real Estate
Municipality Requirements

Gas Call Drive Time Summary

- **For the current Hastings Service Center and the proposed site at Vacant Land M-179**
  - Within 20 minutes we are able to reach 50% of gas customers and in 40 minutes we are able to reach 100% of gas customers.
- **For the proposed site at Vacant Land Enterprise Drive**
  - Within 25 minutes we are able to reach 50% of gas customers and in 45 minutes we are able to reach 100% of gas customers.

Electric Outage Drive Time Summary

- **For the current Hastings Service Center and the proposed site at Vacant Land M-179**
  - Within 15 minutes we are able to reach 50% of electric customers and in 30 minutes we are able to reach 100% of electric customers.
- **For the proposed site at Vacant Land Enterprise Drive**
  - Within 20 minutes we are able to reach 50% of electric customers and in 30 minutes we are able to reach 100% of electric customers.

Summary Site Comparison

Vacant Land: Enterprise Dr

- Public water and septic
- Would add 5 minutes to both electric and gas drive times

Vacant Land: M-179

- Private water and septic
- Drive times would remain similar to what is being experienced at the current location

Hastings Service Center Site Options Comparison

Vacant Land: Enterprise Dr, Hastings, MI 49058

Characteristics:

- Property – 18 acres
- Municipal Water – Available at the street
- Municipal Sewer – Available at the street
- Fiber – Available
- Wetlands – No mitigation required
- 3-Phase – Available at the street
- Natural Gas – Available at the street

Vacant Land: M-179, Hastings, MI 49058

Characteristics:

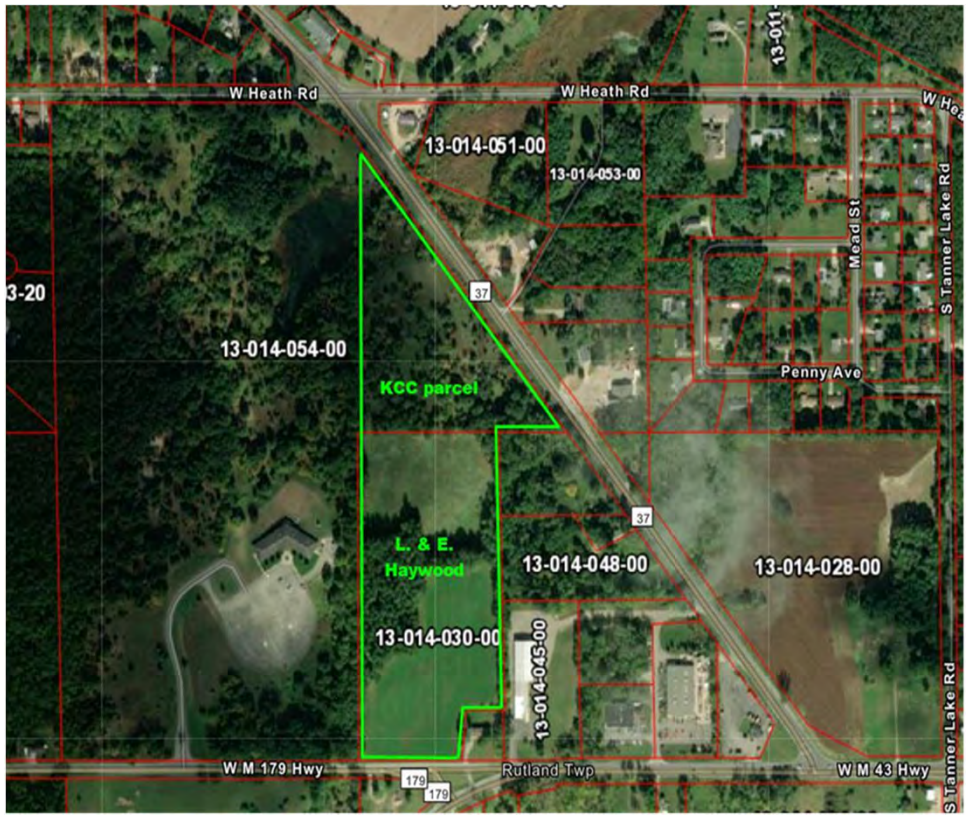
- Property – 30 Acres
- Private Water System – New system needed
- Private Septic System – New system needed
- Fiber – Available
- Wetlands – No mitigation required
- 3-Phase – Available at the street
- Natural Gas – Available at the street

Vacant Land: M-179, Hastings, MI 49058

Location Description: Just west of the corner of M-43 and M-37, on M-179 at M-43. Just East of Kellogg Community College parcel.

Access: Main entrance off M-37

Owner: 2 property owners have been approached one being Kellogg Community College



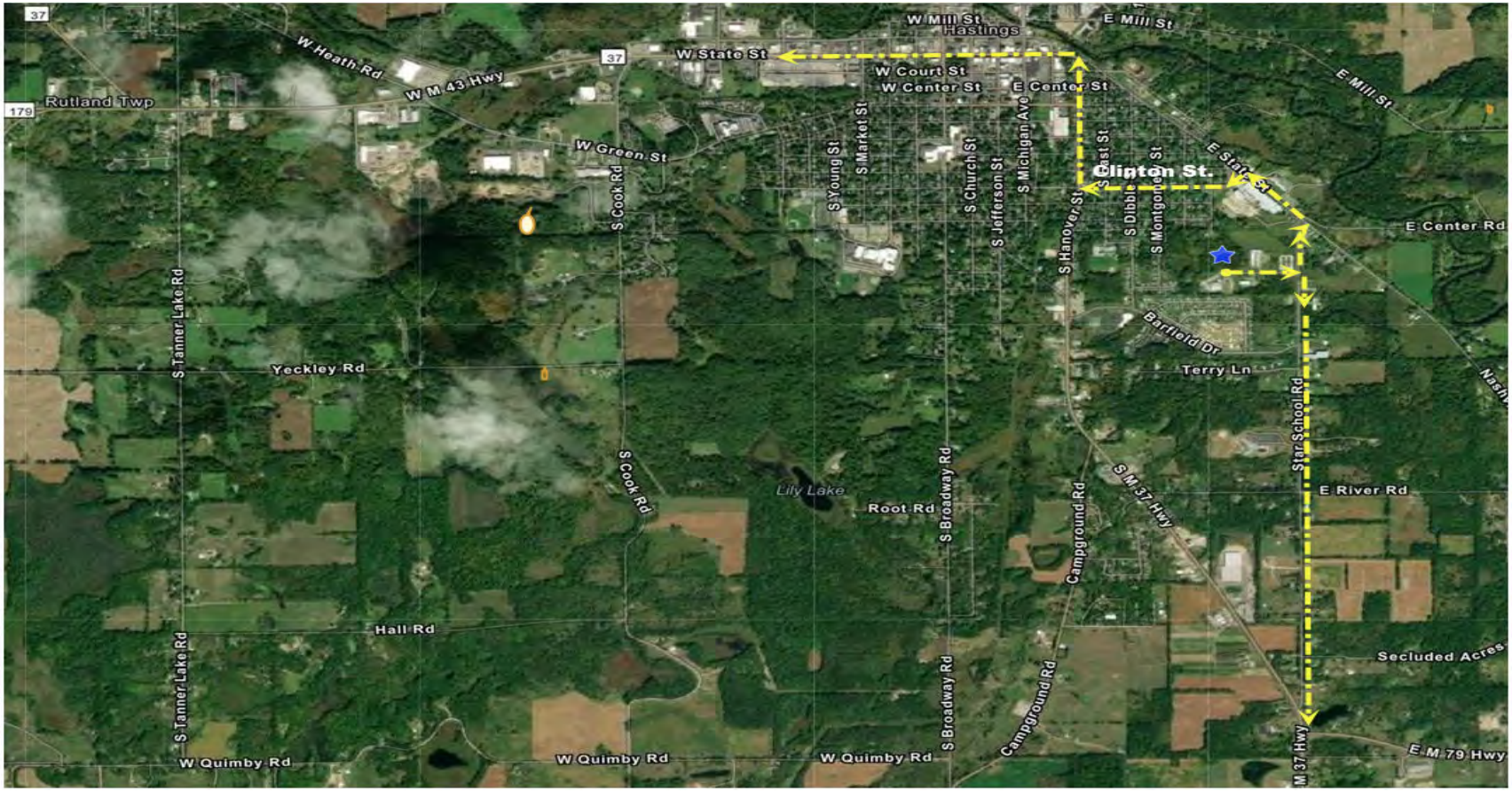
Vacant Land: Enterprise Dr, Hastings, MI 49058

Location Description: Southeast in the City just off E State St and Star School Rd in the Industrial Park

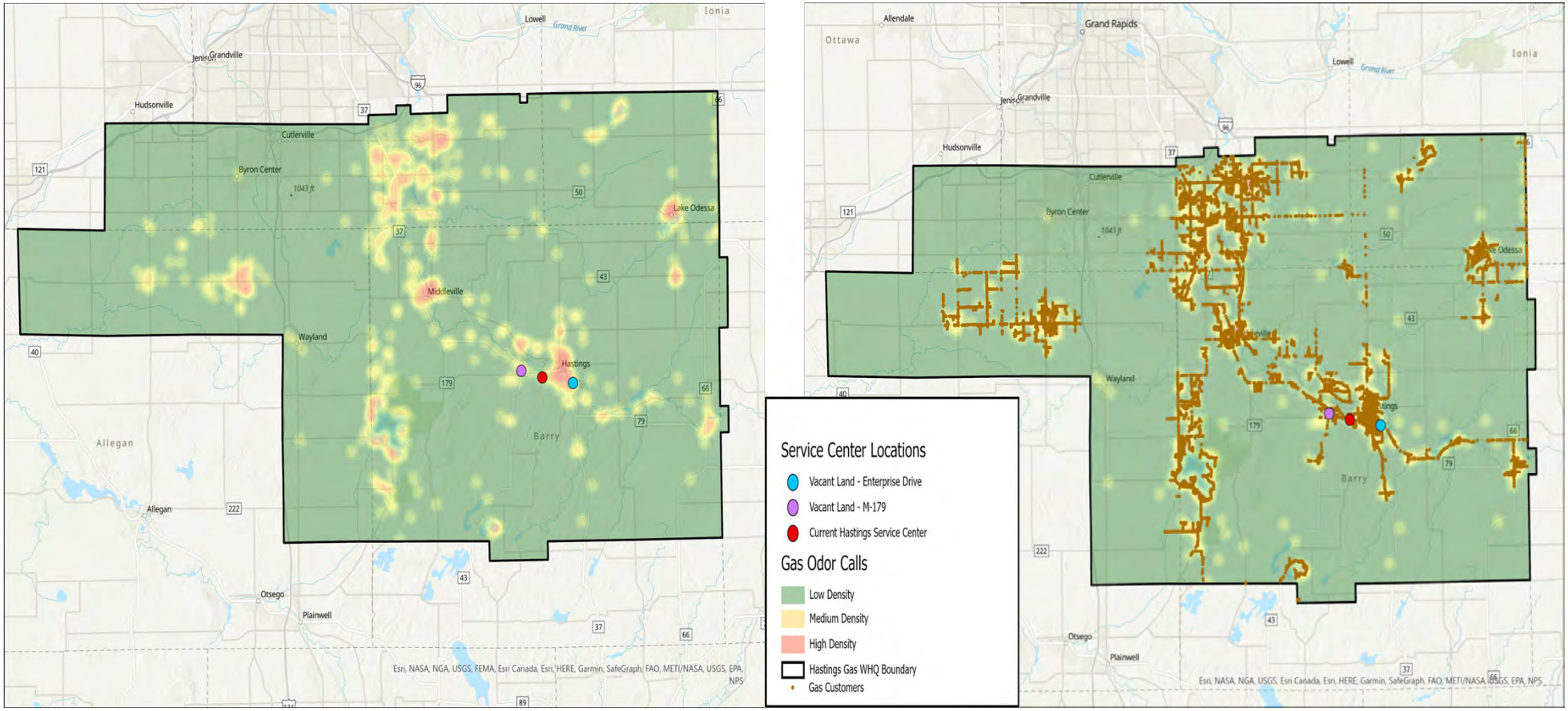
Access: There could be multiple drives on E. Enterprise Dr. Northeast parcel has access to Star School Rd.

Owner: City of Hastings, parcels are currently for sale.

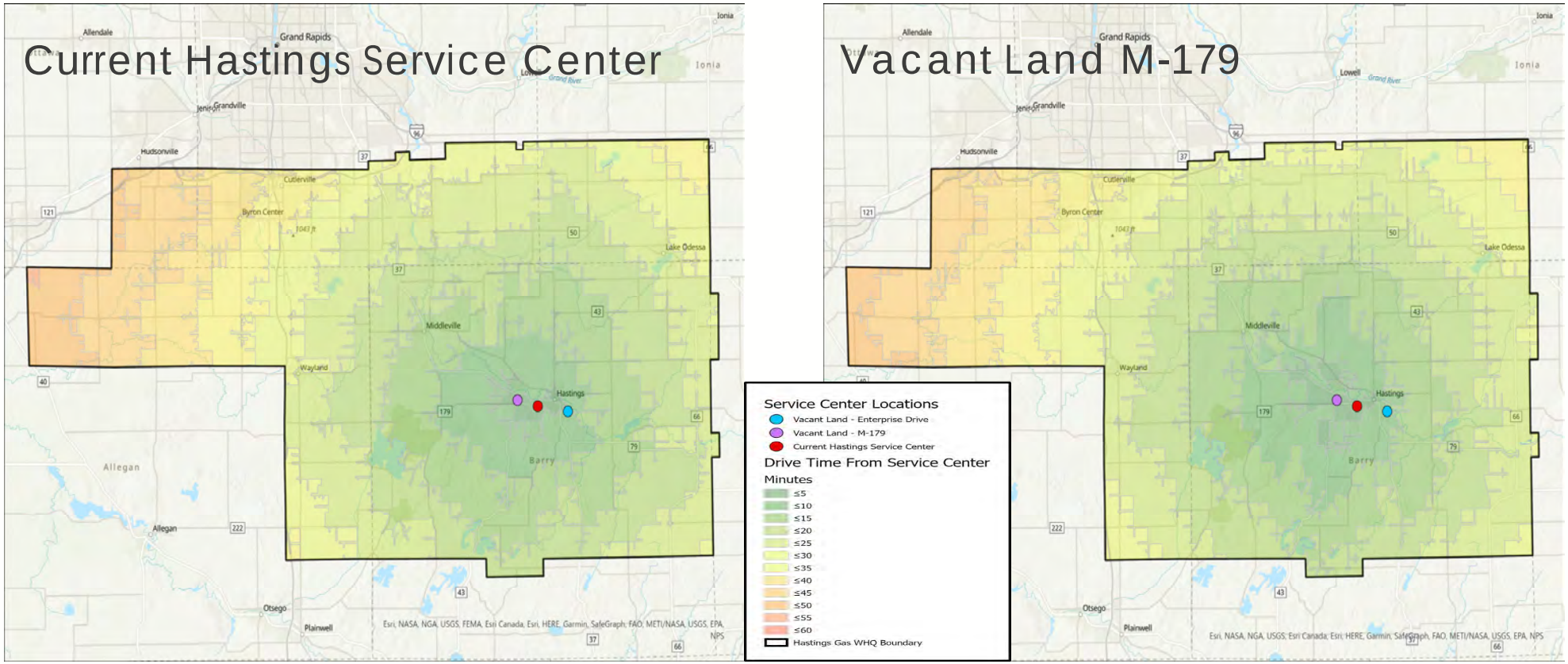
Class A Road Access Vacant Land Enterprise Dr.



