Table 6. Proposed high-voltage transmission line additions filed covering calendar Year 2014, by North American Electric Reliability Corporation, 2015 through 2027

Geographic Area		Voltag	ge	Capacity	In-Service		Electrical Connection				Company Inform	nation				Project Informati	on
Data Year NERC Region	Type	Operating (kV)	Design (kV)	Rating (MVa)	Month/Year	From Terminal	To Terminal	Length (Miles) Type	Cor Coc	mpany de Company Name	Organizational Type	Ownersh (Percent	•	t	Level of Certainty	Primary Driver 1	Primary Driver 2
2014 FRCC		200-299	115		•			3.8	ОН	18445 f Tallahassee		•		SUB 7 230.00) Under Constructi	•	•
2014 FRCC		100-120	115		•				ОН	18445 f Tallahassee	N		100% ıb 14	115-Sub 7 115	5 Planned	Reliability	
2014 FRCC		100-120	115		•			2.9	ОН	18445 of Tallahassee	N	1	100% IO - H	OPKINS 115.00) Planned	Reliability	
2014 FRCC		100-120	115				ORANGE CITY 115.00	6.2	OH	6455 nergy Florida		l		GE CITY 115.00		Reliability	
2014 FRCC 2014 FRCC		100-120 100-120	115 115		•			11.3 11.3	OH OH	6455 nergy Florida 6455 nergy Florida		 		- PERRY 115.00 - PERRY 115.00		Reliability Reliability	
2014 FRCC 2014 FRCC		100-120	115		•			11.3	ОН	6455 nergy Florida		! 		- PERRY 115.00 - PERRY 115.00		Reliability	
2014 FRCC		200-299	230		•		ORANGE CITY 230.00	5.8	ОН	6455 nergy Florida		l		GE CITY 230.00		Reliability	
2014 FRCC	AC	200-299	230	1260	11/2021	SPG VALLEY 230.00	VANDOLAH	29.0	ОН	6455 nergy Florida		I	100% · VAN	DOLAH 230.00) Planned	Reliability	
2014 FRCC		100-120	115		•		INVERNESS 115.00	9.9	ОН	6455 nergy Florida		I		RNESS 115.00		Reliability	
2014 FRCC		200-299	230					12.6	OH	6455 nergy Florida		l		RIVER 230.00		Reliability	
2014 FRCC 2014 FRCC		200-299 200-299	230 230				BRONSON DUKE230.00 TURNPIKE 230.00	13.6 15.1	OH UG	6455 nergy Florida 6452 ght Company		1		N DUKE230.00 RNPIKE 230.00		Reliability Reliability	
2014 FRCC 2014 FRCC		200-299	230				BUCKINGHAM 230.00	2.5	OH	6452 ght Company		' 		NGHAM 230.00		Reliability	•
2014 FRCC		200-299	230					14.9	ОН	6452 ght Company		I		DWAY 230.00		Reliability	•
2014 FRCC	AC	200-299	230	119	5 12/2017	BUCKINGHAM 230.00	ALICO 230.00	16.0	ОН	6452 ght Company		I	100% 0.00	- ALICO 230.00) Planned	Reliability	Reliability
2014 FRCC		200-299	230		-		BUCKINGHAM 230.00	5.0	ОН	6452 ght Company		I		MYERS 230.00		Reliability	•
2014 FRCC		200-299	230		-			45.0	ОН	6452 ght Company		1		RAVEN 230.00		Reliability	•
2014 FRCC 2014 FRCC		200-299 200-299	230 230		•			17.0	OH	6452 ght Company		1	100% 0 - N	1YAKKA 230.00) Planned) Planned	Reliability	•
2014 FRCC 2014 FRCC		200-299	230		•			19.0 52.0	OH OH	6452 ght Company 6452 ght Company		! !	100% CLE) Planned	•	ar Integration ar Integration
2014 FRCC		400-599	500		-			43.0	ОН	6452 ght Company		I	100% CLE) Planned		ar Integration
2014 FRCC		400-599	500		-			43.0	ОН	6452 ght Company		I	100% · CLE	ARSKY 500.00) Planned	•	ar Integration
2014 FRCC	AC	200-299	230	759	9 12/2018	ST JOHNS 230.00	PELLICER 230.00	21.5	ОН	6452 ght Company		I	100% - PEL	LICER 230.00) Planned	Reliability	Reliability
2014 FRCC		200-299	230		•			1.7	ОН	6452 ght Company		I	100% TREA		O Under Constructi	•	•
2014 FRCC		121-150	138		•			4.5	OH	6452 ght Company		I		ORIAL 138.00		Reliability	•
2014 FRCC 2014 FRCC		121-150 121-150	138 138		•			3.0 17.0	OH OH	6452 ght Company 6452 ght Company		 		OWAY 138.00 -SANPIPER 138		Reliability Reliability	•
2014 FRCC 2014 FRCC		200-299	230		-			4.4	ОН	9617 JEA	N	1		Center-Nocate		Other	•
2014 FRCC		100-120	115			•		11.5	ОН	14610; Commission	N		0,	GRANT 115.00		Reliability	
2014 FRCC		200-299	230			Aspen	Polk	6.3	ОН	18454 tric Company		I	100%	Aspen-Poll	k Under Constructi	od Integration	·
2014 FRCC	AC	200-299	230		•	•	Mines W	10.4	ОН	18454 tric Company		1	100% A	spen-Mines W	/ Under Constructi	od Integratior	
2014 FRCC		200-299	230			•	FishHawk (Circuit 1)	6.0	ОН	18454 tric Company		1		•) Under Constructi	•	
2014 FRCC 2014 FRCC		200-299 200-299	230 230		•	•	FishHawk (Circuit 2) Mines E	6.0	OH OH	18454 tric Company		1	100% FishF 100%	*) Under Constructi Under Constructi	_	
2014 FRCC 2014 FRCC		200-299	230					10.8 8.2	ОН	18454 tric Company 18454 tric Company		! !		nan (Circuit 2		d Integration	
2014 FRCC		200-299	230		-		·	11.4	ОН	18454 tric Company		I	•	spen (Circuit 2	•	d Integration	
2014 MISO		100-120	115	40 Mvar		Maynard	Capacitor			Northern Sta	tes Power (X	cel Ener	gy) MTE	P05 XEL	Planned	Reliability	
2014 MISO		200-299	230			Panther	???	ОН		Northern Sta	•	•		P05 XEL	Planned	Reliability	
2014 MISO		151-199	161		•		Carrier Mills 161kV	25 OH		Southern Illir		•		er Mills 161kV		Reliability	
2014 MISO 2014 MISO		151-199 100-120	161	1 5 194 MV/	-		161/69 kV transformer Scott County	OH 20.1 OH		Southern Illir Northern Sta		•		er Mills 161kV		Reliability Reliability	
2014 MISO 2014 MISO		300-399	345			_	Briggs Road (North LaCrosse			Northern Sta	•	`	• • •	iild Westgate t win Cities - Ro	c Under Constructio	•	
2014 MISO		151-199	161				Substation	32 3.7		Northern Sta	•	`	• • •		c Under Construction	•	
2014 MISO		200-299	230)	6/2017	Durbin	230/69 substation			Duke Energy	Corporation		Durk	in 230/69	Planned	Reliability	
2014 MISO		121-150	138			· ·	Trienda	3.4 OH		American Tra			•	te Portage-Tri		Reliability	
2014 MISO		600+	765			•	Greentown	69.44 OH		Duke Energy			•	osed MVP Por		Reliability	Economics / Congestion
2014 MISO 2014 MISO		121-150 300-399	138	3 179 5 1800 M\			Greentown Ellendale	10.22 OH 165 OH		Duke Energy Otter Tail Po	•		•	osed MVP Por Portfolio 1 - E		Reliability Reliability	Economics / Congestion Economics / Congestion
2014 MISO 2014 MISO		300-399		5 1800 M\ 5 1800 M\	•	J	Brookings	65 OH		Otter Tail Po	•	•		Portfolio 1 - B		Reliability	Economics / Congestion
2014 MISO		200-299		674 MV		=	Big Stone South	2 OH		Otter Tail Po	•	•		Portfolio 1 - B	•	Reliability	Economics / Congestion
2014 MISO		200-299	230	674 MV	9/2017	Big Stone	Big Stone South	2 OH		Otter Tail Po	wer Compan	У	MVP	Portfolio 1 - B	i _i Planned	Reliability	Economics / Congestion
2014 MISO		300-399	345				Faraday	35.9 OH		Ameren Serv	•	•	•	osed MVP Por		Reliability	Economics / Congestion
2014 MISO		300-399	345			•	Kansas	70.2 OH		Ameren Serv	•	•	•	osed MVP Por		Reliability	Economics / Congestion
2014 MISO 2014 MISO		300-399 300-399	345 345				Sugar Creek Sugar Creek	34.5 OH 1.5 OH		Ameren Serv Ameren Serv			•	osed MVP Por osed MVP Por		Reliability Reliability	Economics / Congestion Economics / Congestion
2014 MISO 2014 MISO		300-399	345		•	•	Area Connection Work	1.5 OH OH		Ameren Serv	•	•	•	osed MVP Por osed MVP Por		Reliability	Economics / Congestion
2014 MISO		300-399	345		11/2018	•	Area Connection Work	ОН		Ameren Serv	•	•	•	osed MVP Por		Reliability	Economics / Congestion
2014 MISO		121-150	138		•		Mt. Zion	4.9 OH		Ameren Serv	•	•	•	osed MVP Por		Reliability	Economics / Congestion
2014 MISO		121-150	138				Mt. Zion Rt. 121	2.37 OH		Ameren Serv	•	•	•	osed MVP Por		Reliability	Economics / Congestion
2014 MISO		121-150	138		•		Route 51	4.43 OH		Ameren Serv	•	•	•	osed MVP Por		Reliability	Economics / Congestion
2014 MISO		121-150	138		•		Install 4-138 kV breakers	2.011		Ameren Serv	•	•	•	osed MVP Por		Reliability	Economics / Congestion
2014 MISO		121-150	138 138				Mt. Zion PPG Mt. Zion PPG	2 OH 2 OH		Ameren Serv Ameren Serv	•	•	•	osed MVP Por osed MVP Por		Reliability Reliability	Economics / Congestion Economics / Congestion