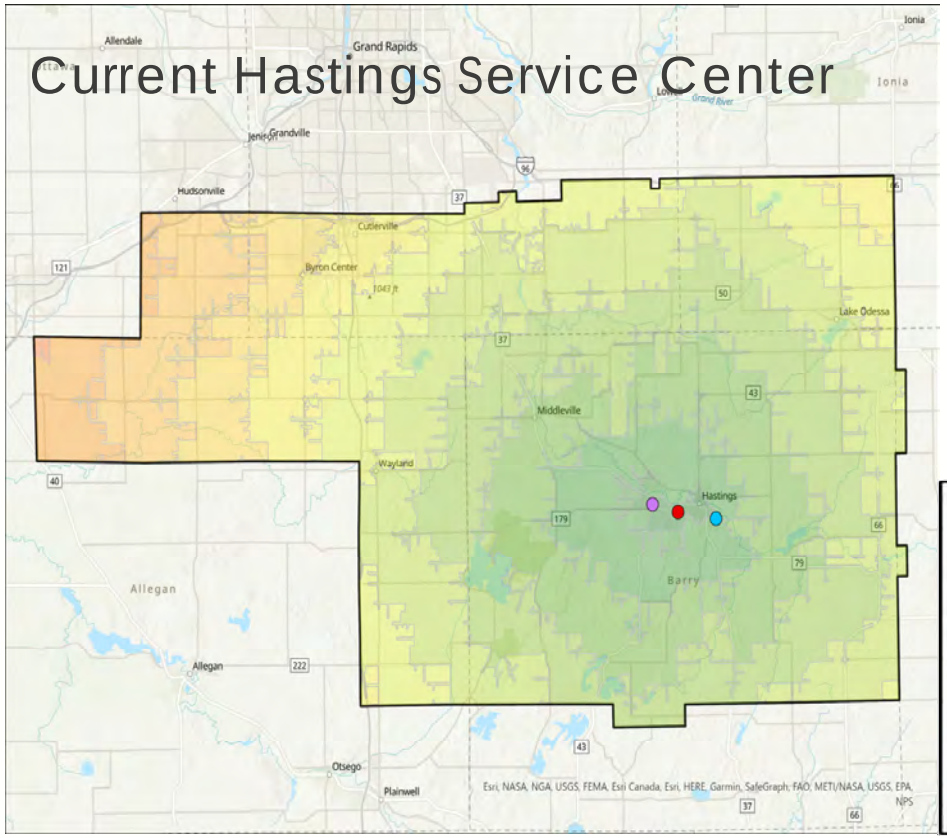
2019-2020 Density of Gas Odor Calls and Customer Data

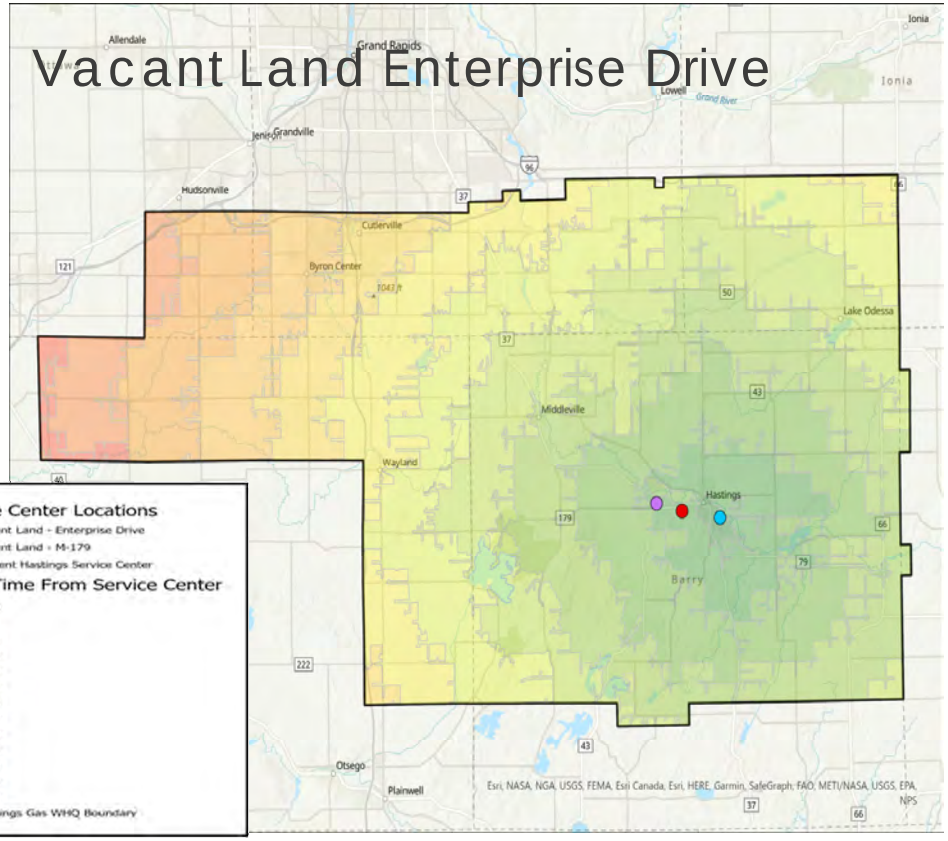


Gas Call Drive Times



Gas Call Drive Times



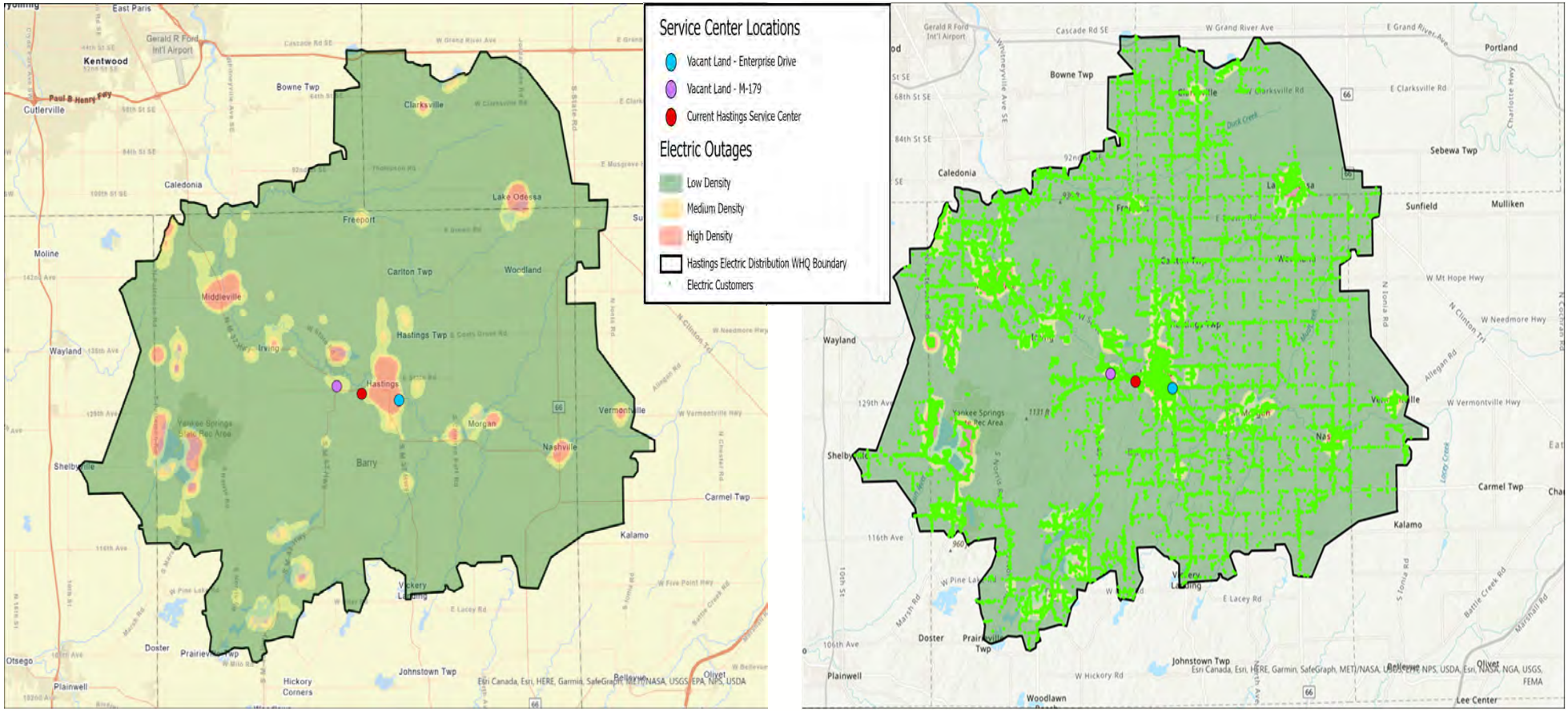


Service Center Locations
- Vacant Land - Enterprise Drive
- Vacant Land - M-179
- Current Hastings Service Center

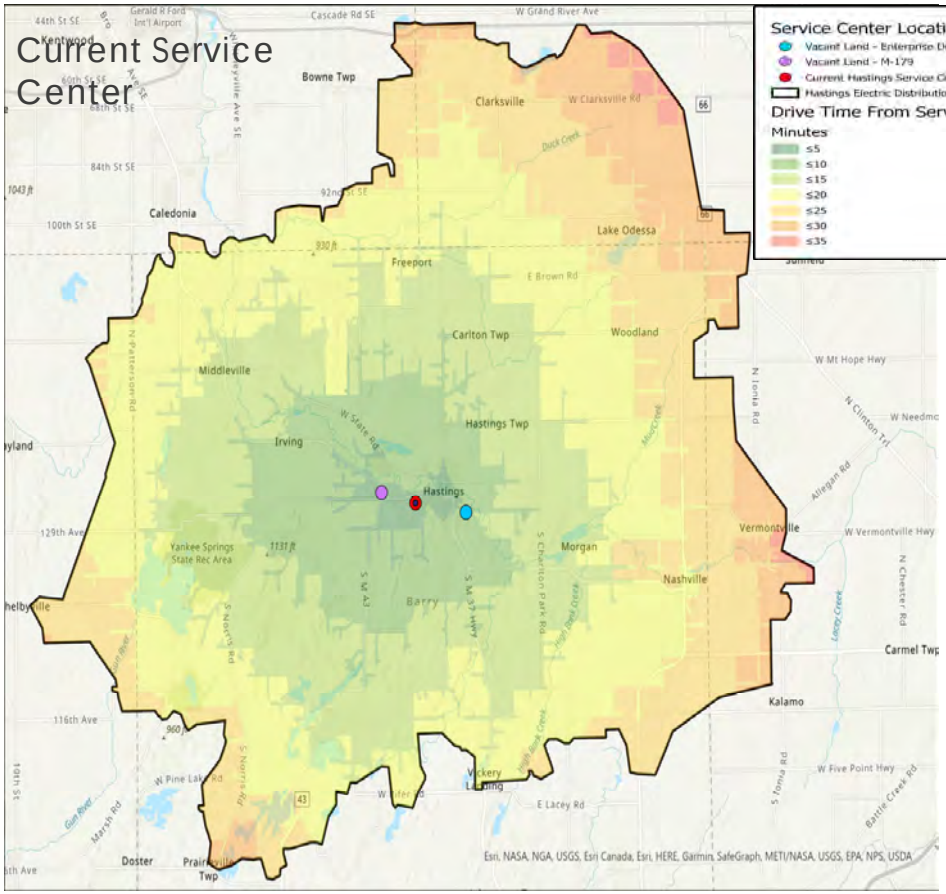
Drive Time From Service Center

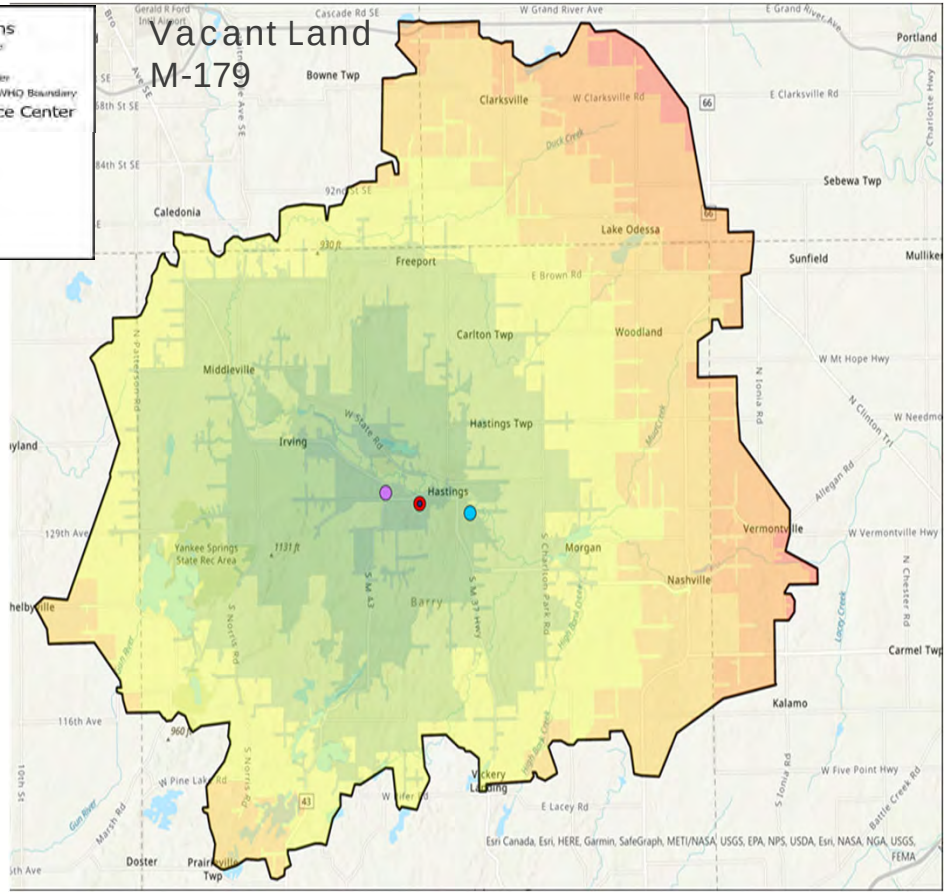
Minutes
- ≤5
- ≤10
- ≤15
- ≤20
- ≤25
- ≤30
- ≤35
- ≤40
- ≤45
- ≤50
- ≤55
- ≤60
- Hastings Gas WHQ Boundary