2014 MISO		1/1-1711													a rainicu	VIIILV	ECONOMICS / COMEESHUII
2014 MISO 2014 MISO		121-150 300-399	345			•	Sidney	25 OH		Ameren Serv	•	•	•	osed MVP Por		Reliability	Economics / Congestion

2014 MISO	300-399	345	1793	6/2016 Sidney		ОН	Ameren Services Company	Proposed MVP Porti Under Constructi	or Reliability	Economics / Congestion
2014 MISO	300-399	345		6/2016 Rising	Area Connection Work	ОН	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		6/2016 Sidney	Area Connection Work	ОН	Ameren Services Company	Proposed MVP Porti Planned	, Reliability	Economics / Congestion
2014 MISO	300-399	345	1793	11/2018 Ottumwa	Zachary	36 OH	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
			560	•	•	30 011	• •	•	•	
2014 MISO	300-399	345	500	11/2018 Zachary	Install Transformer	46.6.00	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		6/2017 Ottumwa	Iowa border	16.6 OH	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		6/2017 Ottumwa	345 kV terminal		Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345	1793	6/2017 Ottumwa	IA/MO Border	20 OH	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	151-199	161		11/2018 Zachary			Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	121-150	138	240	6/2015 Madison Industrial	Madison State Street	2.35 OH	Ameren Services Company	Madison Industrial-I Planned	Reliability	
2014 MISO	300-399	345	560	6/2016 Northwest Cape 345/161 I			Ameren Services Company	Nortwest Cape Area Planned	Reliability	
2014 MISO	300-399	345	1793	6/2016 Lutesville	Northwest Cape	11 OH	Ameren Services Company	Nortwest Cape Area Planned	Reliability	
				•	•	II OH	• •	•	-	
2014 MISO	300-399	345	560	6/2016 Fargo 345/138 kV	New Substation		Ameren Services Company	New 345kV Supply a Planned	Reliability	
2014 MISO	300-399	345	1793	6/2016 Fargo	Maple Ridge	20 OH	Ameren Services Company	New 345kV Supply a Planned	Reliability	
2014 MISO	300-399	345		6/2016 Maple Ridge 345 kV Switch	hii New Substation		Ameren Services Company	New 345kV Supply a Planned	Reliability	
2014 MISO	100-120	115		3/2016 Sartell	Le Sauk	3 OH	Great River Energy	Sartell (SEA) 3.0 mile Under Construction	or Reliability	
2014 MISO	100-120	115	310	5/2015 Savanna	Cromwell	29 OH	Great River Energy	Savanna-Cromwell Under Construction	or Reliability	
2014 MISO	200-299	230		5/2021 Ramsey	Grand Forks	81.02 OH	Great River Energy	Ramsey-Grand Fork: Under Construction	or Reliability	
2014 MISO	151-199	161	167	12/2014 Sub T Fort Dodge			MidAmerican Energy Company	Sub T - Boone Jct 16 Planned	Reliability	
2014 MISO	300-399	345	1793	6/2015 Turkey Hill	Cahokia	18.8 OH	Ameren Services Company	Turkey Hill-Cahokia Planned	Reliability	
				•				•	•	Faculties / Compostion
2014 MISO	300-399	345	1793	11/2017 Meredosia	Ipava	48 OH	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345	1793	11/2017 Meredosia	Austin	76.5 OH	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345	1793	11/2016 Maywood	Herleman	15.2 OH	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345	1793	11/2016 Herleman	Meredosia	46.6 OH	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345	1793	6/2017 Ipava		ОН	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		11/2015 Herleman	Area Connection Work	ОН	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		11/2015 Austin	Area Connection Work	ОН	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		6/2017 Ipava	Area Connection Work	ОН	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
				•				•	•	
2014 MISO	300-399	345		11/2016 Meredosia	Area Connection Work	ОН	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		11/2018 Fargo	Sandburg	39 OH	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		12/2016 Oak Grove	Sandburg	32 OH	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		12/2016 Oak Grove	345 kV terminal		Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	151-199	161	410	12/2016 Sub 56	Sub 85	7.5 OH	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		12/2016 Fargo		ОН	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	121-150	138		11/2016 Sandburg			Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	100-120	115	120	7/2018 North Dickinson	Dickinson West	3 OH	Montana-Dakota Utilities Company	Dickinson 115 kV Lo Planned	Reliability	Leonormes / Congestion
			120	•		3 OH			•	
2014 MISO	100-120	115		7/2018 North Dickinson	2 PCB		Montana-Dakota Utilities Company	Dickinson 115 kV Lo Planned	Reliability	
2014 MISO	300-399	345		12/2018 Cardinal	Substation		American Transmission Co. LLC	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345	1446	12/2018 Briggs Road	North Madison	161.8 OH	American Transmission Co. LLC	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	121-150	138	272	12/2018 North Madison	Cardinal	19.9 OH	American Transmission Co. LLC	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345	1446	12/2018 North Madison	Cardinal	19.9 OH	American Transmission Co. LLC	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		12/2018 Briggs Road (North LaCros	se Substation		American Transmission Co. LLC	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345	1399	12/2020 Eden	Hickory Creek	49 OH	American Transmission Co. LLC	Proposed MVP Porti Planned	Reliability	Economics / Congestion
		345	1399	·	•			·	•	
2014 MISO	300-399		1399	12/2020 Eden	Cardinal	60 OH	American Transmission Co. LLC	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		12/2020 Hickory Creek			American Transmission Co. LLC	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		12/2020 Eden			American Transmission Co. LLC	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		12/2020 Cardinal			American Transmission Co. LLC	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345	1793	11/2018 Pana	Austin	33.6 OH	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		11/2016 Pana	Area Connection Work	ОН	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345	1793	11/2018 Zachary	Maywood	60 OH	Ameren Services Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345	1793	11/2015 Maywood	Establish 345 kV Sub	33 3	Ameren Services Company	Proposed MVP Porti Under Constructi	•	Economics / Congestion
2014 MISO	300-399	345	1755	12/2019 Reynolds	Hiple	ОН	Northern Indiana Public Service Compa	•	Reliability	Economics / Congestion
			4720	•	•		•	' '	•	
2014 MISO	300-399	345	1739	12/2016 Obrien County	Webster	122 OH	MidAmerican Energy Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		12/2016 Obrien County			MidAmerican Energy Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		12/2016 Webster			MidAmerican Energy Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		12/2016 Kossuth Co.			MidAmerican Energy Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345	1386	12/2015 Petersburg - Wheatland	AEP Breed Station	52.2 OH	Midcontinent Independent System Ope	era MTEP11 TCFS Flowg Planned	Economics ,	Congestion
2014 MISO	300-399	345		12/2015 Petersburg	345 kV breakers		Midcontinent Independent System Ope	era MTEP11 TCFS Flowg Planned	Economics	Congestion
2014 MISO	300-399		800 MV	6/2015 Blackhawk	Hazleton	12 OH	MidAmerican Energy Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345	500	12/2015 Black Hawk	Black Hawk	12 011	MidAmerican Energy Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
				,		26.24.011		•	•	
2014 MISO	151-199	161	410	12/2015 Franklin	Butler	26.24 OH	MidAmerican Energy Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	151-199	161	410	12/2015 Butler	Union Tap	15.93 OH	MidAmerican Energy Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	151-199	161	410	12/2015 Union Tap	Black Hawk	7.9 OH	MidAmerican Energy Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	151-199	161	410	12/2015 Black Hawk	Hazleton	24 OH	MidAmerican Energy Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	151-199	161 33	35 MVA	6/2015 Blackhawk	Hazleton	12 OH	MidAmerican Energy Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	151-199	161		6/2015 Blackhawk	Hazleton	ОН	MidAmerican Energy Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399		800 MV	6/2015 Hazleton	Substation		MidAmerican Energy Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
2014 MISO	300-399	345		12/2015 Blackhawk	Hazleton	25 OH	MidAmerican Energy Company	Proposed MVP Porti Planned	Reliability	Economics / Congestion
				·				•	•	Leonomics / Congestion
2014 MISO	100-120	120		6/2015 Calla (formerly Dexter)	Madrid	0.1 OH	ITC Transmission	Calla (formerly Dext Under Constructi	•	
2014 MISO	100-120	120		6/2015 Calla (formerly Dexter)	Majestic	0.1 OH	ITC Transmission	Calla (formerly Dext Under Construction	•	
2014 MISO	100-120	120		12/2015 Blanket for Customer Inter	rc:Throughout system		ITC Transmission	ITCT Customer Inter Under Constructi	or Reliability	
2014 MISO	100-120	115	361	6/2015 West Creek	Chaska	2.9 OH	Northern States Power (Xcel Energy)	Highway 212 Corrid Under Construction	or Reliability	
2014 MISO	100-120	115		6/2015 Chaska	Scott County	1.9 OH	Northern States Power (Xcel Energy)	Highway 212 Corrid Under Constructi	or Reliability	
2014 MISO	100-120	115		6/2015 Kohlman Lake	•		Northern States Power (Xcel Energy)	Kohlman Lake - Lonį Under Constructi	•	
2014 MISO	300-399	345		6/2015 Chisago County			Northern States Power (Xcel Energy)	Chisago County 2nd Under Constructi	•	
2014 MISO	100-120	115		6/2015 Chisago County			Northern States Power (Xcel Energy)	Chisago County 2nd Under Constructi	•	
			201		Kahlman Laka	2.2.011				
2014 MISO	100-120	115	361	6/2015 Goose Lake	Kohlman Lake	3.2 OH	Northern States Power (Xcel Energy)	Goose Lake - Kohlm Under Constructi	or keliability	

2014 MICO	100 130	115	261	6/2015 Coose Lake			Northern States Dower (Veel Energy)	Coose Lake Kahlm Under Construction	v Doliobility
2014 MISO 2014 MISO	100-120 100-120	115 115	361 361	6/2015 Goose Lake 7/2015 Lawrence	Sioux Falls (New)	5.4 OH	Northern States Power (Xcel Energy) Northern States Power (Xcel Energy)	Goose Lake - Kohlm Under Construction	•
2014 MISO 2014 MISO	100-120	115	361	7/2015 Lawrence 7/2015 Sioux Falls (New)	West Sioux Falls	4.3 OH	Northern States Power (Xcel Energy)	Sioux Falls 115 kV Pl Under Construction Sioux Falls 115 kV Pl Under Construction	•
2014 MISO 2014 MISO	100-120	115	201	8/2015 West Sioux Falls	West Sloux Falls	4.5 UII	Northern States Power (Xcel Energy)	Sioux Falls 115 kV Pl Under Construction	•
2014 MISO 2014 MISO	100-120	115		12/2015 Viest Sloux Falls (New)			Northern States Power (Xcel Energy)	Sioux Falls 115 kV Pl Under Construction	•
2014 MISO	100-120	115		3/2016 Lawrence			Northern States Power (Xcel Energy)	Sioux Falls 115 kV Pl Under Construction	· ·
2014 MISO	200-299	230		12/2015 MPC Prairie	NSP Prairie		Northern States Power (Xcel Energy)	Prairie 3rd transforn Under Construction	•
2014 MISO	200-299	230	564	5/2016 Bluemound	Oak Creek	0.4 OH	American Transmission Co. LLC	Uprate Oak Creek-B Planned	Reliability
2014 MISO	121-150	138	293	6/2018 Mukwonago	Edgewood	7.19 OH	American Transmission Co. LLC	Rebuild Mukwonage Planned	Reliability
2014 MISO	121-150	138	287	12/2017 Edgewood	St. Martins	7.19 OH	American Transmission Co. LLC	Rebuild Mukwonag(Planned	Reliability
2014 MISO	151-199	161	207	12/2017 Edgewood 12/2017 Heron Lake	capacitor	7.07 011	ITC Midwest	Heron Lake 50 Mvar Planned	Reliability
2014 MISO	200-299	230	187	12/2017 Deer River Substation	Substation Equipment		Minnesota Power (Allete, Inc.)	Zemple (formerly De Under Construction	•
2014 MISO	100-120	115	10	12/2015 Deer River Substation	Substation Equipment		Minnesota Power (Allete, Inc.)	Zemple (formerly Dr Under Construction	,
2014 MISO	100-120	115	122	11/2016 GRE Deer River	MP Deer River	1.75 OH	Minnesota Power (Allete, Inc.)	Zemple (formerly Dr Under Construction	•
2014 MISO 2014 MISO	121-150	138	122	12/2015 Wabash River Sta.	WIF Deel Rivel	1.75 On	Duke Energy Corporation	Wabash River 138K\ Under Construction	•
2014 MISO 2014 MISO	121-150 121-150	138		12/2015 Wabash River Sta.			Duke Energy Corporation Duke Energy Corporation	Wabash Riv 138KV (Planned	Reliability
2014 MISO	100-120	120		12/2015 Wabasii Kivei Sta. 12/2015 Bismarck	Stephens	5 OH	ITC Transmission	Bismarck - Stephens Planned	Reliability
2014 MISO	121-150	138		11/2015 Delhi	Tompkins	21 OH	METC	Delhi - Tompkins #1 Under Construction	•
2014 MISO 2014 MISO		138		11/2015 Dellii 11/2015 Delhi	Tompkins	21 OH 21 OH	METC	·	•
	121-150			•	' ·	21 UH		Delhi - Tompkins #1 Under Constructio	,
2014 MISO	100-120	120		12/2016 Blanket for Customer Interd			ITC Transmission METC	ITCT Customer Inter Planned	Reliability
2014 MISO	121-150	138	F.C.O.	12/2016 Blanket for Customer Interd	•			METC Customer Inte Planned	Reliability
2014 MISO	300-399	345	560	12/2015 Bland 345/138 kV Sub	Establish 345/138 kV Sub	OU	Ameren Services Company	Bland 345/138 kV St Planned	Reliability
2014 MISO	121-150	138	128	12/2015 Bland	Tegeler	OH	Ameren Services Company	Bland 345/138 kV St Planned	Reliability
2014 MISO	121-150	138	128	12/2015 Bland	Osage	OH	Ameren Services Company	Bland 345/138 kV Si Planned	Reliability
2014 MISO	151-199	161	410	11/2015 Raun	Kellogg	10.3 OH	MidAmerican Energy Company	Salix-Morningside 1 Planned	Reliability
2014 MISO	151-199	161	410	11/2015 Salix	Morningside	2.3 OH	MidAmerican Energy Company	Salix-Morningside 1 Planned	Reliability
2014 MISO	151-199	161		1/2016 Couderay (Radisson)	Osprey	ОН	Northern States Power (Xcel Energy)	Couderay - Osprey 1 Under Construction	•
2014 MISO	151-199	161	509	1/2016 BR Tap (3 terminal midpoin		0.2 OH	Big Rivers Electric Corporation	Wilson-Matanzas 16 Under Construction	•
2014 MISO	121-150	138	293	6/2019 Bain	Spring Valley	14.45 OH	American Transmission Co. LLC	Construct Bain-Sprir Planned	Reliability
2014 MISO	121-150	138	293	6/2019 Spring Valley	Geneva	11.55 OH	American Transmission Co. LLC	Construct Bain-Sprir Planned	Reliability
2014 MISO	121-150	138	293	6/2019 Geneva	North Lake Geneva	12.5 OH	American Transmission Co. LLC	Construct Bain-Sprir Planned	Reliability
2014 MISO	151-199	161 33	5 MVA	12/2015 Lore	Turkey River	19.72 OH	ITC Midwest	Lore-Turkey River-St Under Construction	or Reliability
2014 MISO	151-199	161 22	3 MVA	12/2015 Turkey River	Stoneman	2.16 OH	ITC Midwest	Lore-Turkey River-St Planned	Reliability
2014 MISO	151-199	161 33	0 MVA	12/2015 Lore	Substation	ОН	ITC Midwest	Lore-Turkey River-St Under Construction	or Reliability
2014 MISO	151-199	161 25	0 MVA	12/2015 Turkey River	Substation	ОН	ITC Midwest	Lore-Turkey River-St Under Construction	or Reliability
2014 MISO	400-599	500	1732	6/2020 Dorsey	US/MB Border	160 OH	Minnesota Power (Allete, Inc.)	Great Northern Trar Planned	Hydro Integration
2014 MISO	400-599	500	1732	6/2020 US/MB Border	Iron Range	220 OH	Minnesota Power (Allete, Inc.)	Great Northern Trar Planned	Hydro Integration