2019-2020 Density of Electric Outages and Customer Data

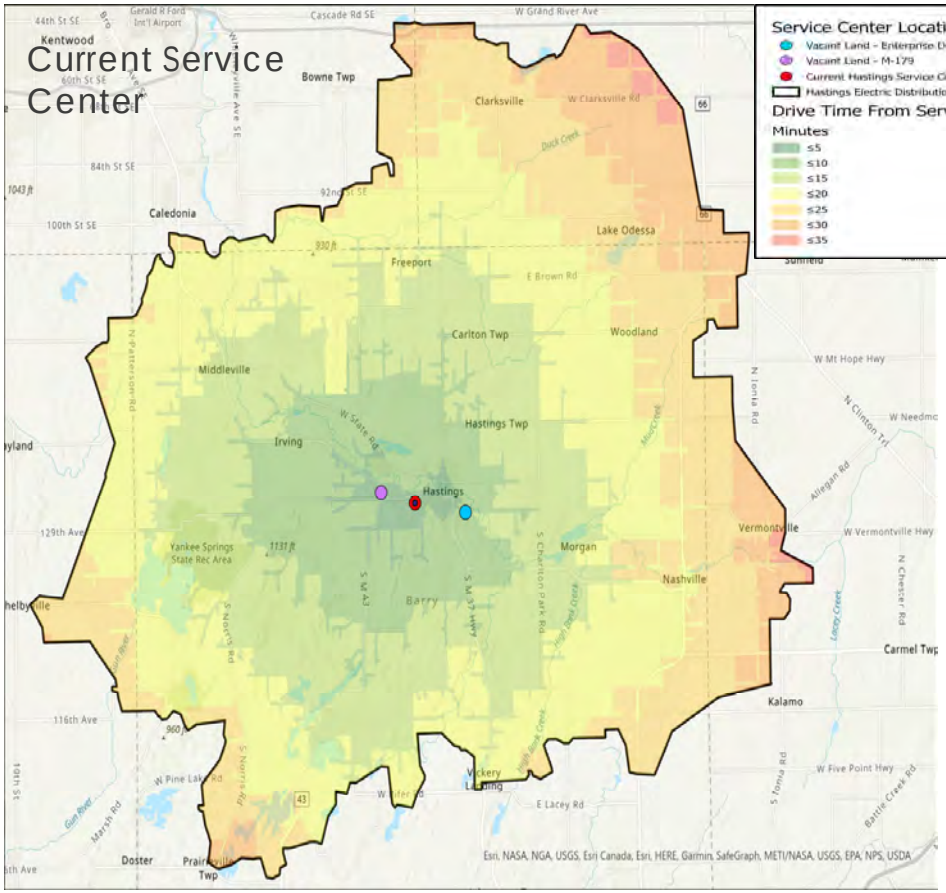


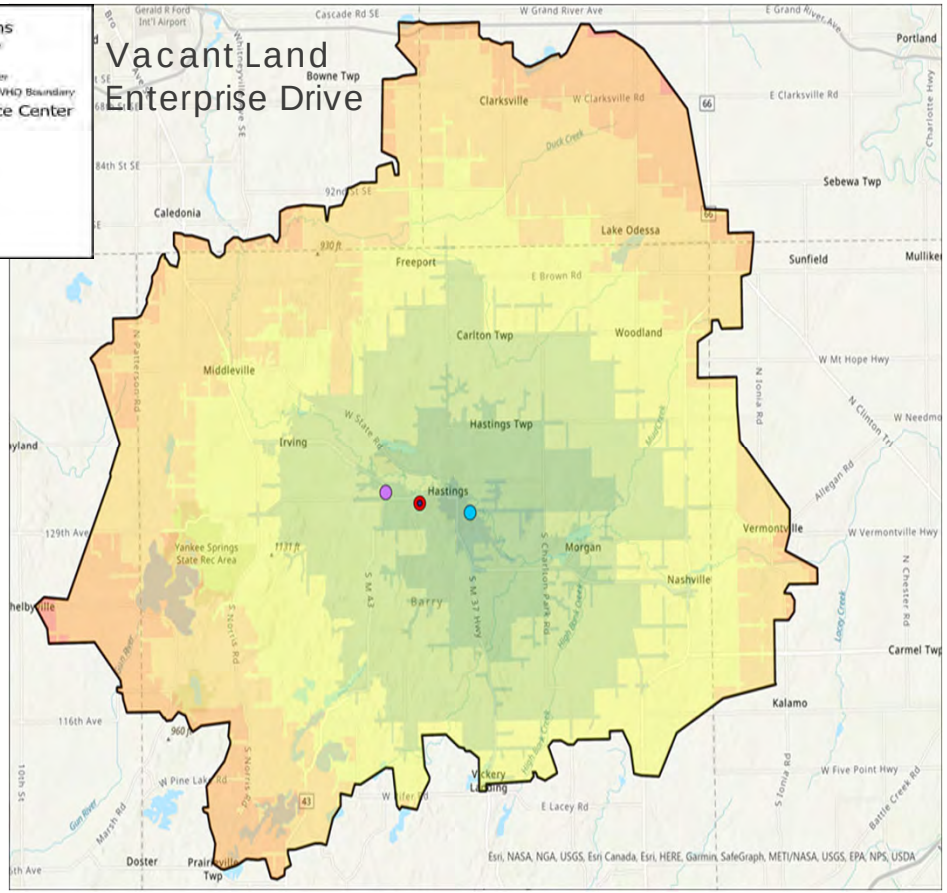
Electric Call Drive Times



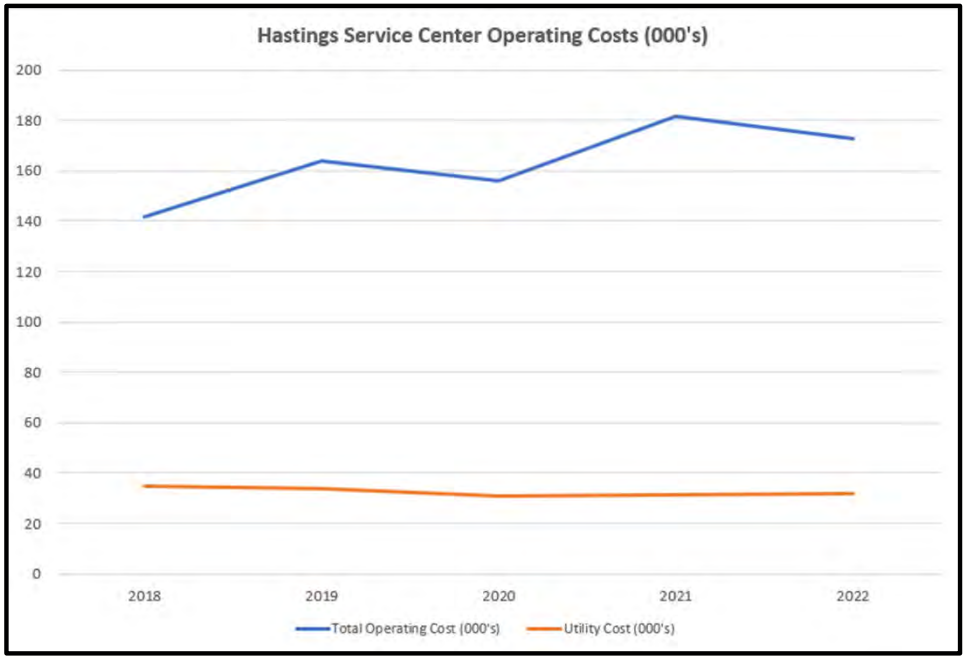


Electric Call Drive Times





Hastings Service Center – Operating Costs



Service Center	Existing Building Area	Existing Building 2022 Annual Operating Cost	Existing Building Cost Per Square Foot	New Building Estimated Cost Per Square Foot	New Building Area - Current Conceptual	New Building Estimated Annual Cost
Hastings	12,317 SF	$172,514	$14.01	$9.70	23,500 SF	$227,950

Greenville Storage Building

Plan Summary

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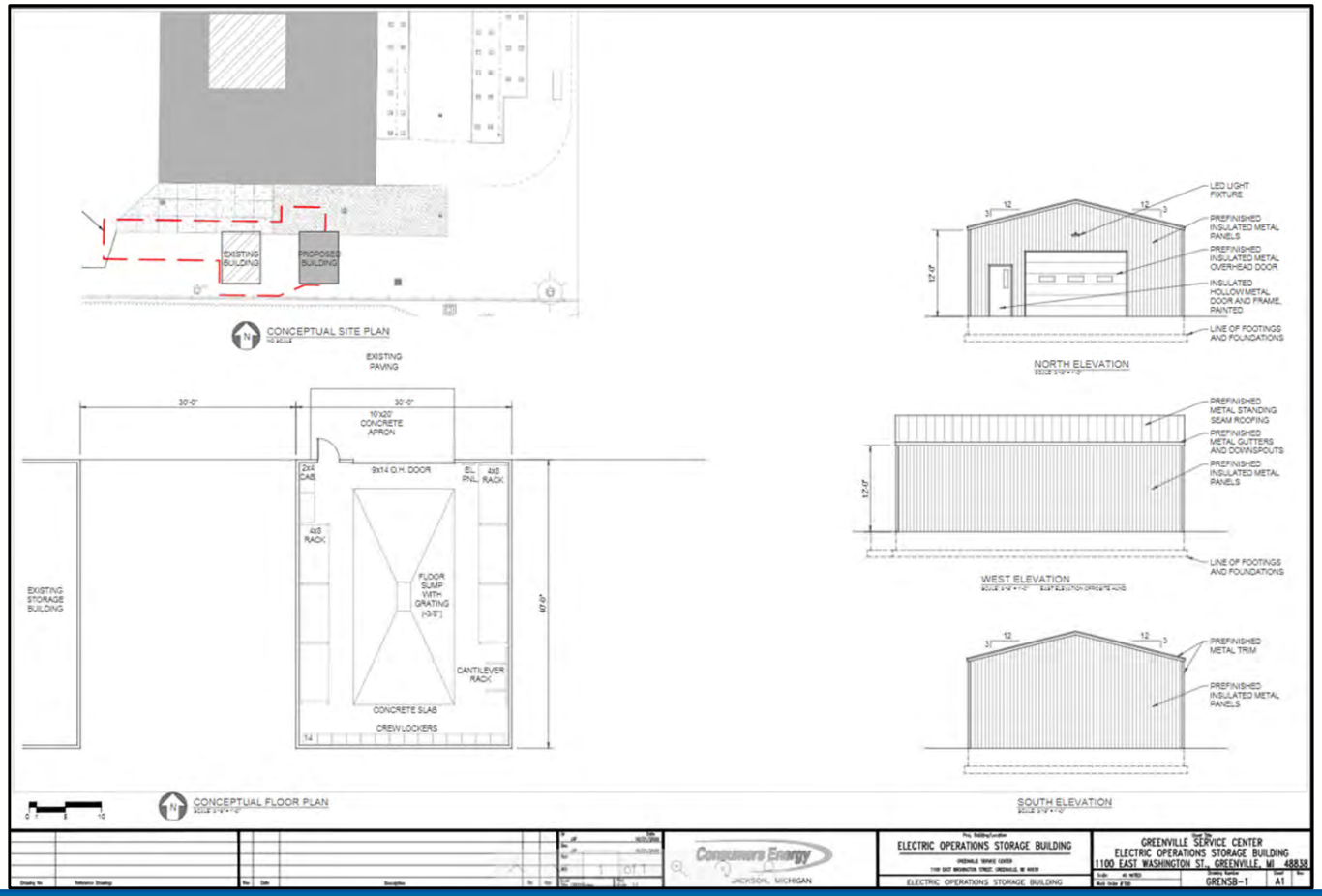
Greenville Storage Building – Conceptual Plan



Ludington Storage Building

Plan Summary

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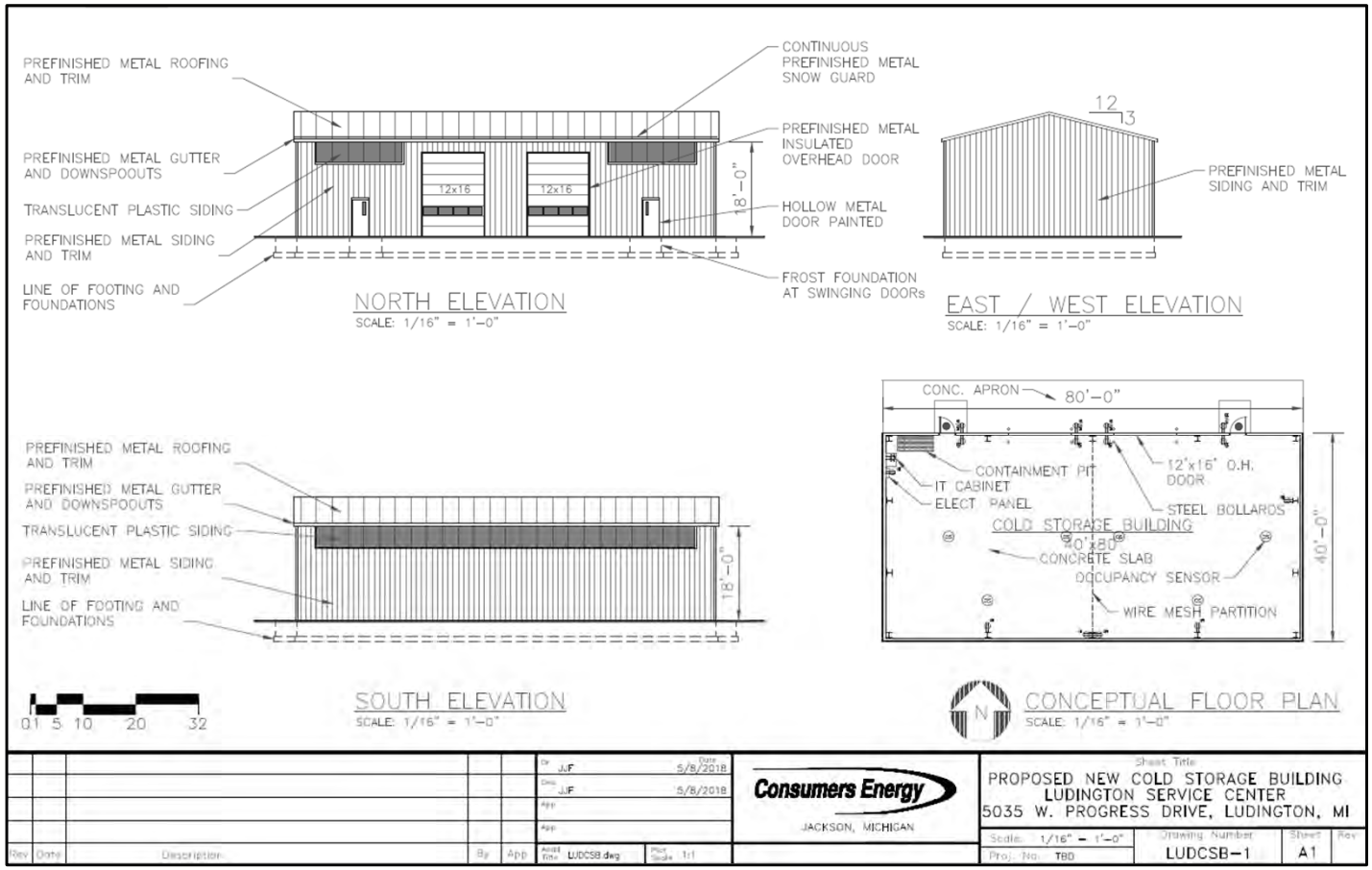
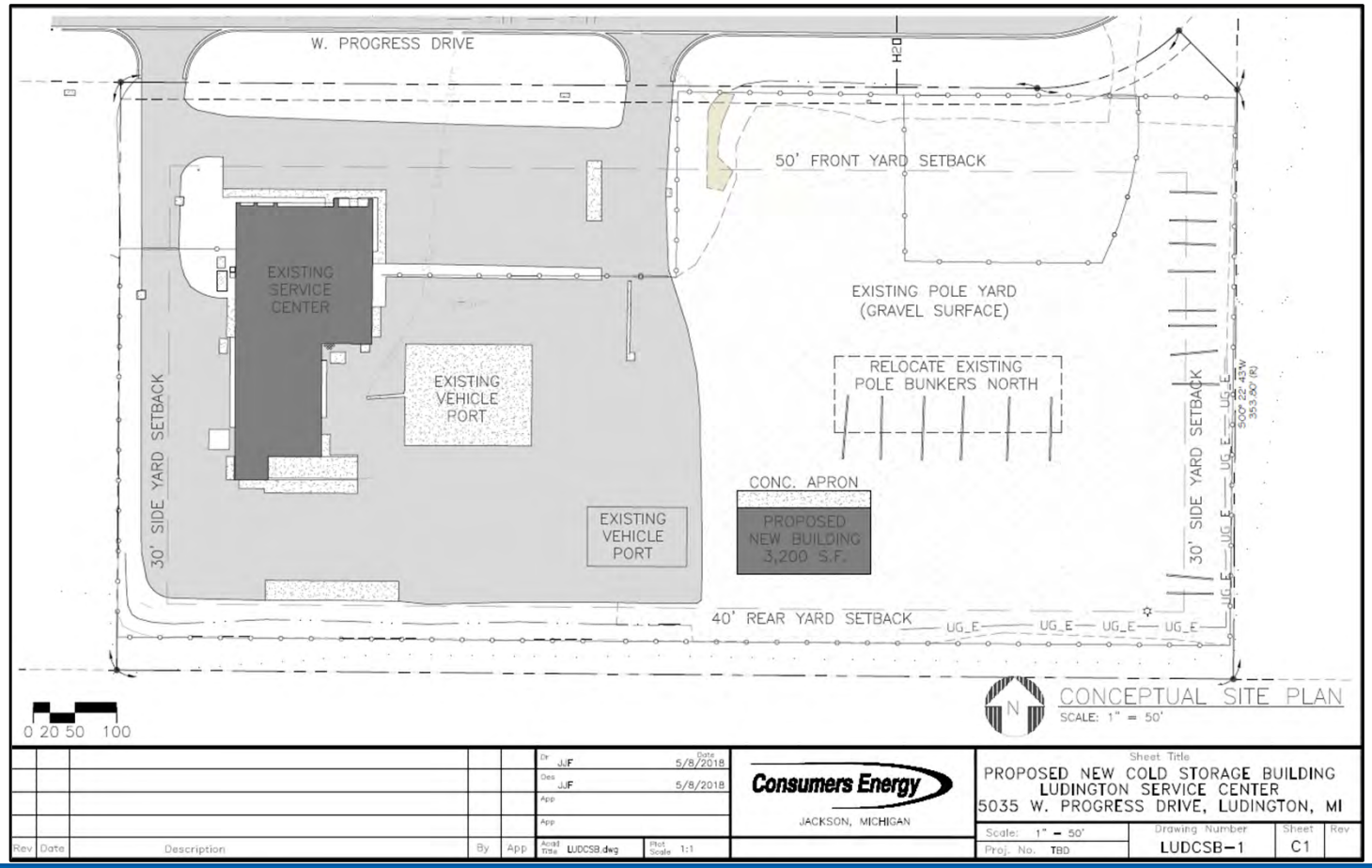
CMS ENERGY

Ludington Storage Building – Conceptual Plan



Ludington Storage Building – Conceptual Plan



Hardy Headquarter Building

Plan Summary

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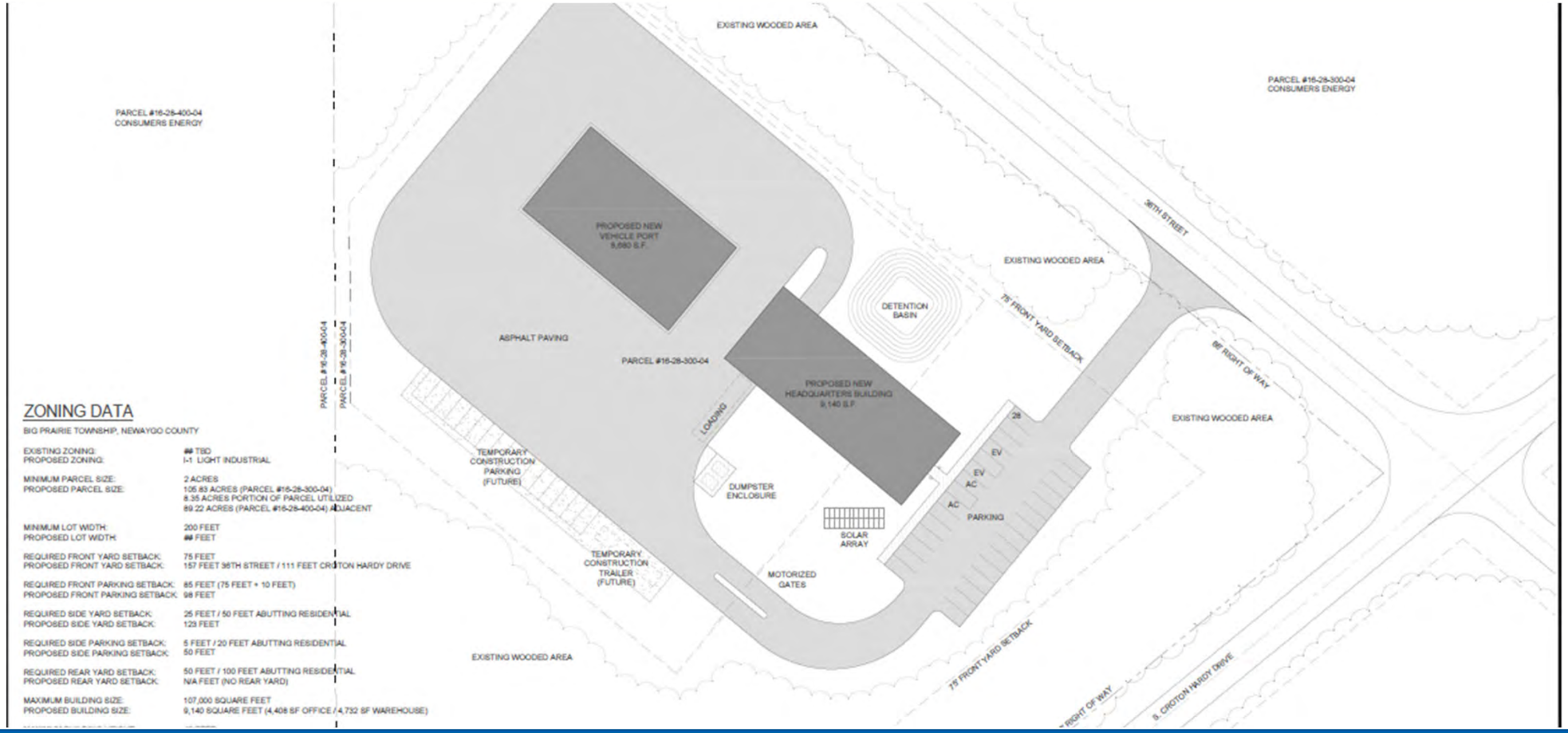
Hardy Headquarter Building – Conceptual Site Plan



ZONING DATA

BIG PRAIRIE TOWNSHIP, NEWAYGO COUNTY

EXISTING ZONING:	## TBD
PROPOSED ZONING:	I-1 LIGHT INDUSTRIAL
MINIMUM PARCEL SIZE:	2 ACRES
PROPOSED PARCEL SIZE:	105.83 ACRES (PARCEL #16-28-300-04) 8.35 ACRES PORTION OF PARCEL UTILIZED 89.22 ACRES (PARCEL #16-28-400-04) ADJACENT
MINIMUM LOT WIDTH:	200 FEET
PROPOSED LOT WIDTH:	## FEET
REQUIRED FRONT YARD SETBACK:	75 FEET
PROPOSED FRONT YARD SETBACK:	157 FEET 36TH STREET / 111 FEET CROTON HARDY DRIVE
REQUIRED FRONT PARKING SETBACK:	85 FEET (75 FEET + 10 FEET)
PROPOSED FRONT PARKING SETBACK:	98 FEET
REQUIRED SIDE YARD SETBACK:	25 FEET / 50 FEET ABUTTING RESIDENTIAL
PROPOSED SIDE YARD SETBACK:	129 FEET
REQUIRED SIDE PARKING SETBACK:	5 FEET / 20 FEET ABUTTING RESIDENTIAL
PROPOSED SIDE PARKING SETBACK:	50 FEET
REQUIRED REAR YARD SETBACK:	50 FEET / 100 FEET ABUTTING RESIDENTIAL
PROPOSED REAR YARD SETBACK:	N/A FEET (NO REAR YARD)
MAXIMUM BUILDING SIZE:	107,000 SQUARE FEET
PROPOSED BUILDING SIZE:	9,140 SQUARE FEET (4,408 SF OFFICE / 4,732 SF WAREHOUSE)

Hardy Headquarter – HQ Building, Vehicle Port & Solar Array

Kalamazoo Service Center

Plan Summary

Consumers Energy
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Kalamazoo Service Center – Health Assessment

Facility Assessment - Kalamazoo Service Center

Location	Kalamazoo		Maximum Possible Points (80)	Servicable > 48 Points	Poor < 48 Points	Good > 64 Points
Zone	SWOM					
Safety						
Compatible Use	4		5	3	2	4
Site Conditions	5		5	3	2	4
Traffic/Site Flow	3		5	3	2	4
Environmental Hazard	0		5	3	2	4
Quality						
Branding	3		5	3	2	4
Workplace Efficiency	3		5	3	2	4
Years since last major systems upgrade	0		5	3	2	4
Cost						
Facility Operating Costs	5		5	3	2	4
Non Facility Cost Impact	4		5	3	2	4
Space Optimization	1		5	3	2	4
Delivery						
Drive Time	3		5	3	2	4
Customer Response	4		5	3	2	4
Sustainability	1		5	3	2	4
Morale						
Employee Pride	1		5	3	2	4
Retention	4		5	3	2	4
Wellness	5		5	3	2	4
Total	***46***		***80***	***48***	***32***	***64***

Kalamazoo Service Center – Health Assessment Scoring Criteria

Safety (20 Points)	Comments	Pro	Con	Score 0 Does not satisfy criteria	Score 1 Does not satisfy most listed criteria	Score 2 Does not satisfy some listed criteria	Score 3 Satisfies minimal criteria	Score 4 Satisfies most listed criteria	Score 5 Satisfies all listed criteria
Compatible Use	Use of property is compatible with adjoining properties and surrounding area.	Industrial zoning and use	Residential use, retail use, criminal activity	Residential zoning, high crime area	Residential zoning	Mixed Commercial / Residential zoning	Commercial zoning for Service Centers, mixed Commercial / Industrial zoning for non-Service Centers	Industrial zoning for Service Centers, Commercial zoning for non-Service Centers	Industrial zoning for Service Centers, Central Business District zoning for non-Service Centers
Site Conditions	Physical condition of site	Full utilities, good paving, fencing, drainage	No utilities, poor paving, fencing, drainage	Site not adequate to support operational requirements, located in flood plain,	Site not adequate to support operational requirements	significant upgrades, such as storm water detention, fire water, potable water, sanitary sewer, paving, etc.	Site in serviceable condition with full utilities or good condition with partial utilities	Site in good condition, full utilities	Site in good condition with undeveloped space to accommodate future growth
Traffic/Site Flow	Road network, site access drive, vehicle turning space	Close to highway, access from two roads, space for truck trailer to pull off road, one way gates	Secondary road, no truck pull off space at gate, two way gates, insufficient turning space	Unimproved road frontage / site traffic flows crossing	Non Class A road frontage / Site heavy traffic and light traffic flows crossing	with impediments, railroad tracks, intersections, etc. / Site traffic flows crossing	Class A road frontage / Site traffic flows mixed	Class A road frontage with secondary frontage / Site traffic flows separated	with secondary frontage and nearby highway access / Site traffic flows separated
Environmental Hazard	Environmental hazards	LEED certification, no environmental hazards	Former MGP site, soil contamination, abandoned underground fuel tanks, abandoned transformer storage, asbestos fire proofing, asbestos duct wrap, asbestos pipe wrap, lead paint,	Immediate hazards to employees present during normal use of site	Hazardous materials present, with reoccurring or continuous exposure hazard, former MGP site, current 201 site	Hazardous materials present in manageable form, former MGP site, current 201 site	Hazardous materials present in manageable form	No environmental impacts, hazardous materials abated or encapsulated	LEED Certified facility with no environmental impacts

Quality (15 Points)	*Employee/Customer Engagement*	Pro	Con	Score 0 Does not satisfy criteria	Score 1 Does not satisfy most listed criteria	Score 2 Does not satisfy some listed criteria	Score 3 Satisfies minimal criteria	Score 4 Satisfies most listed criteria	Score 5 Satisfies all listed criteria
Branding	Projects positive image to community and potential employees	Well cared for facility, curb appeal, neat landscaping, coordinated site signage	Dilapidated facility, dated appearance, overgrown landscaping, mismatched site signage	damaged or deteriorated structures, landscape materials overgrown or absent, failed pavement, etc.	Structures deteriorated, landscape materials overgrown or absent, failing paving, no signage	Structures poorly maintained, landscape materials overgrown or absent, poor signage	for, landscape materials in serviceable condition, uncoordinated signage	Structures well cared for, landscape materials in good condition, coordinated signage	New facility, landscape materials in good condition, coordinated signage
Workplace Efficiency	Space is fully utilized	Space provided for all operational functions, space size meets needs, proper inventory stored	Space not provided for all operational functions, space oversized, space not fully utilized, unused materials (junk) stored	Space inadequate for intended occupancy	Hard wall offices, empty or vacant spaces	Hard wall offices, fully utilized	Mix of hard wall offices and systems furniture, fully utilized	Modular systems furniture, fully utilized	Flexible, open and collaborative workspaces, modular systems furniture, fully utilized
Years since last major systems upgrade	Condition of facility is code compliant, building systems are within normal operational life cycle and supports working environment	New construction or recently completed full renovation	Building old and unrenovated or only minimal or partial renovation work completed	initial construction or last major systems upgrade	initial construction or last major systems uprade	initial construction or last major systems uprade	initial construction or last major systems uprade	initial construction or last major systems uprade	initial construction or last major systems uprade

Kalamazoo Service Center – Health Assessment Scoring Criteria

Cost (15 Points)		Pro	Con	Score 0 Does not satisfy criteria	Score 1 Does not satisfy most listed criteria	Score 2 Does not satisfy some listed criteria	Score 3 Satisfies minimal criteria	Score 4 Satisfies most listed criteria	Score 5 Satisfies all listed criteria
Facility Operating Costs	O&M costs to operate and maintain facility	Cost per square foot for facility less than statewide average cost per square foot ($5.31)	Cost per square foot for facility more than statewide average cost per square foot ($5.31)	costs greater than $10.00 per square foot	costs between $8.00 to $10.00 per square foot	costs between $7.25 to $7.99 per square foot	costs between $7.00 to $7.24 per square foot	costs between $5.75 to $6.99 per square foot	Combined operating costs less than $5.75 per square foot
Non Facility Cost Impact	O&M cost impacts to operations	Building correct size, centrally located within customer base area, able to accommodate necessary materials, able to maneuver onsite	Building too large, eccentrically located within customer base area, unable to accommodate necessary materials, difficult to maneuver onsite	Building eccentrically located within service territory, inadequate space	Building eccentrically located within service territory, underutilized space	Building eccentrically located within service territory	Building centrally located within service territory	Building accommodates operational needs, centrally located within service territory	Building accommodates operational need, space utilized efficiently, centrally located within service territory
Space Optimization	Reduce excess square footage	Space fully utilized, space utilized efficiently	Space under utilized, space utilized inefficiently, indoor parking area	Building vacant	Building partially occupied or partially vacant	Building occupied inefficiently, includes IPA	Building fully occupied, includes IPA	Building fully occupied, no IPA	occupied, no IPA, includes cold storage

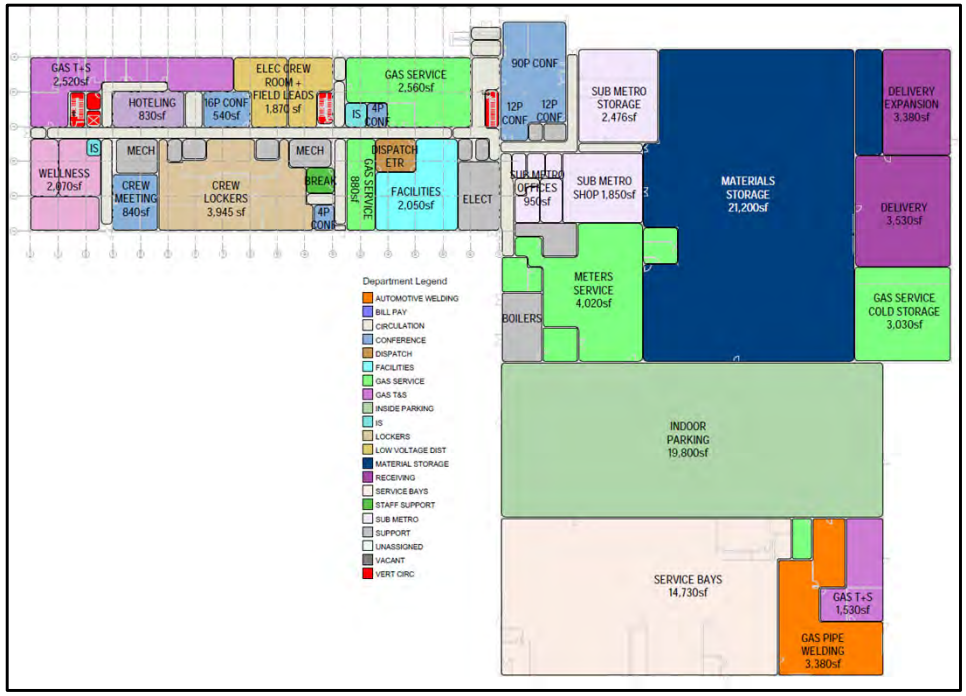
Delivery (15 Points)	Customer Service	Pro	Con	Score 0 Does not satisfy criteria	Score 1 Does not satisfy most listed criteria	Score 2 Does not satisfy some listed criteria	Score 3 Satisfies minimal criteria	Score 4 Satisfies most listed criteria	Score 5 Satisfies all listed criteria
Drive Time	Service territory area of proper size	Centrally located within service area(s), drive time balanced across territory and within targeted limits	Eccentrically located within service area(s), drive time unbalanced across territory and/or exceeds targeted limits	service territory and size of service territory allows drive time >1:20 Gas and >1:30 Electric	service territory and size of service territory allows drive time < 1:20 Gas and <1:30 Electric	service territory and size of service territory allows drive time < 1:10 Gas and <1:15 Electric	service territory and size of service territory allows drive time < 1:00 Gas and <1:00 Electric	service territory and size of service territory allows drive time < 0:50 Gas and <0:45 Electric	service territory and size of service territory allows drive time < 0:40 Gas and <0:30 Electric
Customer Response	Meets needs of customers	Customer response time metrics fall below targets	Customer response times exceed targets	response times meet target <90% of time, Electric CAIDI >215 minutes	response times meet target >90% of time, Electric CAIDI <215 minutes	response times meet target >95% of time, Electric CAIDI <195 minutes	response times meet target >97% of time, Electric CAIDI <180 minutes	response times meet target >98% of time, Electric CAIDI <165 minutes	response times meet target >99% of time, Electric CAIDI <150 minutes
Sustainability	Facility incproprates reduced energy utiliztion and minimizes environmental impact	Facility constructed in accordance with recent Energy Codes, includes onsite stormwater treatment, Green building certification	Facility constructed with no insulation, utilizes enegy intensive equipment, no onsite storm water treatment	Minimal roofing insulation	Upgraded roofing insulation	Upgraded roofing insulation and windows	Upgraded roofing insulation, windows and building envelope	insulation, windows, and building envelope with onsite storm water treatment	LEED Certified (or higher LEED rated) facility

Kalamazoo Service Center – Health Assessment Scoring Criteria

Morale (15 Points)	Employee Wellness	Pro	Con	Score 0 Does not satisfy criteria	Score 1 Does not satisfy most listed criteria	Score 2 Does not satisfy some listed criteria	Score 3 Satisfies minimal criteria	Score 4 Satisfies most listed criteria	Score 5 Satisfies all listed criteria
Employee Pride	Employees are engaged	Employee engagement scores > company average	Employee engagement scores < company average	Deteriorated facility	Deteriorated or dated facility with limited amenities	Dated facility with minimal amenities	Dated facility with full amenities and onsite parking	Modern facility with full amenities	Modern facility with full amenities, onsite parking
Retention	Facilities located in a desirable area, space is attractive to Millennials and supports millennial work styles	Downtown location, local amenities available, space supports varied work styles	Remote location, few local amenities, fixed work space	Remote location, no local amenities	some amenities available within 20 minutes driving distance	Remote location, amenities available within 20 minutes driving distance	Remote location, amenities available within 15 minutes driving distance	Diverse location, amenities available within 10 minutes driving distance	Diverse location, amenities available within walking distance
Wellness	Wellness facilities	Wellness room, space for trainer, drinking fountain, shower facilities nearby, space for wellness classes, well maintained exercise equipment, mirrors, lockers	Wellness room combined with non-compatible uses (i.e.: conference room), aged exercise equipment, poorly maintained exercise equipment, remote shower facilities	No shower, drinking fountain, Wellness or Nursing Mother Room, no additional space available	Shower and drinking fountain, no Wellness or Nursing Mother Room, no additional space available	Wellness Room or Nursing Mother Room, shower and drinking fountain, no additional space available	Nursing Mother Room, shower and drinking fountain, with space available to add Wellness or NMR	Wellness Room and Nursing Mother room, shower and drinking fountain, with space available for Trainer	Wellness room, Trainer room, Nursing Mother Room, shower and drinking fountain nearby