2014 MISO	400-599	500	1200	6/2020 Iron Range			Minnesota Power (Allete, Inc.)	Great Northern Trar Planned	Hydro Integration
2014 MISO	400-599	500	1732	6/2020 Warroad River			Minnesota Power (Allete, Inc.)	Great Northern Trar Planned	Hydro Integration
2014 MISO	200-299	230		6/2020 Iron Range	various	2 OH	Minnesota Power (Allete, Inc.)	Great Northern Trar Planned	Hydro Integration
2014 MISO	200-299	230		6/2020 Blackberry			Minnesota Power (Allete, Inc.)	Great Northern Trar Planned	Hydro Integration
2014 MISO	200-299	230		6/2020 Forbes			Minnesota Power (Allete, Inc.)	Great Northern Trar Planned	Hydro Integration
2014 MISO	200-299	230		6/2020 Arrowhead			Minnesota Power (Allete, Inc.)	Great Northern Trar Planned	Hydro Integration
2014 MISO	200-299	230		6/2020 Hilltop			Minnesota Power (Allete, Inc.)	Great Northern Trar Planned	Hydro Integration
2014 MISO	121-150	138	246	2/2016 Pulliam	Liberty St	3.93 OH	American Transmission Co. LLC	Convert Pulliam-Glo Planned	Reliability
2014 MISO	121-150	138	246	2/2016 Liberty St	Ashland Ave	2.81 OH	American Transmission Co. LLC	Convert Pulliam-Glo Planned	Reliability
2014 MISO	121-150	138	246	2/2016 Ashland Ave	Glory Rd	1.19 OH	American Transmission Co. LLC	Convert Pulliam-Glo Planned	Reliability
2014 MISO	121-150	138	319	10/2015 Port Washington	Saukville	0H	American Transmission Co. LLC	Reconductor Port W Planned	Reliability
2014 MISO	121-150	138	319	10/2015 Port Washington	Saukville	ОН	American Transmission Co. LLC	Reconductor Port W Planned	Reliability
		138	139						•
2014 MISO	121-150			6/2015 Rock Springs Tap	Kirkwood	OH	American Transmission Co. LLC	Uprate Rock Springs Planned	Economics / Congestion
2014 MISO	121-150	138	285	12/2015 Bain	Albers	3.1 OH	American Transmission Co. LLC	Reconductor Bain-A Planned	Reliability
2014 MISO	100-120	115	205	12/2016 Rocky Run	Plover	2.6 OH	American Transmission Co. LLC	Uprate Rocky Run-P Planned	Reliability
2014 MISO	121-150	138	324	6/2015 Granville	Tamarack	6.5 OH	American Transmission Co. LLC	Reconductor Granvi Planned	Reliability
2014 MISO	121-150	138	288	4/2015 Merrill Hills	Summit	6.7 OH	American Transmission Co. LLC	Rebuild Merrill Hills Planned	Reliability
2014 MISO	121-150	138		6/2015 Dresser 138	tie bkr disc sw's		Duke Energy Corporation	Dresser 138kV Bus T Under Construction	•
2014 MISO	200-299	230	400	12/2016 Five Points 230kV	brkr replacements		Duke Energy Corporation	Five Points 230kV St Planned	Reliability
2014 MISO	121-150	138	100	12/2015 Crane South	New Sub		Duke Energy Corporation	Crane South 138/69 Under Construction	•
2014 MISO	200-299	230		12/2016 Lafayette 230	breaker		Duke Energy Corporation	Lafayette 230kV Rin Planned	Reliability
2014 MISO	100-120	115	39.2	6/2016 Canosia Road	New Substation		Minnesota Power (Allete, Inc.)	Canosia Road Substi Under Construction	•
2014 MISO	121-150	138	327	6/2015 East Peoria	Tazewell	5.2 OH	Ameren Services Company	East Peoria-Tazewel Planned	Reliability
2014 MISO	151-199	161		10/2015 Maurer Lake	Install 30 Mvar, 161 kV cap bank		Ameren Services Company	Maurer Lake 161 kV Planned	Reliability
2014 MISO	151-199	161		12/2017 Fletcher	Substation		ITC Midwest	New Fletcher 161/6 Planned	Reliability
2014 MISO	100-120	115	113	10/2015 Collins tap	Collins distribution	2.6 OH	Montana-Dakota Utilities Company	Collins distribution & Planned	Reliability
2014 MISO	100-120	115	25	10/2015 Collins	115/12.47 kV transformer		Montana-Dakota Utilities Company	Collins distribution s Planned	Reliability
2014 MISO	100-120	115	25	6/2017 South 9th	115/12.47 kV transformer		Montana-Dakota Utilities Company	South 9th distributic Planned	Reliability
2014 MISO	100-120	115	190	6/2017 South 9th tap	South 9th	ОН	Montana-Dakota Utilities Company	South 9th distributic Planned	Reliability
2014 MISO	100-120	115		3/2015 Lignite Jct	115/60 kV transformer		Montana-Dakota Utilities Company	Lignite Planned	Reliability
2014 MISO	300-399	345		12/2015 St. Clair	Stephens	ОН	ITC Transmission	St. Clair to Stephens Under Construction	or Reliability
2014 MISO	121-150	138		6/2015 Verona			METC	Verona - Marshall 1: Planned	Reliability
2014 MISO	121-150	138		12/2015 North Belding	Marquette	12.8 OH	METC	North Belding - Mar Planned	Reliability
2014 MISO	121-150	138		6/2015 Verona			METC	Verona-Argenta 138 Planned	Reliability
2014 MISO	100-120	120		6/2016 Bloomfield	Hamlin	3.5 OH	ITC Transmission	Bloomfield - Hamlin Planned	Reliability
2014 MISO	100-120	120		6/2016 Bloomfield			ITC Transmission	Bloomfield - Hamlin Planned	Reliability
2014 MISO	100-120	120		12/2015 Toll Road	Fermi	ОН	ITC Transmission	Toll Road + SVC Planned	Reliability
2014 MISO	100-120	120		12/2016 Toll Road			ITC Transmission	Toll Road + SVC Planned	Reliability
2014 MISO	100-120	120		6/2015 North Belding			METC	North Belding 138k\ Planned	Reliability
2014 MISO	121-150	138		12/2015 McGulpin	Riggsville		METC	METC Pole Top Swit Under Construction	
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2014 MISO	300-399	345		12/2015 Kenowa	Ludington	ОН	METC	Kenowa - Ludington Planned	Reliability
2014 MISO	151-199	161		12/2014 CBEC	Pottawattamie County	0.25	MidAmerican Energy Company	Pottawattamie Coui Planned	Reliability
2014 MISO	151-199	161		12/2014 Pottawattamie County	Quick	0.25	MidAmerican Energy Company	Pottawattamie Coui Planned	Reliability
2014 MISO	300-399	345		12/2014 CBEC	Pottawattamie County	0.25	MidAmerican Energy Company	Pottawattamie Coui Planned	Reliability
2014 MISO	300-399	345		12/2014 Pottawattamie County	Fallow Avenue	0.25	MidAmerican Energy Company	Pottawattamie Coui Planned	Reliability
2014 MISO	151-199	161		12/2017 Sub 701			MidAmerican Energy Company	Quick-Sub 701 161 Planned	Reliability
2014 MISO	151-199	161 200	00 A	6/2018 Quick			MidAmerican Energy Company	Quick-Sub 701 161 Planned	Reliability
2014 MISO	151-199	161 410	0 MVA	6/2018 Quick	Sub 701	15 OH	MidAmerican Energy Company	Quick-Sub 701 161 Planned	Reliability
2014 MISO	300-399	345		12/2014 Raun	Transformer		MidAmerican Energy Company	Raun 345-161 kV Tr Planned	Reliability
2014 MISO	151-199	161		6/2015 Neal North	Breaker		MidAmerican Energy Company	Neal North:161 kV E Planned	Reliability
2014 MISO	151-199	161		6/2015 Raun	Breaker		MidAmerican Energy Company	Raun:161 kV Breake Planned	Reliability
2014 MISO	151-199	161		6/2016 Sioux City Airport	Substation		MidAmerican Energy Company	Sioux City Airport St Planned	Reliability
2014 MISO	121-150	138 38	2 MVA	6/2014 N Auburn	Chatham Main	2.6 OH	City of Springfield, IL - CWLP	N Auburn-Chatham Planned	Reliability
2014 MISO	300-399	345		12/2015 Moroco (formerly "Lenaw	vee")		METC	Morocco (formerly ' Under Constr	ructior Reliability
2014 MISO	300-399	345		12/2015 Milan			METC	Morocco (formerly ' Planned	Reliability
2014 MISO	300-399	345		12/2015 Monroe 34			METC	Morocco (formerly ' Planned	Reliability