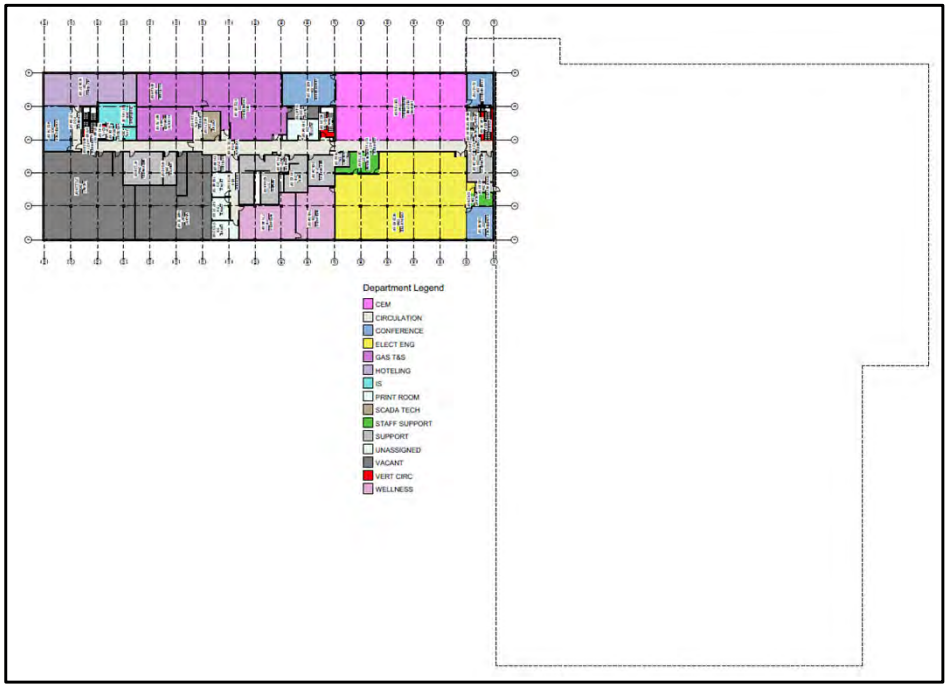
Kalamazoo Service Center First Floor: Existing & Conceptual Plan

Existing

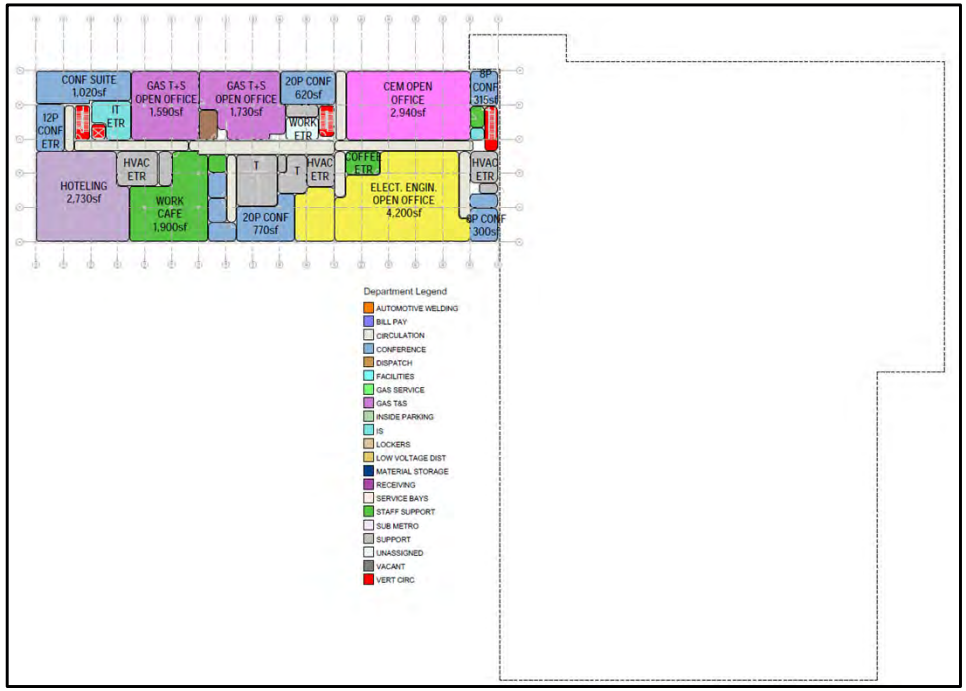


Conceptual Plan

Kalamazoo Service Center Second Floor: Existing & Conceptual Plan

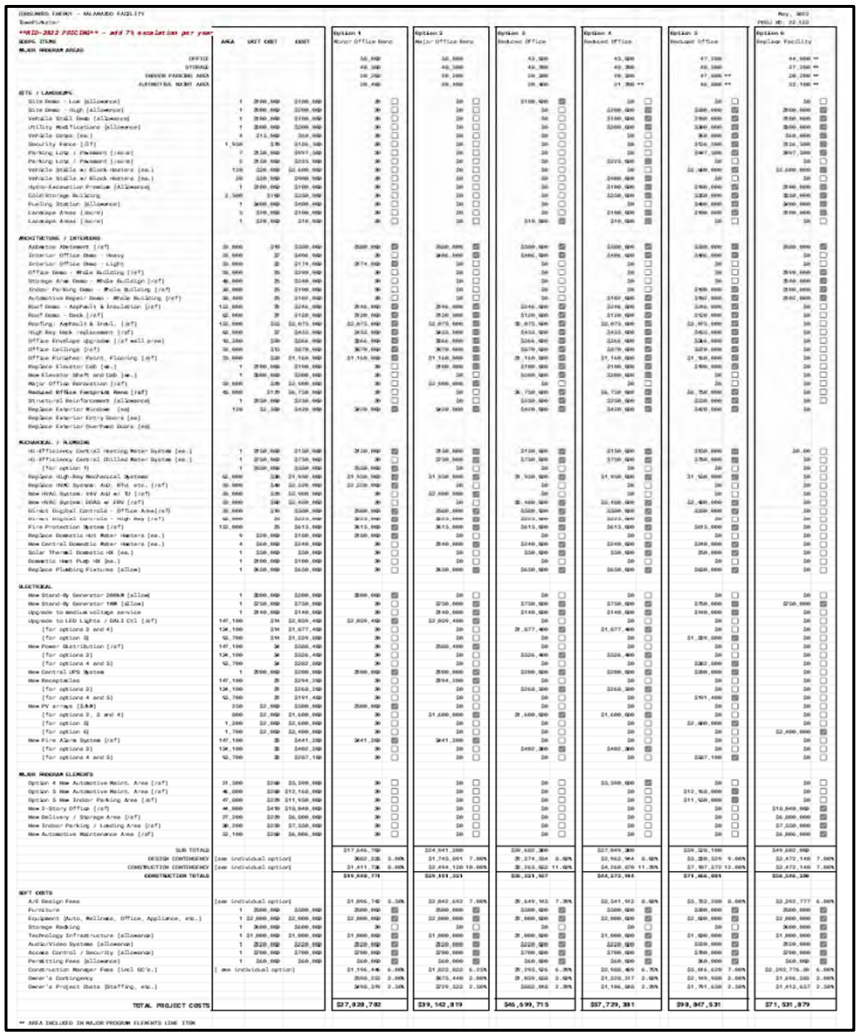


Existing



Conceptual Plan

Kalamazoo Service Center: Alternatives Summary



CONSUMERS ENERGY – KALAMAZOO FACILITY
Rev. 0013
PROJ NO: 22.522

Escalation:

2023-2022 PROCIMA – add 7% escalation per year

BASE STUDY	AREA	UNIT COST	COST	Option 1 Minor Office Remo	Option 2 Major Office Remo	Option 3 Reduced Office	Option 4 Reduced Office	Option 5 Reduced Office	Option 6 Replace Facility
MAJOR PROGRAM AREAS									
OFFICE				52,000	52,000	43,000	43,000	47,000	44,000 **
STORAGE				43,100	43,100	43,100	43,100	43,100	37,100 **
INDOOR PARKING AREA				19,200	19,200	19,200	19,200	17,000 **	20,200 **
AUTOMOTIVE MAINT AREA				19,400	19,400	19,400	17,300 **	16,000 **	22,100 **
SITE / LANDSCAPE									
Site Demo - Low (allowance)	1	200,000	200,000	X	No	$100,000	No	No	No
Site Demo - High (allowance)	1	300,000	300,000	X	No	No	$300,000	$300,000	$300,000
Vehicle Shell Demo (allowance)	1	300,000	300,000	X	No	No	$300,000	$300,000	$300,000
Utility Modifications (allowance)	1	300,000	300,000	X	No	No	$300,000	$300,000	$300,000
Vehicle Demo (ea.)	4	215,000	860,000	X	No	No	No	$860,000	$860,000
Security Fence (LF)	1,500	170	255,000	X	No	No	No	$255,000	$255,000
Parking Lot / Pavement (remo)	2	235,000	$470,000	X	No	No	No	$470,000	$470,000
Parking Lot / Pavement (remo)	2	250,000	$500,000	X	No	No	$500,000	No	No
Vehicle Stalls w/ Block Heaters (ea.)	120	225,000	$2,600,000	X	No	No	No	$2,600,000	$2,600,000
Vehicle Stalls w/ Block Heaters (ea.)	20	225,000	2000,000	X	No	No	$500,000	No	No
Hydro-Excavation Premium (Allowance)	1	200,000	200,000	X	No	No	200,000	200,000	200,000
Cold Storage Building	2,500	250	250,000	X	No	No	$250,000	250,000	250,000
Fueling Station (allowance)	1	400,000	400,000	X	No	No	No	400,000	400,000
Landscape Areas (more)	5	200,000	200,000	X	No	No	200,000	200,000	200,000
Landscape Areas (more)	1	220,000	220,000	X	No	$220,000	220,000	No	No
ARCHITECTURE / EXTERIORS									
Asbestos Abatement (LF)	20,000	250	5000,000	5000,000	5000,000	5000,000	5000,000	5000,000	5000,000
Interior Office Demo - Heavy	20,000	22	440,000	X	440,000	440,000	440,000	440,000	No
Interior Office Demo - Light	20,000	20	2170,000	2170,000	No	No	No	No	No
Office Demo - Whole Building (LF)	20,000	25	5200,000	X	No	No	No	No	5200,000
Storage Area Demo - Whole Building (LF)	40,000	25	5200,000	X	No	No	No	No	5200,000
Indoor Parking Demo - Whole Building (LF)	20,000	25	2500,000	X	No	No	No	2500,000	2500,000
Automotive Repair Demo - Whole Building (LF)	20,000	25	2500,000	X	No	No	2500,000	2500,000	2500,000
Roof Demo - Asphalt & Insulation (LF)	132,000	25	3300,000	3300,000	3300,000	3300,000	3300,000	3300,000	No
Roof Demo - Deck (LF)	32,000	20	2120,000	2120,000	2120,000	2120,000	2120,000	2120,000	No
Roofing: Asphalt & Insul. (LF)	132,000	102	$13,475,000	$13,475,000	$13,475,000	$13,475,000	$13,475,000	$13,475,000	No
High Bay Deck replacement (LF)	32,000	22	$432,000	$432,000	$432,000	$432,000	$432,000	$432,000	No
Office Envelope upgrades (LF wall area)	32,200	220	$204,000	$204,000	$204,000	$204,000	$204,000	$204,000	No
Office Ceilings (LF)	32,000	170	$2170,000	$2170,000	$2170,000	$2170,000	$2170,000	$2170,000	No
Office Finishes: Paint, Flooring (LF)	20,000	120	$1,140,000	$1,140,000	$1,140,000	$1,140,000	$1,140,000	$1,140,000	No
Replace Elevator Cab (ea.)	1	2100,000	2100,000	X	2100,000	2100,000	2100,000	2100,000	No
New Elevator Shaft and Cab (ea.)	1	5000,000	5000,000	X	No	5000,000	5000,000	No	No
Major Office Renovation (LF)	20,000	120	$2,000,000	X	$2,000,000	No	No	No	No
Reduced Office Footprint Area (LF)	40,000	215	$6,720,000	X	No	$6,720,000	$6,720,000	$6,720,000	No
Structural Reinforcement (allowance)	1	2500,000	$2500,000	X	No	$2500,000	$2500,000	$2500,000	No
Replace Exterior Windows (ea)	120	$2,500	$420,000	$420,000	$420,000	$420,000	$420,000	$420,000	No
Replace Exterior Entry Doors (ea)									
Replace Exterior Overhead Doors (ea)									
MECHANICAL / PLUMBING									
Hi-Efficiency Central Heating Water System (ea.)	1	2150,000	2150,000	2150,000	2150,000	2150,000	2150,000	2150,000	2150,000
Hi-Efficiency Central Chilled Water System (ea.)	1	2750,000	2750,000	X	2750,000	2750,000	2750,000	2750,000	No
(for option 5)	1	3500,000	3500,000	3500,000	No	No	No	No	No
Replace High Bay Mechanical Systems	42,000	220	24,500,000	24,500,000	24,500,000	24,500,000	$1,500,000	$1,500,000	No
Replace HVAC System: Add. Ahu etc. (LF)	20,000	240	$2,220,000	$2,220,000	No	No	No	No	No
New HVAC System: VAV Ahu w/ TU (LF)	20,000	220	$2,000,000	X	$2,000,000	No	No	No	No
New HVAC System: DOAS w/ ERV (LF)	20,000	240	$2,400,000	X	No	$2,400,000	$2,400,000	$2,400,000	No
Direct Digital Controls - Office Area(LF)	20,000	250	5000,000	5000,000	5000,000	5000,000	5000,000	5000,000	No
Direct Digital Controls - High Bay (LF)	42,000	20	2200,000	2200,000	2200,000	2200,000	2200,000	No	No
Fire Protection System (LF)	132,000	25	$615,000	$615,000	$615,000	$615,000	$615,000	$615,000	No
Replace Domestic Hot Water Heaters (ea.)	5	220,000	2100,000	2100,000	No	No	No	No	No
New Central Domestic Water Heaters (ea.)	4	260,000	2240,000	X	2240,000	2240,000	2240,000	2240,000	No
Solar Thermal Domestic HX (ea.)	1	250,000	250,000	X	No	250,000	250,000	250,000	No
Domestic Heat Pump HX (ea.)	1	2100,000	2100,000	X	No	No	No	No	No
Replace Plumbing Fixtures (allow)	1	2650,000	2650,000	X	2650,000	2650,000	2650,000	2650,000	No
ELECTRICAL									
New Stand-By Generator 2000kW (allow)	1	2000,000	2000,000	2000,000	No	No	No	No	No
New Stand-By Generator 750 (allow)	1	2750,000	2750,000	X	2750,000	2750,000	2750,000	2750,000	2750,000
Upgrade to medium voltage service	1	2140,000	2140,000	X	2140,000	2140,000	2140,000	2140,000	No
Upgrade to LED Lights / DALI Ctl (LF)	147,100	215	$2,829,400	$2,829,400	$2,829,400	No	No	No	No
(for options 2 and 4)	124,100	215	$1,677,400	X	No	$1,677,400	$1,677,400	No	No
(for option 5)	52,700	215	$1,029,000	X	No	No	No	$1,029,000	No
New Power Distribution (LF)	147,100	25	3680,400	X	3680,400	No	No	No	No
(for options 2)	124,100	25	3024,400	X	No	3024,400	3024,400	No	No
(for options 4 and 5)	52,700	25	2202,000	X	No	No	No	2202,000	No
New Central UPS System	1	2000,000	2000,000	2000,000	2000,000	2000,000	2000,000	2000,000	No
New Receptacles	147,100	25	2254,200	X	2254,200	No	No	No	No
(for options 2)	124,100	25	2262,200	X	No	2262,200	2262,200	No	No
(for options 4 and 5)	52,700	25	2191,400	X	No	No	No	2191,400	No
New PV Arrays (SAM)	250	22,000	5500,000	5500,000	No	No	No	No	No
(for options 3, 2 and 4)	800	22,000	$1,600,000	X	$1,600,000	$1,600,000	$1,600,000	No	No
(for option 5)	1,200	22,000	$2,600,000	X	No	No	No	$2,400,000	No
(for option 6)	1,700	22,000	$2,400,000	X	No	No	No	No	$2,400,000
New Fire Alarm System (LF)	147,100	25	$441,200	$441,200	No	No	No	No	No
(for options 2)	124,100	25	$402,200	X	No	$402,200	$402,200	No	No
(for options 4 and 5)	52,700	25	$267,100	X	No	No	No	$267,100	No
MAJOR PROGRAM ELEMENTS									
Option 4 New Automotive Maint. Area (LF)	21,000	250	$5,500,000	X	No	No	$5,500,000	No	No
Option 5 New Automotive Maint. Area (LF)	46,000	250	$12,160,000	X	No	No	No	$12,160,000	No
Option 5 New Indoor Parking Area (LF)	47,000	235	$11,420,000	X	No	No	No	$11,420,000	No
New 2-Story Office (LF)	46,000	245	$10,840,000	X	No	No	No	No	$10,840,000
New Delivery / Storage Area (LF)	27,200	225	$6,000,000	X	No	No	No	No	$6,000,000
New Indoor Parking / Loading Area (LF)	28,200	225	$7,500,000	X	No	No	No	No	$7,500,000
New Automotive Maintenance Area (LF)	22,100	250	$6,000,000	X	No	No	No	No	$6,000,000
SUB TOTALS				$17,646,750	$24,941,200	$20,602,800	$27,809,300	$20,329,100	$49,202,000
DESIGN CONTINGENCY	[see individual option]			3682,225 5.00%	$1,745,884 7.00%	$1,374,204 6.68%	$2,562,944 8.92%	$2,280,529 9.00%	$3,472,140 7.00%
CONSTRUCTION CONTINGENCY	[see individual option]			$1,411,738 8.00%	$2,494,120 10.00%	$2,060,480 11.00%	$4,368,688 15.00%	$7,307,270 18.00%	$3,472,140 7.00%
CONSTRUCTION TOTALS				$19,808,713	$29,181,204	$24,037,487	$34,272,964	$29,916,899	$56,146,280
SOFT COSTS									
A/E Design Fees	[see individual option]			$1,886,740 9.50%	$2,842,602 7.00%	$2,649,963 7.50%	$2,541,963 8.00%	$2,352,200 8.00%	$2,250,777 6.00%
Furniture	1	3500,000	3500,000	3500,000	3500,000	3500,000	3500,000	3500,000	3500,000
Equipment (Auto, Wellness, Office, Appliance, etc.)	1	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000
Storage Racking	1	3600,000	3600,000	X	No	No	No	No	3600,000
Technology Infrastructure (allowance)	1	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Audio/Video Systems (allowance)	1	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000	$220,000
Access Control / Security (allowance)	1	2700,000	2700,000	2700,000	2700,000	2700,000	2700,000	2700,000	2700,000
Permitting Fees (allowance)	1	260,000	260,000	260,000	260,000	260,000	260,000	260,000	260,000
Construction Manager Fees (incl GC's.)	[see individual option]			$1,156,446 6.00%	$1,602,022 6.10%	$1,263,924 6.30%	$2,000,804 6.70%	$3,046,620 7.00%	$2,243,776.00 6.00%
Owner's Contingency				3566,232 2.00%	$873,440 2.00%	$1,000,000 2.00%	$1,000,000 2.00%	$1,000,000 2.00%	$1,000,000 2.00%
Owner's Project Costs (Staffing, etc.)				$692,576 2.50%	$729,522 2.50%	$602,993 2.30%	$1,196,982 2.30%	$1,791,658 2.50%	$1,412,657 2.50%
TOTAL PROJECT COSTS				$27,839,732	$39,142,819	$46,699,715	$57,729,331	$59,847,531	$71,531,979

** AREA INCLUDED IN MAJOR PROGRAM ELEMENTS LINE ITEM

Kalamazoo Service Center: Renovation Expected Energy Usage Reductions (Alternative #1)

CONSUMERS KALAMAZOO SERVICE CENTER

2500 EAST CORK STREET

BUILDING AREAS BY TYPE

	ALT 1	ALT 2	ALT 3	ALT 4	ALT 5	ALT 6
OFFICE	58,000	58,000	45,000	45,000	47,200	44,000
STORAGE	48,500	48,500	48,500	48,500	48,500	27,200
INDOOR PARKING	20,200	20,200	20,200	20,200	47,800	30,200
AUTO MAINTENANCE	20,400	20,400	20,400	21,500	46,800	23,100
TOTAL	147,100	147,100	134,100	135,200	190,300	124,500

ESTIMATED ENERGY USE - CONCEPT LEVEL

	ALT 1	ALT 2	ALT 3	ALT 4	ALT 5	ALT 6
Total Area (SF)	147,100	147,100	134,100	135,200	190,300	124,500
Baseline EUI, CBECS Weighted (kBtu/SF)	42	42	41	41	43	44
Estimated Overall Reduction	10%	20%	25%	30%	35%	45%
Reduced EUI (kBtu/SF)	38	33	30	28	28	24
Estimated Annual Energy Use (kBtu)	5,524,470	4,910,640	4,086,975	3,851,470	5,302,635	3,033,800

Kalamazoo Service Center – Electric Customer Drive Times

Kalamazoo Service Center – Electric Customer Drive Times

Eastern Electric

Drive Time (minutes)	Count of Customers	Percentage	Cumulative Percentage
5	1,450	1.1%	1.1%
10	20,759	16.0%	17.1%
15	46,583	35.9%	53.1%
20	40,146	31.0%	84.0%
25	8,651	6.7%	90.7%
30	6,174	4.8%	95.5%
35	1,953	1.5%	97.0%
40	**934**	0.7%	97.7%
45	646	0.5%	98.2%
50	1,493	1.2%	99.4%
55	605	0.5%	99.8%
60	229	0.2%	100.0%
Grand Total	**129,623**	**100%**	

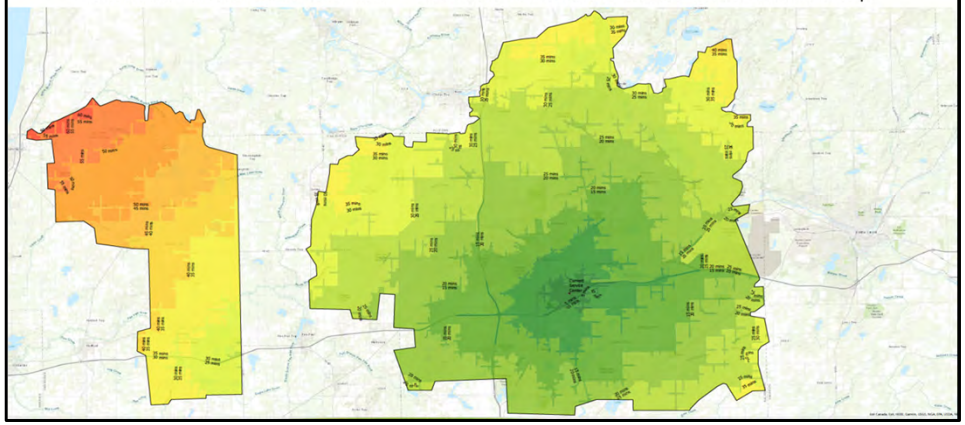
Western Electric

Drive Time (minute	Count of Customers	Percentage	Cumulative Percentage
5	4,202	3.2%	3.2%
10	33,706	26.0%	29.2%
15	39,159	30.2%	59.5%
20	28,523	22.0%	81.5%
25	13,224	10.2%	91.7%
30	5,375	4.1%	95.8%
35	2,721	2.1%	97.9%
40	**1,906**	1.5%	99.4%
45	606	0.5%	99.8%
50	201	0.2%	100.0%
Grand Total	**129,623**	**100.00%**	

Northern Electric

Drive Time (minutes)	Count of Customers	Percentage	Cumulative Percentage
5	2,597	2.0%	2.0%
10	18,922	14.6%	16.6%
15	35,461	27.4%	44.0%
20	44,914	34.6%	78.6%
25	15,626	12.1%	90.7%
30	5,527	4.3%	94.9%
35	4,444	3.4%	98.4%
40	**1,688**	1.3%	99.7%
45	441	0.3%	100.0%
50	3	0.0%	
Grand Total	**129,623**	**100%**	

Kalamazoo Service Center – Electric Customer Drive Times Heat Map



Kalamazoo Service Center – Gas Customer Drive Times

Kalamazoo Service Center – Gas Customer Drive Times

Current Gas

Drive Time (minutes)	Count of Customers		
5	5,113	5.1%	5.1%
10	21,900	21.7%	26.8%
15	36,026	35.7%	62.5%
20	19,219	19.1%	81.5%
25	7,601	7.5%	89.1%
30	3,731	3.7%	92.8%
35	4,713	4.7%	97.4%
40	1,608	1.6%	99.0%
45	749	0.7%	99.8%
50	162	0.2%	99.9%
55	59	0.1%	100.0%
Grand Total	100,881	100%	

Northern Gas

Drive Time (minutes	Count of Customers		
5	2,379	2.4%	2.4%
10	10,292	10.2%	12.6%
15	20,680	20.5%	33.1%
20	33,090	32.8%	65.9%
25	15,911	15.8%	81.6%
30	9,315	9.2%	90.9%
35	3,191	3.2%	94.0%
40	3,866	3.8%	97.9%
45	666	0.7%	98.5%
50	710	0.7%	99.2%
55	306	0.3%	99.5%
60	374	0.4%	99.9%
65	101	0.1%	100.0%
Grand Total	100,881	100%	

Western Gas

Drive Time (minutes	Count of Customers		
5	2,857	2.8%	2.8%
10	23,143	22.9%	25.8%
15	30,990	30.7%	56.5%
20	23,967	23.8%	80.2%
25	9,378	9.3%	89.5%
30	5,814	5.8%	95.3%
35	2,483	2.5%	97.8%
40	1,096	1.1%	98.9%
45	582	0.6%	99.4%
50	341	0.3%	99.8%
55	230	0.2%	100.0%
Grand Total	100,881	100%	

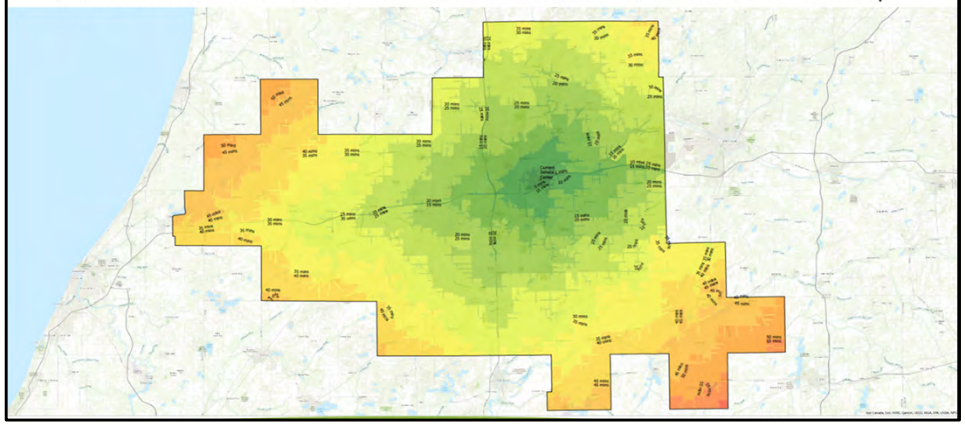
Eastern Gas

Drive Time (minutes)	Count of Customers		
5	1,285	1.3%	1.3%
10	16,770	16.6%	17.9%
15	32,817	32.5%	50.4%
20	29,244	29.0%	79.4%
25	7,816	7.7%	87.2%
30	6,199	6.1%	93.3%
35	2,469	2.4%	95.8%
40	3,025	3.0%	98.8%
45	1,197	1.2%	99.9%
50	59	0.1%	100.0%
Grand Total	100,881	100%	

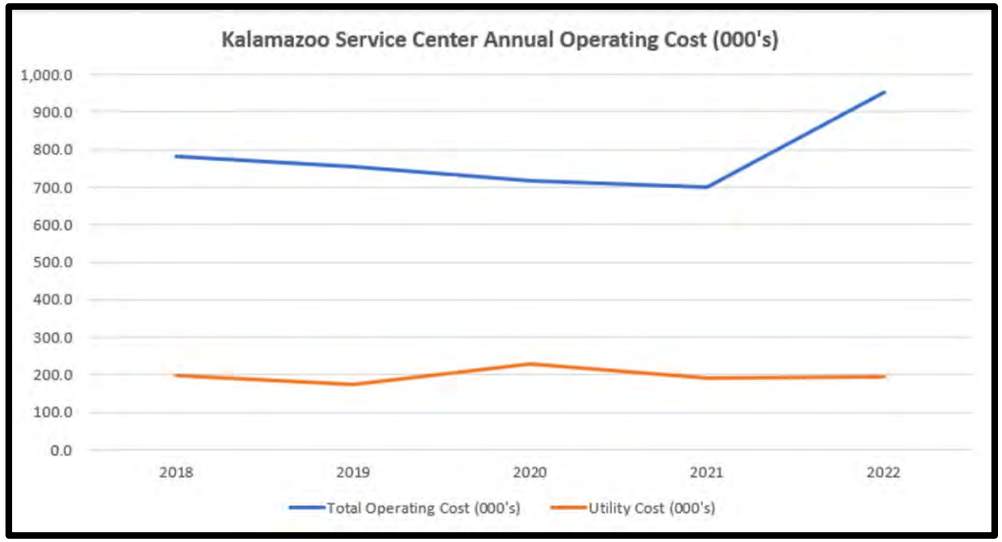
Southern Gas

Drive Time (minutes	Count of Customers		
5	5,349	5.3%	5.3%
10	20,447	20.3%	25.6%
15	30,252	30.0%	55.6%
20	23,832	23.6%	79.2%
25	9,218	9.1%	88.3%
30	5,877	5.8%	94.1%
35	3,262	3.2%	97.4%
40	1,943	1.9%	99.3%
45	311	0.3%	99.6%
50	341	0.3%	100.0%
55	49	0.0%	100.0%
Grand Total	100,881		

Kalamazoo Service Center – Gas Customer Drive Times Heat Map



Kalamazoo Service Center – Operating Costs



Service Center	Existing Building Area	Existing Building Annual Operating Cost	Existing Building Cost Per Square Foot	Renovated Building Estimated Cost Per Square Foot	Renovated Building Area - Current Conceptual	Renovated Building Estimated Annual Cost
Kalamazoo	140,884 SF	$952,924	$6.76	$4.62	* 147,100 SF	$679,430

* Total building area unchanged. Number reflects different method used to measure area.

Jackson Dispatch

Plan Summary

Consumers Energy
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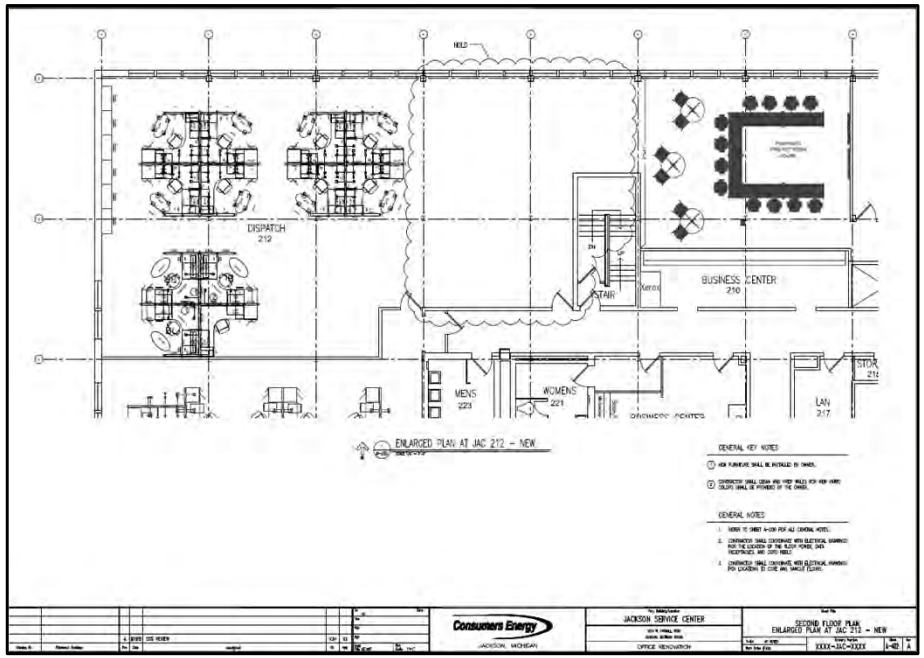
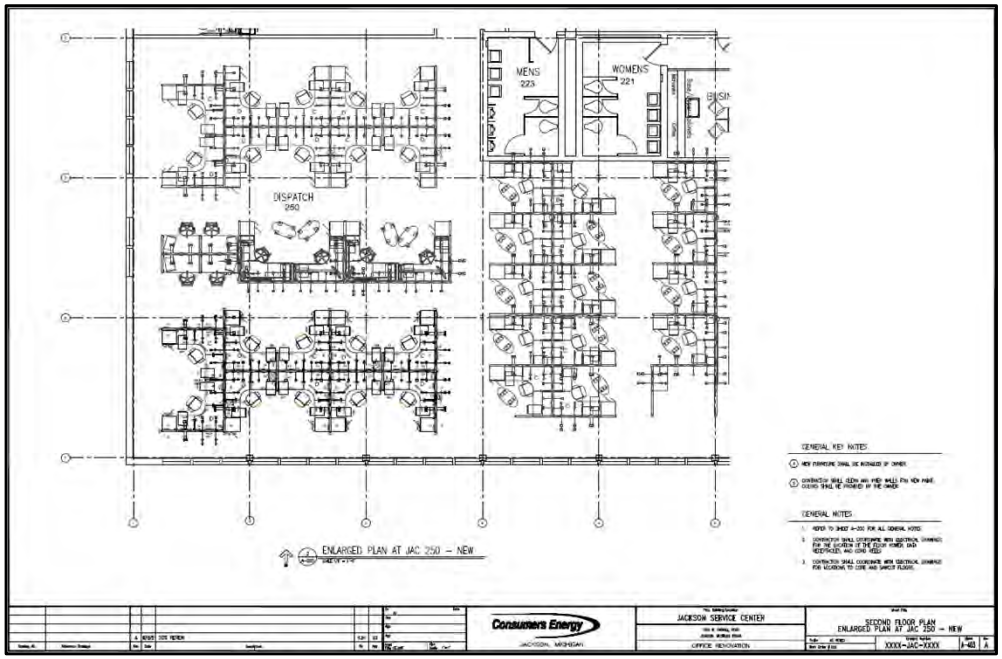
CMS ENERGY