2014 MISO	100-120	115	55	12/2016 Arrowhead	16 Line Tap	44.76 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	120	12/2016 Arrowhead	Cloquet	10.51 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	144	12/2016 Arrowhead	Colbyville	19.24 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	135	12/2016 Arrowhead	Haines Road	7.6 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	182	12/2016 Arrowhead	Hibbard	10.73 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	120	12/2016 Arrowhead	15th Ave West	11.86 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	58	12/2016 Badoura	Dog Lake	33.99 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	91	12/2016 Badoura	Hubbard	14.77 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	122	12/2016 Badoura	Akeley	9.41 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	182	12/2016 Blackberry	9 Line Tap	32.83 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	118	12/2016 Colbyville	Two Harbors	22.98 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	98	12/2016 Blanchard	Pepin Lake	14.27 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	90	12/2016 Blanchard	Little Falls	8.4 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	135	12/2016 Blandin	20 Line Tap	8.32 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	85	12/2016 Blandin 12/2016 Boise	International Falls	1.4 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	120	12/2016 Boswell	Blandin	7.78 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	•
							Minnesota Power (Allete, Inc.)	, .	Reliability
2014 MISO	100-120	115	120	12/2016 Boswell	Nashwauk	36.09 OH	, , ,	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	120	12/2016 Boswell	Grand Rapids	10.73 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	71	12/2016 Brainerd	Riverton	13.1 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	78 	12/2016 Cloquet	9 Line Tap	30.25 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	77	12/2016 Cromwell	Riverton	61.15 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	98	12/2016 Dog Lake	24 Line Tap	0.65 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	90	12/2016 Embarrass	Virginia	15.34 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	64	12/2016 Embarrass	Babbitt	26.37 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	90	12/2016 ETCO	16 Line Tap	1.52 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	40	12/2016 Fond Du Lac	Hibbard	11.5 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	120	12/2016 Forbes	ETCO	6.28 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	85	12/2016 Forbes	44 Line Tap	17.83 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	113	12/2016 Forbes	78 Line Tap	15.87 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	207	12/2016 Gary	Stinson	11.05 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	55	12/2016 Grand Rapids	Riverton	67.7 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	144	12/2016 Haines Road	Swan Lake Road	1.32 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	182	12/2016 Hibbard	Winter Street	3.38 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	99	12/2016 Hibbing	14 Line Tap	5.76 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	91	12/2016 Hibbing	44 Line Tap	1.72 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	144	12/2016 Hibbtac	78 Line Tap	7.75 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	120	12/2016 Hilltop	15th Ave West	4.57 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	182	12/2016 Hilltop	LSPI	2.91 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	168	12/2016 Hoyt Lakes	Laskin	5.75 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	180	12/2016 International Falls	Fort Frances	2.19 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	98	12/2016 Laskin	Embarrass	10.23 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	113	12/2016 Laskin	Forbes	31.41 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	98	12/2016 Laskin	Virginia	25.86 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	103	12/2016 Little Falls	West St. Cloud	17.57 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	98	12/2016 Long Prairie	Pepin Lake	12.69 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	98	12/2016 Long Prairie	Douglas County	9.37 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	98	12/2016 Mud Lake	Brainerd	4.4 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	71	12/2016 Mud Lake	Little Falls	28.48 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	144	12/2016 Nashwauk	14 Line Tap	4.88 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	144	12/2016 Nashwauk	National	6.23 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	144	12/2016 Nashwauk	Blackberry	13.16 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	144	12/2016 Nashwauk	Blackberry	13.11 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	120	12/2016 Ridgeview	Colbyville	9.1 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	58	12/2016 Riverton	Pequot Lakes	19.17 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	77	12/2016 Riverton	Baxter	13.45 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	98	12/2016 Savanna	9 Line Tap	12.98 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	77	12/2016 Scearcyville	24 Line Tap	16.66 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	217	12/2016 Scearcyville 12/2016 Shannon	Hibbtac Pumps	7.53 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	175	12/2016 Stinson	Fairmount Park	3.07 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	98	12/2016 Stinson	Bayfront	25.75 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	151-199	161	168	12/2016 Stinson	Stone Lake	42.6 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2011 141130	131 133	101	100	11, 2010 0000000	Storic Lanc	12.0 011		radinty nating radined	Renability

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2014 MISO	100-120	115 144	12/2016 Swan Lake Road	Ridgeview	2.87 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115 159	12/2016 Taconite Harbor	Silver Bay	24.86 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115 90	12/2016 Thomson	Fond Du Lac	2.2 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115 84	12/2016 Thomson	Potlatch	6.88 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115 98	12/2016 Thomson	Cromwell	28.05 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115 77	12/2016 Verndale	24 Line Tap	16.37 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115 98	12/2016 Verndale	Wing River	1.08 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115 90	12/2016 Virginia	16 Line Tap	11.12 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
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2014 MISO	100-120	115 55	12/2016 Virginia	Hibbing	28.71 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115 120	12/2016 Virginia	Inland	4.04 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115 144	12/2016 Virginia	Minntac	6.26 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115 85	12/2016 Wing River	Long Prairie	31.6 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115 182	12/2016 Winter Street	Fairmount Park	3.48 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115 217	12/2016 Riverton 230	Riverton 115	0.68 OH	Minnesota Power (Allete, Inc.)	NERC Facility Rating Planned	Reliability
2014 MISO	100-120	115	12/2015 Yankee			Northern States Power (Xcel Energy)	SW MN High Voltag Under Constructio	r Reliability
2014 MISO	100-120	115	6/2016 Fenton			Northern States Power (Xcel Energy)	SW MN High Voltag Under Constructio	r Reliability
2014 MISO	300-399	345	6/2015 Helena	Scott County	ОН	Northern States Power (Xcel Energy)	Scott County 345 kV Under Constructio	*
2014 MISO	300-399	345	6/2015 Scott County	Blue Lake	ОН	Northern States Power (Xcel Energy)	Scott County 345 kV Under Constructio	•
2014 MISO			6/2015 Scott County	blue take	OH		•	•
	300-399	345 672	•			Northern States Power (Xcel Energy)	Scott County 345 kV Under Constructio	•
2014 MISO	300-399	345 672	6/2015 Scott County			Northern States Power (Xcel Energy)	Scott County 345 kV Under Constructio	*
2014 MISO	100-120	115	3/2016 T-Corners			Northern States Power (Xcel Energy)	T-Corners Breaker a Under Constructio	•
2014 MISO	151-199	161	6/2015 Seven Mile			Northern States Power (Xcel Energy)	Seven Mile 2nd TR Under Constructio	r Reliability
2014 MISO	121-150	138 143	6/2016 Edwards	Kewanee		Ameren Services Company	Edwards Substation Planned	Reliability
2014 MISO	121-150	138 338	6/2016 Edwards	Tazewell		Ameren Services Company	Edwards Substation Planned	Reliability
2014 MISO	121-150	138 287	6/2016 Edwards	Keystone		Ameren Services Company	Edwards Substation Planned	Reliability
2014 MISO	121-150	138 191	6/2016 Edwards	Fargo		Ameren Services Company	Edwards Substation Planned	Reliability
2014 MISO	121-150	138 233	6/2016 Edwards	Fargo		Ameren Services Company	Edwards Substation Planned	Reliability
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2014 MISO	121-150		6/2016 Edwards	Caterpillar		Ameren Services Company	Edwards Substation Planned	Reliability
2014 MISO	121-150	138 465	6/2016 Edwards	Tazewell		Ameren Services Company	Edwards Substation Planned	Reliability
2014 MISO	121-150	138 220	6/2016 Edwards	Caterpillar		Ameren Services Company	Edwards Substation Planned	Reliability
2014 MISO	121-150	138 430	6/2016 Edwards	GSU #3		Ameren Services Company	Edwards Substation Planned	Reliability
2014 MISO	121-150	138	10/2015 South Sheboygan Falls			American Transmission Co. LLC	Install South Sheboy Planned	Reliability
2014 MISO	151-199	161 400	12/2015 Marshland	Briggs Road	13.4 OH	Dairyland Power Cooperative	Rebuild Marshland-Planned	Reliability
2014 MISO	121-150	138 478	6/2016 Dresser	Wabash River Gen. Station	10 OH	Duke Energy Corporation	Dresser - Wabash Ri Planned	Reliability
2014 MISO	151-199	161 330 MVA	12/2015 Hickory Creek	Liberty	ОН	ITC Midwest	Hickory Creek 161 k' Under Constructio	•
2014 MISO	151-199	161 330 MVA	12/2015 Hickory Creek	Lore	ОН	ITC Midwest	Hickory Creek 161 k' Under Constructio	•
2014 MISO	300-399	345 1195 MV	12/2015 Hickory Creek	Substation	OH	ITC Midwest	Hickory Creek 161 k Under Constructio	•
			•				•	•
2014 MISO	300-399	345	12/2015 Turkey River	Substation	011	ITC Midwest	Hickory Creek 161 k' Under Constructio	•
2014 MISO	100-120	115 190	3/2017 Quarry	West St. Cloud	ОН	Great River Energy	Quarry-West St. Clo Planned	Reliability
2014 MISO	100-120	115	3/2017 West St. Cloud			Great River Energy	Quarry-West St. Clo Planned	Reliability
2014 MISO	100-120	115	3/2017 Quarry			Great River Energy	Quarry-West St. Clo Planned	Reliability
2014 MISO	200-299	230	12/2015 New London 230	brkr replacements		Duke Energy Corporation	New London 230kV Under Constructio	r Reliability
2014 MISO	200-299	230	6/2017 Hillsdale North	new sub	2	Duke Energy Corporation	Hillsdale North 230- Planned	Reliability
2014 MISO	121-150	138	1/2017 Hoyt Lakes			Minnesota Power (Allete, Inc.)	Hoyt Lakes Substatic Planned	Reliability
2014 MISO	121-150	138 30	1/2017 Hoyt Lakes			Minnesota Power (Allete, Inc.)	Hoyt Lakes Substatic Planned	Reliability
2014 MISO	121-150	138 229	6/2014 Big Swan West	Big Swan East	0.41 OH	Prairie Power, Inc.	Big Swan 138/69 kV Under Constructio	•
2014 MISO	121-150	138	12/2015 Alsey	8	• · · · · · · · · · · · · · · · · · · ·	Prairie Power, Inc.	Alsey 138 kV Substa Under Constructio	•
2014 MISO	121-150	138	12/2015 Pittsfield			Prairie Power, Inc.	Pittsfield 138 kV suk Under Constructio	•
			•	Dittofiald	24.5.011	·		•
2014 MISO	121-150		12/2015 Alsey	Pittsfield	24.5 OH	Prairie Power, Inc.	Alsey-Pittsfield 138 Under Constructio	•
2014 MISO	200-299	230	8/2015 NERC Alert Facility Ratings		ОН	Otter Tail Power Company	NERC Alert Facility F Planned	Reliability
2014 MISO	100-120	115	12/2016 NERC Alert Facility Ratings		ОН	Otter Tail Power Company	NERC Alert Facility F Planned	Reliability
2014 MISO	151-199	161 150	12/2015 Adams	Substation		ITC Midwest	Adams 161/69kV Tr Planned	Variable/Renewable Integration
2014 MISO	151-199	161 327 MVA	12/2015 Marshalltown	Toledo	16 OH	ITC Midwest	Marshalltown-Stone Planned	Reliability
2014 MISO	151-199	161 327 MVA	12/2015 Toledo	Belle Plaine	16.5 OH	ITC Midwest	Marshalltown-Stone Planned	Reliability
2014 MISO	151-199	161 327 MVA	12/2015 Belle Plaine	Stoney Point	27.25 OH	ITC Midwest	Marshalltown-Ston∈Planned	Reliability
2014 MISO	151-199	161	12/2015 Marshalltown	Substation		ITC Midwest	Marshalltown-Stone Planned	Reliability
2014 MISO	151-199	161	12/2015 Toledo	Substation		ITC Midwest	Marshalltown-Stone Planned	Reliability
2014 MISO	151-199	161	12/2015 Belle Plaine	Substation		ITC Midwest	Marshalltown-Stone Planned	Reliability
2014 MISO	151-199	161	12/2015 Stoney Point	Substation		ITC Midwest	Marshalltown-Stone Planned	Reliability
			•		OH			•
2014 MISO	100-120	115	12/2014 Detroit Lakes West	Detroit Lakes Industrial	OH	Missouri River Energy Services (MRES)	Woodpecker Damas Planned	Reliability
2014 MISO	121-150	138	12/2017 Cahokia	Dupo Ferry	6.98 OH	Ameren Services Company	Cahokia-Dupo Ferry Planned	Reliability
2014 MISO	121-150	138	9/2015 Lasalle Tap (Hickok)	Install 138 kV Breaker Station		Ameren Services Company	LaSalle Tap (Hickok) Planned	Reliability
2014 MISO	121-150	138 255	9/2015 Hennepin	Oglesby		Ameren Services Company	LaSalle Tap (Hickok) Planned	Reliability
2014 MISO	300-399	345	12/2024 Campbell Tap (Kerr)	Intall 345 kV Breaker Station		Ameren Services Company	Campbell Tap (Kerr) Planned	Reliability
2014 MISO	121-150	138	9/2015 Clayton Junction (Monume	n Install 138 kV Breaker Station		Ameren Services Company	Clayton Junction (M Planned	Reliability
2014 MISO	121-150	138 175	9/2015 Macomb	Monument		Ameren Services Company	Clayton Junction (M Planned	Reliability
2014 MISO	121-150	138 240	9/2015 East Quincy	Monument		Ameren Services Company	Clayton Junction (M Planned	Reliability
2014 MISO	121-150	138 240	9/2015 Meredosia East	Monument		Ameren Services Company	Clayton Junction (M Planned	Reliability
2014 MISO	300-399	345	12/2015 Bunsonville	Install 345 kV Ring Bus		Ameren Services Company	Bunsonville 345 kV i Planned	Reliability
2014 MISO	300-399	345	9/2016 Ramsey, East	Install 345 kV Ring Bus		Ameren Services Company	Ramsey, East 345 k\ Planned	Reliability
			•	•		• •	•	•
2014 MISO	300-399	345 1153	11/2015 Casey, West	Kansas	CO OU	Ameren Services Company	Casey, West Termin Planned	Reliability
2014 MISO	121-150	138 269	12/2016 Rivermines	Maries	60 OH	Ameren Services Company	Rivermines-Maries-1 Planned	Reliability
2014 MISO	121-150	138 269	12/2016 Clark	Osage	95 OH	Ameren Services Company	Rivermines-Maries-1 Planned	Reliability
2014 MISO	121-150	138 269	12/2016 Maries	Osage	34.3 OH	Ameren Services Company	Rivermines-Maries-: Planned	Reliability
2014 MISO	121-150	138 154 MVA	12/2016 Bass Creek	Sternberg	15.9 OH	METC	Bass Creek - Sternb∈ Planned	Reliability
2014 MISO	121-150	138	12/2016 Riggsville	Rondo	ОН	METC	Riggsville - Rondo 1: Planned	Reliability
2014 MISO	121-150	138	12/2016 Lawndale	Murphy	2.84 OH	METC	Lawndale - Murphy Planned	Reliability

2014 MISO	100-120	120	4/2016 Newburgh	Wayne	ОН	ITC Transmission	Newburgh - Wayne Planned	Reliability