Jackson Dispatch: Rooms 212 & 250 Conceptual Plans



Room 212



Room 250

Parnall 1-3

Plan Summary

Consumers Energy
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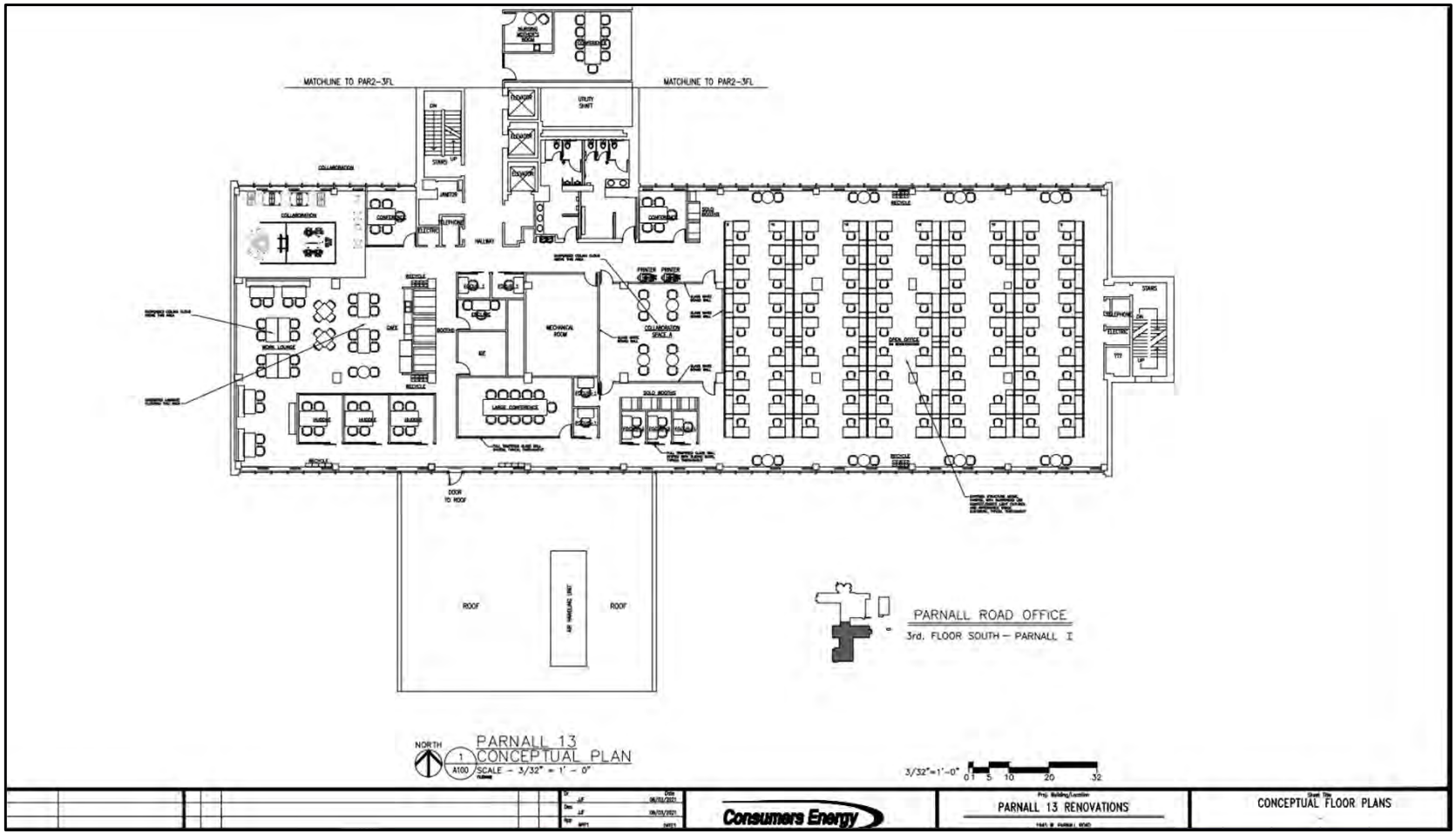
Parnall 1-3: Conceptual Floor Plan



Grand Rapids LVD UG

Plan Summary

Consumers Energy
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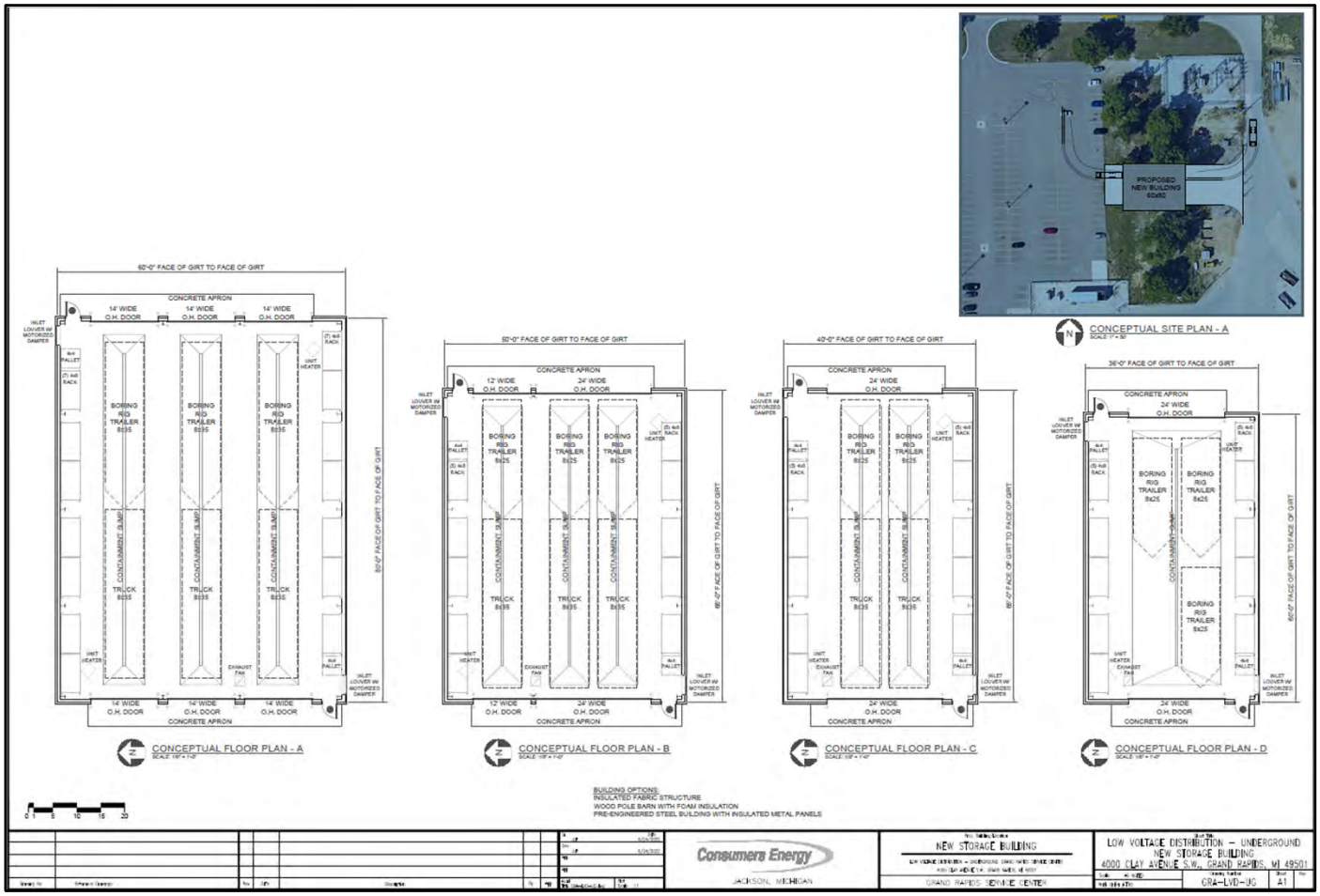
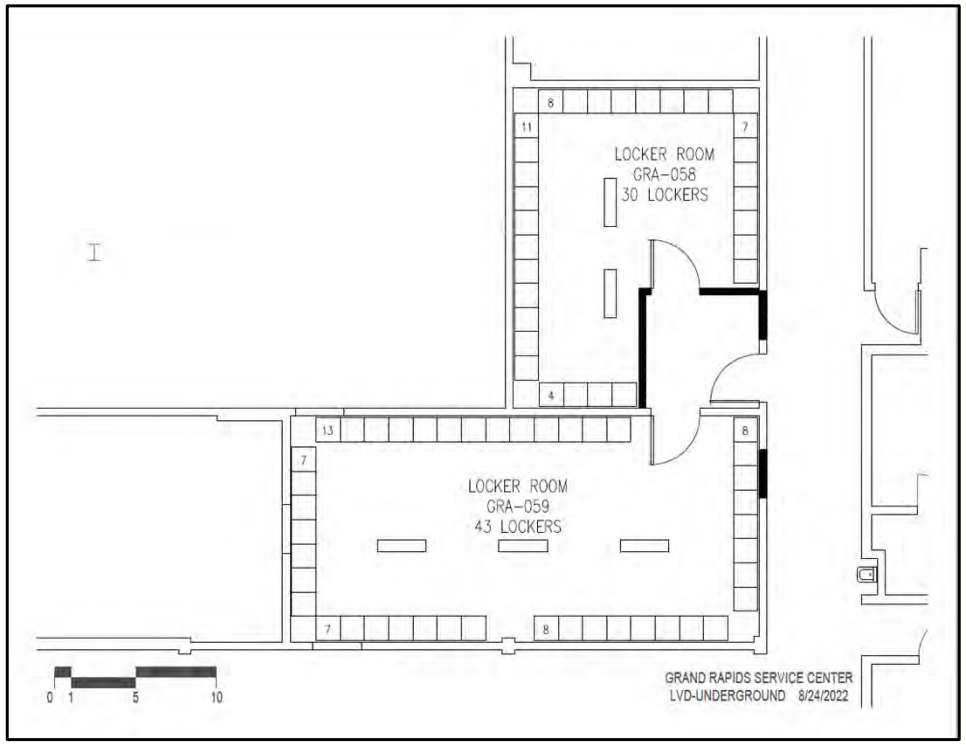
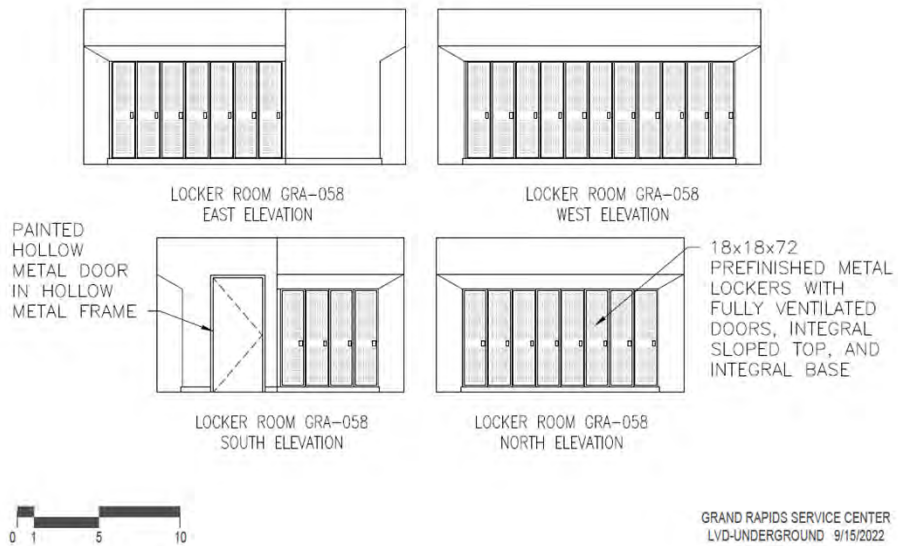
CMS ENERGY

Grand Rapids LVD UG: Conceptual Floor Plan & Site Plan



Grand Rapids LVD UG: Lockers Plan





Control/Dispatch Consolidation

Plan Summary

Consumers Energy
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CMS ENERGY

Control/Dispatch Consolidation: Alternatives Considered

Alternative 1: New Control Center Building (Case No. U-20963)

$100.4 Million

UCC Full Project Spend By Year

Item	2021 - Total Plan	2021 - Electric Only	2022 - Total Plan	2022 - Electric Only	2023 - Total Plan	2023 - Electric Only	2024 - Total Plan	2024 - Electric Only	Subtotals
Budget per year	$1,000,000		$28,764,660		$38,268,692		$32,383,096		$100,416,448
Design Engineering	$850,000		$1,000,000		$250,000		$250,000		$2,350,000
Fiber optic service			$5,000,000						$5,000,000
Site infrastructure			$4,764,660				$1,000,000		$5,764,660
Building construction			$9,500,000		$22,018,692		$5,133,096		$36,651,788
Commissioning					$1,000,000		$500,000		$1,500,000
Furnishings					$3,500,000		$500,000		$4,000,000
IT equipment and systems							$15,000,000		$15,000,000
Loadings/AFUDC	$150,000		$8,500,000		$11,500,000		$10,000,000		$30,150,000
Subtotals	**$1,000,000**	**$840,000**	**$28,764,660**	**$24,162,314**	**$38,268,692**	**$32,145,701**	**$32,383,096**	**$27,201,801**	**$100,416,448**

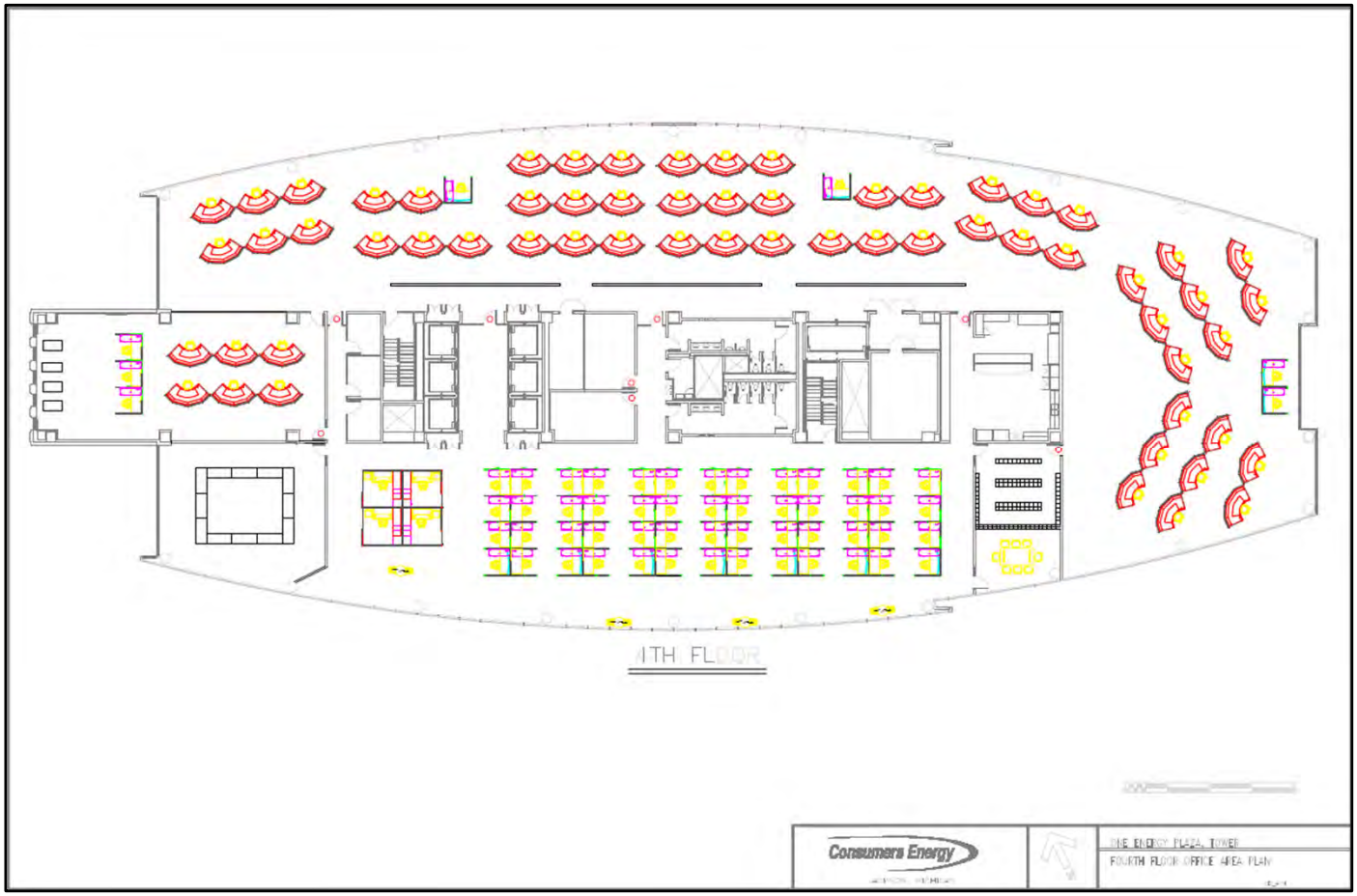
Alternative 2: Use OEP Floors 3 & 4 and JSC Backup Site (Current Case)

$14.8 Million

Location		Historical Cost 2022	Plan Cost 2023	Plan Cost 2024	Plan Cost 2025	Plan Cost 2026	Plan Cost 2027	Total Cost
Control/Dispatch Center	Master Planning	$80,871						$80,871
	Programming		$65,000					$65,000
	Land Acquisition							$0
	Engineering		$353,460		$57,540			$411,000
	Construction		$1,027,678	$5,287,740	$3,437,280	$1,711,802		$11,464,500
	Furnishings		$105,000		$2,415,000	$105,000		$2,625,000
	Commissioning			$130,000		$105,100		$235,100

Control/Dispatch Consolidation: OEP 3rd Floor Conceptual Plan

Control/Dispatch Consolidation: OEP 4th Floor Conceptual Plan



South Monroe Service Center Building Renovations Rough Order of Magnitiude (ROM) Rev (0)

This is a conceptual estimate with an expected accuracy range of **-30%/+50%.**

SCOPE: Renovation of 3,830 FT2 of office and mezzanine spaces to include architectural/mechanical/electrical upgrades.
Ventilation improvements of the existing internal parking area (IPA) and the addition of an attached 1,300 FT2 storage building.
Total affected space 11,027 FT2.

Anticipated Construction Cost	$1,839,567.86
Construction Contingency	6.8%

			Cost		Contingency		Total Cost
5101500	Material Stock Issues	$	105.74	$	7.19	$	112.93
5101700	NonStock Material (FURNISHINGS)	$	79,859.62	$	5,430.45	$	85,290.07
5101700	NonStock Material (IT EQPT)	$	44,612.00	$	3,033.62	$	47,645.62
5101750	N-Stk Mtl Nonstorerm	$	-	$	-	$	-
5200800	Lodging	$	-	$	-	$	-
5201200	General Travel-Other	$	1,327.73	$	90.29	$	1,418.02
5201600	Meals & Ent-50%	$	-	$	-	$	-
5202800	Other Buisness Expenses	$	3,245.56	$	220.70	$	3,466.26
5210000	Fees-Regulatory/Permit	$	-	$	-	$	-
5227000	Indirect Lbr Cr/Adj (FEDT)	$	49,175.22	$	3,343.91	$	52,519.13
5360000	IT Tech Chgbk-Labor	$	34,531.06	# $	2,348.11	$	36,879.17
5361000	IT SDvlp Chgbk-Labor	$	2,278.33	# $	154.93	$	2,433.26
5373000	IS&T Tech Chgbk-Contractor	$	3,156.63	# $	214.65	$	3,371.28
5374000	IT SDvlp Chgbk-Contractor	$	279.98	# $	19.04	$	299.02
5380000	Lab Services Chargeback-Labor	$	1,200.00	$	81.60	$	1,281.60
5380659	Lab Chargeback-LaborNDT	$	-	$	-	$	-
5390000	Lab Srvc Chgbk-NLbr	$	600.00	$	40.80	$	640.80
5390659	Lab Chargeback-NonLabor NDT	$	-	$	-	$	-
5503500	Other Outside Services - CONSTRUCTION: RENOVATION	$	1,839,567.86	$	125,090.61	$	1,964,658.47
5503500	Other Outside Services - DESIGN FEE - WHITMAN	$	126,200.00	$	8,581.60	$	134,781.60
5503500	Other Outside Services - FURNISHINGS INSTALL - MARXMODA	$	9,140.38	$	621.55	$	9,761.93
5503500	Other Outside Services - IT MGMT: CSM	$	106,897.00	$	7,269.00	$	114,166.00
5503500	Other Outside Services - IT CABLING: CPS	$	15,850.00	$	1,077.80	$	16,927.80
5503500	Other Outside Services - AV: BLUEWATER	$	49,649.99	$	3,376.20	$	53,026.19
5503500	Other Outside Services - SHELVING/INSTALL	$	28,615.38	$	1,945.85	$	30,561.23
5504100	BTS O/S Managed Services	$	-	$	-	$	-
5508000	Contractor Costs-Other	$	12,740.56	$	866.36	$	13,606.92
5509000	Contractor Costs - Labor (Pro-Unlimited)	$	141,561.82	$	9,626.20	$	151,188.02
5890000	Other Nonlabor Expense	$	-	$	-	$	-
5894000	Sales/Salvage	$	-	$	-	$	-
A1000	OM&C Direct Labor	$	4,240.00	$	288.32	$	4,528.32
A3000	Non Exempt Direct Labor	$	-	$	-	$	-
A3500	Exempt Direct Labor (CE Facilities Staff)	$	28,145.08	$	1,913.87	$	30,058.95
M1034	Real Estate Services - Labor	$	-	$	-	$	-
M1061	ENVIRONMENTAL LABOR	$	-	$	-	$	-
M1090	Facil Eng/Proj Labor	$	-	$	-	$	-
M1516	Environ Compl - Labor	$	-	$	-	$	-
M1520	Facil Eng Proj Cap L	$	-	$	-	$	-
M2034	Real Estate - Non Lbr	$	-	$	-	$	-
M2090	FACIL ENG NLABOR	$	-	$	-	$	-
M2516	Environ Compl - NLbr	$	-	$	-	$	-
M2520	Fac Eng Proj Cap Nlb	$	-	$	-	$	-
	Project Direct Totals:	**$**	**2,582,979.95**	**$**	**175,642.64**	**$**	**2,758,622.58**

5231300	OPEB Expense Capitalized	1,917.60
5250000	Pwr Plt Capitalized AFUDC	45,325.00
5251000	Pwr Plt Capitalized Pension	8,507.65
5252000	PP Capitalz Oth Cost	20,733.28
5253000	PP Capitalz Adm&Gen	7,930.19
	Corporate Overheads:	**84,413.72**
	Total Capital Project Costs:	**2,843,036**

O & M Costs

IT

5101700	NonStock Material	$	2,500.00
5360000	IT Tech Chgbk-Labor	$	1,500.00
5361000	IT SDvlp Chgbk-Labor	$	-
5373000	IS&T Tech Chgbk-Contractor	$	-
5374000	IT SDvlp Chgbk-Contractor	$	-
5503500	Other Outside Services -	$	2,500.00
5504100	BTS O/S Managed Services -	$	-
	IT O & M:	**$**	**6,500.00**

O & M: 35687754

5101500	Material Stock Issues	$	-
5101750	N-Stk Mtl Nonstroerm	$	-
5503500	Other Outside Services - Remove Existing Furnishings	$	1,800.00
A3500	Exempt Direct Labor	$	-
	O & M:	**$**	**1,800.00**

Total Project Costs:		**2,851,336**
CAPITAL COSTS		
CONSTRUCTION:	$	1,779,321.16
COR:	$	60,246.70
DESIGN SERVICES:	$	126,200.00
IT:	$	257,254.99
FURNISHINGS:	$	89,000.00
EQUIPMENT:	$	28,615.38
CONTRACT CONST MGMT:	$	154,302.38
CE STAFFING:	$	82,760.29
CE MISC COSTS:	$	5,279.04
CONTINGENCY:	$	175,642.64
OVERHEADS:	$	84,413.72
TOTAL CAPITAL COSTS	**$**	**2,843,036.30**
O & M COSTS:		
CONSTRUCTION:	$	-
MISCELLANEOUS:		
FURNISHINGS:	$	1,800.00
IT:	$	6,500.00
TOTAL O & M COSTS:	**$**	**8,300.00**
TOTAL PROJECT COSTS:	**$**	**2,851,336.30**

S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of	)	
CONSUMERS ENERGY COMPANY	)	
for authority to increase its rates for the	)	Case No. U-21389
the generation and distribution of	)	
electricity and for other relief.	)	

EXHIBITS

OF

CULLEN M. HALE

ON BEHALF OF

CONSUMERS ENERGY COMPANY

May 2023

Schedule: B-5.6

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual and Projected Capital Expenditures
Customer Experience and Operations
($000)

Case No.: U-21389
Exhibit No.: A-12 (CMH-1)
Schedule: B-5.6
Page: 1 of 2
Witness: CMHale
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)
		Historical Year	**Projected Bridge Period**			**Projected Test Year**
Line No	**Description**	**12 Mos Ended 12/31/2022**	**12 Mos Ended 12/31/2023**	**2 Mos Ending 2/29/2024**	**14 Mos Ending 2/29/2024**	**12 Mos Ending 2/28/2025**
1	Business Customer Care	-	-	-	-	-
	Contractor					
	Labor					
	Materials					
	Business Expenses					
	Contingency					
	Other (Loadings, Chargebacks)					
2	Customer Contact Center	3	-	-	-	-
	Contractor					
	Labor	3				
	Materials					
	Business Expenses					
	Contingency					
	Other (Loadings, Chargebacks)	1				
3	Digital Customer Operations	49	310	-	310	-
	Contractor	30	310		310	
	Labor					
	Materials					
	Business Expenses					
	Contingency					
	Other (Loadings, Chargebacks)	19				
4	**Total Capital**	52	310	-	310	-

Schedule: B-5.6

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual and Projected Capital Expenditures

($000)

Case No.: U-21389
Exhibit No.: A-12 (CMH-1)
Schedule: B-5.6
Page: 2 of 2
Witness: CMHale
Date: May 2023

		Projected			
		2 Mos Ending 2/28/2023	**12 Mos Ending 2/29/2024**	**12 Mos Ending 2/28/2025**	**26 Mos Ending 2/28/2025**
5	Business Customer Care	-	-	-	-
	Contractor				
	Labor				
	Materials				
	Business Expenses				
	Contingency				
	Other (Loadings, Chargebacks)				
6	Customer Contact Center	-	-	-	-
	Contractor				
	Labor				
	Materials				
	Business Expenses				
	Contingency				
	Other (Loadings, Chargebacks)				
7	Digital Customer Operations	-	310	-	310
	Contractor		310		310
	Labor				
	Materials				
	Business Expenses				
	Contingency				
	Other (Loadings, Chargebacks)				
8	**Total Capital**	-	310	-	310

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
Customer Experience and Operations
($000)

Case No.: U-21389
Exhibit No.: A-109 (CMH-2)

Witness: CMHale
Date: May 2023

Line No.	(a) Description	(b) 2022 Actual	(c) Projected 12-Mos Ending 2/28/2025
1	**Billing & Payment**	**18,212**	**18,301**
	Labor	2,640	2,604
	Material	761	769
	Contractor	9,299	9,345
	Non-Labor Overheads	0	0
	Non-Labor Other	5,513	5,583
2	**Customer Interactions**	**25,769**	**26,544**
	Labor	18,115	18,744
	Material	30	0
	Contractor	6,616	6,137
	Non-Labor Overheads	0	0
	Non-Labor Other	1,009	1,664
4	**Customer Experience & Ops O&M**	**$ 43,982**	**$ 44,845**
	Labor	20,755	21,348
	Material	791	769
	Contractor	15,914	15,482
	Non-Labor Overheads	0	0
	Non-Labor Other	6,521	7,247

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
Customer Experience and Operations
($000)

Case No.: U-21389
Exhibit No.: A-109 (CMH-2)
Page: 2 of 4
Witness: CMHale
Date: May 2023

Line No.	(a) Description	(b) 2022 Actual	(c) Projected 12-Mos Ending 2/28/2025
1	**Customer Billing**	**8,784**	**9,089**
	Labor	2,250	2,185
	Material	758	769
	Contractor	498	576
	Non-Labor Overheads		
	Non-Labor Other	5,278	5,559
2	**Customer Payment Programs**	**9,429**	**9,212**
	Labor	390	419
	Material	3	
	Contractor	8,801	8,769
	Non-Labor Overheads		
	Non-Labor Other	235	24
3	**Billing & Payment O&M**	**$ 18,212**	**$ 18,301**
	Labor	2,640	2,604
	Material	761	769
	Contractor	9,299	9,345
	Non-Labor Overheads	0	0
	Non-Labor Other	5,513	5,583

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of Actual & Projected O&M Expenses
Customer Experience and Operations
($000)

Case No.: U-21389
Exhibit No.: A-109 (CMH-2)
Page: 3 of 4
Witness: CMHale
Date: May 2023

Line No.	(a) Description	(b) 2022 Actual	(c) Projected 12-Mos Ending 2/28/2025
1	**Analytics & Outreach**	**470**	**446**
	Labor	205	109
	Material	8	
	Contractor	248	333
	Non-Labor Overheads		
	Non-Labor Other	9	4
2	**Business Customer Care**	**2,110**	**2,256**
	Labor	1,902	1,936
	Material	2	
	Contractor	152	269
	Non-Labor Overheads		
	Non-Labor Other	54	51
3	**Credit & Assistance**	**2,942**	**3,605**
	Labor	1,758	1,889
	Material	1	
	Contractor	985	1,363
	Non-Labor Overheads		
	Non-Labor Other	198	353
4	**Customer Contact Center**	**16,349**	**16,626**
	Labor	12,935	13,258
	Material	16	
	Contractor	2,821	2,215
	Non-Labor Overheads		
	Non-Labor Other	576	1,152
5	**Digital Customer Operations**	**3,899**	**3,611**
	Labor	1,315	1,550
	Material	3	
	Contractor	2,409	1,957
	Non-Labor Overheads		
	Non-Labor Other	172	104
6	**Customer Interactions O&M**	**$ 25,769**	**$ 26,544**
	Labor	18,115	18,744
	Material	30	0
	Contractor	6,616	6,137
	Non-Labor Overheads	0	0
	Non-Labor Other	1,009	1,664

MICHIGAN PUBLIC SERVICE COMMISSION
Consumers Energy Company
Summary of O&M Expenses Projected Using Inflation
Customer Experience and Operations
($000)

Case No.: U-21389
Exhibit No.: A-109 (CMH-2)
Page: 4 of 4
Witness: CMHale
Date: May 2023

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Line No.	Description	2022 Actual	Base O&M for Merit & Inflation 12 Mos Ended Dec 31, 2022	Merit & Inflation 12 Mos Ending Dec 31, 2023	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2023	Merit & Inflation 12 Mos Ending Dec 31, 2024	Base O&M for Merit & Inflation 12 Mos Ending Dec 31, 2024	Merit & Inflation 2 Mos Ending 2/28/2025	Other Adjustments	Projected O&M 12 Mos Ending 2/28/2025
				(c) * Inflation Rate		(e) * Inflation Rate		(g) * Inflation Rate		(b) + (d) + (f) + (h) + (i)
1	**Customer Billing**	**18,212**	**18,212**	**710**	**18,923**	**416**	**19,339**	**68**	**-1,106**	**18,301**
	Labor	2,640	2,640	103	2,743	60	2,803	10	-209	2,604
	Material	761	761	30	791	17	808	3	-42	769
	Contractor	9,299	9,299	363	9,661	213	9,874	35	-563	9,345
	Non-Labor Overheads	0	0	0	0	0	0	0	0	0
	Non-Labor Other	5,513	5,513	215	5,728	126	5,854	20	-291	5,583
2	**Customer Interactions**	**25,769**	**25,769**	**1,005**	**26,774**	**589**	**27,363**	**96**	**-915**	**26,544**
	Labor	18,115	18,115	706	18,821	414	19,236	67	-559	18,744
	Material	30	30	1	31	1	32	0	-32	0
	Contractor	6,616	6,616	258	6,874	151	7,025	25	-913	6,137
	Non-Labor Overheads	0	0	0	0	0	0	0	0	0
	Non-Labor Other	1,009	1,009	39	1,048	23	1,071	4	589	1,664
3	**Customer Experience & Ops O&M**	**$ 43,982**	**$ 43,982**	**$ 1,715**	**$ 45,697**	**$ 1,005**	**$ 46,702**	**$ 163**	**$ (2,020)**	**$ 44,845**
	Labor	20,755	20,755	809	21,564	474	22,039	77	-768	21,348
	Material	791	791	31	822	18	840	3	-74	769
	Contractor	15,914	15,914	621	16,535	364	16,899	59	-1,476	15,482
	Non-Labor Overheads	0	0	0	0	0	0	0	0	0
	Non-Labor Other	6,521	6,521	254	6,776	149	6,925	24	298	7,247

Notes

		2023	2024	2025
4	Annual merit increase			
	Annual merit increase	3.9%	2.2%	2.1%
	Number of months in the period	12	12	2
	Pro-rated merit increase	3.9%	2.2%	0.4%
	Annual inflation rates per WP-JCA-51			
	Annual inflation rates	3.9%	2.2%	2.1%
	Number of months in the period	12	12	2
	Pro-rated inflation rate	3.9%	2.2%	0.4%