2014 MISO 2014 MISO	121-150	138	12/2017 Blanket for Customer Interc	•	OH	METC	,	Reliability
2014 MISO	121-150	138	12/2018 Blanket for Customer Interest			METC		Reliability
2014 MISO	300-399	345	12/2017 METC Annual Relay Bettern			METC		Reliability
2014 MISO	300-399	345	12/2018 METC Annual Relay Bettern	,		METC	·	Reliability
2014 MISO	121-150	138	12/2017 METC Wood Pole Replacem		ОН	METC	·	Reliability
2014 MISO	121-150	138	12/2018 METC Wood Pole Replacem	- ,	ОН	METC		Reliability
2014 MISO	121-150	138	12/2015 Karn	Manning		METC		Reliability
2014 MISO	121-150	138	12/2015 Karn	Saginaw River		METC	_	Reliability
2014 MISO	100-120	120	12/2017 Blanket for Customer Interc	•		ITC Transmission		Reliability
2014 MISO	100-120	120	12/2018 Blanket for Customer Interc	,		ITC Transmission		Reliability
2014 MISO	300-399	345	12/2017 ITCT Annual Relay Betterme			ITC Transmission		Reliability
2014 MISO	300-399	345	12/2018 ITCT Annual Relay Betterme			ITC Transmission	•	Reliability
2014 MISO	300-399	345	12/2017 ITCT Surge Arrestor Replace			ITC Transmission	•	Reliability
2014 MISO	300-399	345	12/2018 ITCT Surge Arrestor Replace			ITC Transmission	_	Reliability
2014 MISO	100-120	120	12/2017 ITCT Wood Pole Replaceme		ОН	ITC Transmission	_	Reliability
2014 MISO	100-120	120	12/2018 ITCT Wood Pole Replaceme		ОН	ITC Transmission	ITCT Annual Wood FPlanned	Reliability
2014 MISO	300-399	345	12/2017 METC Misc Line Equipment	Throughout system	ОН	METC	METC Annual Misc I Planned	Reliability
2014 MISO	300-399	345	12/2018 METC Misc Line Equipment	Throughout system	ОН	METC	METC Annual Misc I Planned	Reliability
2014 MISO	151-199	161 405	11/2015 Sub 47	Sub 48		MidAmerican Energy Company	Sub 47: Upgrade Tel Planned	Reliability
2014 MISO	151-199	161 405	11/2015 Sub 48	Sub 47		MidAmerican Energy Company		Reliability
2014 MISO	151-199	161 410	7/2015 Raun	Sioux City Airport	0.1 OH	MidAmerican Energy Company	Sioux City Airport St Planned	Reliability
2014 MISO	151-199	161 410	7/2015 Kellogg	Sioux City Airport	0.1 OH	MidAmerican Energy Company	Sioux City Airport St Planned	Reliability
2014 MISO	151-199	161 405	11/2015 Sub 39	Sub 47		MidAmerican Energy Company	Sub 39: Upgrade Tel Planned	Reliability
2014 MISO	151-199	161 405	11/2015 Sub 47	Sub 39		MidAmerican Energy Company	Sub 47: Upgrade Tel Planned	Reliability
2014 MISO	100-120	115 100+	7/2015 Bellevue Tap	Bellevue	1 OH	Great River Energy	Bellevue 115 kV Swi Planned	Reliability
2014 MISO	100-120	115 398 MVA	6/2018 Franklin 115 kV substation	McComb 115 kV substation	25 OH	Entergy	Franklin - McComb l Planned	Reliability
2014 MISO	100-120	115 398 MVA	6/2018 Franklin 115 kV substation	McComb 115 kV substation		Entergy	Franklin - McComb l Planned	Reliability
2014 MISO	100-120	115 266 MVA	6/2015 HS EHV 115 kV Substation	HS Industrial 115 kV Substation		Entergy Arkansas	HS EHV-HS Industria Planned	Reliability
2014 MISO	100-120	115 266 MVA	6/2015 HS Industrial 115 kV Substa	t HS Union Carbide 115 kV Substatio	on	Entergy Arkansas	HS Industrial-HS Uni Planned	Reliability
2014 MISO	100-120	115 266 MVA	6/2015 HS Union Carbide 115 kV Su	u HS East 115 kV Substation		Entergy Arkansas	HS Union Carbide-H Planned	Reliability
2014 MISO	100-120	115 N/A	3/2016 Woodward 115 kV Substati	on		Entergy Arkansas	Woodward-115 kV I Under Construction	Reliability
2014 MISO	151-199	161 112	6/2015 Tremval			Northern States Power (Xcel Energy)	Install Tremval 2nd Planned	Reliability
2014 MISO	100-120	115	5/2016 Magic City			Northern States Power (Xcel Energy)	Install Souris 115 kV Planned	Reliability
2014 MISO	151-199	161	12/2015 Gravel Island			Northern States Power (Xcel Energy)	Install Gravel Island Planned	Reliability
2014 MISO	300-399	345 1195	12/2015 Split Rock	Nobles County	35 OH	Northern States Power (Xcel Energy)	Reconductor Split R Planned	Reliability
2014 MISO	300-399	345 1195	12/2015 Nobles County	Lakefield Junction	35 OH	Northern States Power (Xcel Energy)	Reconductor Split R Planned	Reliability
2014 MISO	100-120	115	6/2016 Knowlton			American Transmission Co. LLC	Construct Knowlton Planned	Reliability
2014 MISO	100-120	115	6/2016 Weston	Knowlton		American Transmission Co. LLC	Construct Knowlton Planned	Reliability
2014 MISO	100-120	115	6/2016 Knowlton	Dewey		American Transmission Co. LLC	Construct Knowlton Planned	Reliability
2014 MISO	121-150	138 327	5/2014 07Ratts8	07Rattap	0.1 OH	Hoosier Energy REC, Inc.	Ratts 138 kV Transm Planned	Reliability
2014 MISO	121-150	138	1/2014 Michigan City	Laporte	ОН	Edison Mission Marketing & Trading, Inc	LaPorteMichigan C Planned	Economics / Congestion
2014 MISO	300-399	345 1692	12/2015 Sidney	Eugene	29.26 OH	Ameren Services Company	Sidney-Eugene 345 Planned	Reliability
2014 MISO	200-299	230 640 MVA	6/2015 PPG 230 kV Substation	Rose Bluff 230 kV Substatior	5.28 OH	Entergy	PPG to Rosebluff 23 Planned	Reliability
2014 MISO	300-399	345 1178	12/2017 Kelso	Lutesville	17.6 OH	Ameren Services Company	Kelso-Lutesville-1 34 Planned	Reliability
2014 MISO	121-150	138	4/2016 Eagle Valley 138 kV Substat	ti new gen i-connect		Indianapolis Power & Light Company	Eagle Valley 138kV SPlanned	Fossil-Fired Integration
2014 MISO	121-150	138 175	12/2018 Whitewater	Bluff Creek	5.02 OH	American Transmission Co. LLC	Reconfigure Univers Planned	Reliability
2014 MISO	121-150	138 246	12/2018 University	Mukwanago	22.7 OH	American Transmission Co. LLC	Reconfigure Univers Planned	Reliability
2014 MISO	121-150	138 246	12/2018 University	Whitewater	6.2 OH	American Transmission Co. LLC	Reconfigure Univers Planned	Reliability
2014 MISO	121-150	138 117	9/2016 North Fond Du Lac	Metomen	1 OH	American Transmission Co. LLC	Reroute North Fond Planned	Other
2014 MISO	121-150	138 120	9/2016 North Fond Du Lac	Green Lake	1 OH	American Transmission Co. LLC	Reroute North Fond Planned	Other
2014 MISO	100-120	115	6/2015 Cedar Creek			American Transmission Co. LLC	Construct Cedar Cre Planned	Reliability
2014 MISO	100-120	115 205	6/2015 Weston	Cedar Creek	0.25	American Transmission Co. LLC	Construct Cedar Cre Planned	Reliability
2014 MISO	100-120	115 205	6/2015 Cedar Creek	Dewey	15.65	American Transmission Co. LLC	Construct Cedar Cre Planned	Reliability
2014 MISO	100-120	115	6/2015 Cedar Creek			American Transmission Co. LLC	Construct Cedar Cre Planned	Reliability
2014 MISO	100-120	115	6/2015 Cedar Creek			American Transmission Co. LLC	Construct Cedar Cre Planned	Reliability
2014 MISO	100-120	115	6/2015 Cedar Creek			American Transmission Co. LLC		Reliability
2014 MISO	300-399	345	4/2015 Southland			MidAmerican Energy Company		Reliability
2014 MISO	300-399	345 1738	4/2015 CBEC	Southland	3 OH	MidAmerican Energy Company		Reliability
2014 MISO	300-399	345 1792	3/2015 CBEC			MidAmerican Energy Company		Reliability
2014 MISO	100-120	120	12/2015 Micah			ITC Transmission	·	Reliability
2014 MISO	100-120	120 127	12/2015 Micah	Lee	4.5 OH	ITC Transmission	•	Reliability
2014 MISO	100-120	120 134	12/2015 Micah	Kilgore	4.5 OH	ITC Transmission		Reliability
2014 MISO	100-120	120	12/2015 Lee			ITC Transmission		Reliability
2014 MISO	100-120	120	12/2015 Menlo			ITC Transmission	•	Reliability
2014 MISO	100-120	120	12/2015 Klam			ITC Transmission	-	Reliability
2014 MISO	100-120	120	12/2015 Klam	_		ITC Transmission	-	Reliability
2014 MISO	100-120	120 305	12/2015 Klam	Bergen Tap	3.1 OH	ITC Transmission	-	Reliability
2014 MISO	100-120	120 270	12/2015 Klam	Lapeer	3.1 OH	ITC Transmission		Reliability
2014 MISO	100-120	120	12/2015 Tuscola			ITC Transmission	•	Reliability
2014 MISO	100-120	120	12/2015 Lapeer			ITC Transmission		Reliability
2014 MISO	100-120	115	5/2015 Woodlawn 115 kV substation			Entergy Arkansas	AECC Shaw POD (W Under Construction	•
2014 MISO	100-120	115	8/2015 Cofer Road 115 kV substation			Entergy Arkansas		Reliability
2014 MISO	100-120	115	12/2015 Hot Springs Albright 115 kV			Entergy Arkansas	H.S. Albright: New I Under Construction	•
2014 MISO	100-120	115	12/2015 Macedonia 115 kV substati			Entergy Arkansas		Reliability
2014 MISO	100-120	115	12/2015 P.B. 34 & Main 115 kV Subs			Entergy Arkansas		Reliability
2014 MISO	100-120	115	12/2015 L.R. Industrial 115 kV substa	ation		Entergy Arkansas	EAI Underrated Brea Planned	Reliability

2014 MISO	100-120	115	12/2015 L.R. Alexander 115 kV subs	tation		Entergy Arkansas	EAI Underrated Brea Planned	Reliability	
2014 MISO	100-120	115	12/2015 Searcy Price 115 kV substa			Entergy Arkansas	EAI Underrated Brea Planned	Reliability	
2014 MISO	100-120	115	12/2015 McAlmont 115 kV substati			Entergy Arkansas	EAI Underrated Brea Planned	Reliability	
2014 MISO	100-120	115	12/2015 Jacksonville North 115 kV s	substation		Entergy Arkansas	EAI Underrated Brea Planned	Reliability	
2014 MISO	100-120	115	12/2016 Carpenter 115 kV Substation	on		Entergy Arkansas	EAI Underrated Brea Planned	Reliability	
2014 MISO	400-599	500	6/2016 ISES 500 kV substation			Entergy Arkansas	EAI SPOF Projects: Planned	Reliability	
2014 MISO	400-599	500	6/2016 Mabelvale 500 kV Substati 6/2016 El Dorado 500 kV substatio			Entergy Arkansas	EAL SPOF Projects: Planned	Other	
2014 MISO 2014 MISO	400-599 400-599	500 500	6/2016 Hot Springs 500 kV substation			Entergy Arkansas Entergy Arkansas	EAI SPOF Projects: Planned EAI SPOF Projects: Planned	Other Other	
2014 MISO	400-599	500	6/2015 Fancy Point 500kV substati			Entergy	EGSL SPOF Projects: Planned	Other	
2014 MISO	200-299	230	12/2016 Coly 230 kV substation			Entergy	EGSL Underrated Br Planned	Reliability	
2014 MISO	200-299	230	12/2016 Coly 230 kV substation			Entergy	EGSL Underrated Br Planned	Reliability	
2014 MISO	200-299	230	3/2017 Schriever230 kV substation	1		Entergy	Schriever: Construc Planned	Reliability	
2014 MISO	200-299	230	12/2016 Waterford 230 kV substation	on		Entergy	ELL Underrated Brea Planned	Reliability	
2014 MISO	200-299	230	12/2016 Waterford 230 kV substation	on		Entergy	ELL Underrated Brea Planned	Reliability	
2014 MISO	200-299	230	6/2015 Market Street 230 kV			Entergy	ENOI SPOF Projects: Planned	Other	
2014 MISO 2014 MISO	100-120 100-120	115 115	4/2015 Haute 115 kV substation 12/2015 Rex Brown 115 kV substati	on		Entergy Entergy	Haute 115 kV SubstaPlanned EMI Underrated Bre Planned	Reliability Reliability	
2014 MISO	100-120	115	12/2015 Rex Brown 115 kV substati			Entergy	EMI Underrated Bre Planned	Reliability	
2014 MISO	100-120	115	12/2015 Rex Brown 115 kV substati			Entergy	EMI Underrated Bre Planned	Reliability	
2014 MISO	100-120	115	12/2015 Rex Brown 115 kV substati			Entergy	EMI Underrated Bre Planned	Reliability	
2014 MISO	100-120	115	12/2015 Rex Brown 115 kV substati	on		Entergy	EMI Underrated Bre Planned	Reliability	
2014 MISO	100-120	115	12/2015 Rex Brown 115 kV substati	on		Entergy	EMI Underrated Bre Planned	Reliability	
2014 MISO	100-120	115	12/2016 Rex Brown 115 kV substati			Entergy	EMI Underrated Bre Planned	Reliability	
2014 MISO	100-120	115	12/2016 Greenville 115 kV substation			Entergy	EMI Underrated Bre Planned	Reliability	
2014 MISO	151-199	161	7/2015 Karma	Perry distribution	ОН	ITC Midwest	Perry Distribution St Under Construct	•	
2014 MISO 2014 MISO	151-199 151-199	161 161	7/2015 Perry distribution	Bittersweet Perry Transmission	OH OH	ITC Midwest ITC Midwest	Perry Distribution St Under Construct Perry Distribution St Under Construct	•	
2014 MISO 2014 MISO	151-199	161	7/2015 Perry distribution 7/2015 Perry distribution	Substation	Он	ITC Midwest	Perry Distribution St Under Construct	•	
2014 MISO	151-199	161	7/2015 Perry Transmission	Substation		ITC Midwest	Perry Distribution St Under Construct		
2014 MISO	300-399	345	6/2016 Stein			ITC Transmission	(2) 55 Mvar 345kV F Planned	Reliability	
2014 MISO	300-399	345	6/2016 Rapson			ITC Transmission	(2) 55 Mvar 345kV F Planned	Reliability	
2014 MISO	151-199	161 446	6/2015 Purvis Bulk	Plant Morrow	4.55 OH	South Mississippi Electri	ic Power Associat Re-conductor Plant Under Construct	ior Economics ,	/ Congestion
2014 MISO	151-199	161 446	6/2015 Purvis Bulk	Plant Morrow	4.59 OH	South Mississippi Electri	ic Power Associat Re-conductor Plant Under Construct	ior Economics ,	/ Congestion
2014 MISO	100-120	115	6/2016 Madison Ave			Entergy	Madison Ave 115 k√ Planned	Reliability	
2014 MISO	151-199	161 24 MVAR	7/2015 Datto	Mahahala 500la/ aukatatian		Entergy Arkansas	Datto: Add 161 kV 2 Planned	Reliability	/ Commontion
2014 MISO 2014 MISO	400-599 400-599	500 2546 500 2546	6/2017 ANO 500kV substation 6/2017 ANO 500kV substation	Mabelvale 500kV substation Pleasant Hill 500kV substation		Entergy Arkansas	ANO - Mabelvale 50 Planned ANO - Pleasant Hill ! Planned	-	/ Congestion / Congestion
2014 MISO 2014 MISO	200-299	230	12/2018 Tap	Panama		Entergy Arkansas Entergy	Richardson to Ibervi Planned	-	Congestion Congestion
2014 MISO	200-299	230	12/2017 Romeville	Tanania		Entergy	Richardson to Ibervi lanned		/ Congestion
2014 MISO	200-299	230	12/2018 Richardson	Iberville	11 OH	Entergy	Richardson to Ibervi Planned		Congestion
2014 MRO-MAPPAC	300-399	345 1200	11/2015 AVS 345	Charlie Creek 345	66 OH	1307 Basin Electric C	Basin Electric AVS-Charlie Creek 3 Planned	Reliability	
2014 MRO-MAPPAC	300-399	345 1200	11/2015 Charlie Creek 345	Judson 345	75 OH	1307 Basin Electric C	Basin Electric Charlie Creek-Judsoı Planned	Reliability	
2014 MRO-MAPPAC	300-399	345 1200	11/2017 Judson 345	Tande 345	56 OH	1307 Basin Electric C	Basin Electric Judson-Tande 345 Planned	Reliability	
2014 MRO-MAPPAC	200-299	230 460	11/2015 Judson 230	Williston 230	2 OH	1307 Basin Electric C	Basin Electric Judson-Williston 23(Planned	Reliability	
2014 MRO-MAPPAC	200-299	230 460	11/2017 Tande 230	Neset 230	2 OH	1307 Basin Electric C	Basin Electric Tande-Neset 230 Planned	Reliability	
2014 MRO-MAPPAC 2014 MRO-MAPPAC	300-399 300-399	345 1200 345 1200	11/2016 Round Up 345 11/2016 Patent Gate 345	Kummer Ridge Kummer Ridge	30 OH 31 OH	1307 Basin Electric C 1307 Basin Electric C	Basin Electric Round Up-Kummer Conceptual Basin Electric Kummer Ridge-Pate Conceptual	Reliability Reliability	
2014 MRO-MAPPAC	100-120	115 142	NAPA Jct	Yankton East Sub	10 OH	13809 NorthWester I	1 Yankton East Under Construct	•	Other
2014 MRO-MAPPAC	100-120		Rapid City	Dry Creek	0.25 OH	Western Area F	1 Rapid City-Dry Creel Planned	Reliability	Reliability
2014 NPCC-NewEAC	100-120 100-12	20 380	3/2015 Orrington	Coopers Mills	54 OH	3266 CMP I	1 MPRP Under Construct	ior Reliability	Reliability
2014 NPCC-NewEAC	100-120 100-12	20 282	1/2017 Larrabee Road	Middle St	5.7 OH	3266 CMP I	1 MPRP Under Construct	ior Reliability	Reliability
2014 NPCC-NewEAC	100-120 100-12		1/2017 Middle St	Lewiston Lower	1.2 UG	3266 CMP I	1 MPRP Planned	Reliability	Reliability
2014 NPCC-NewEAC	100-120 100-12		12/2018 Brayton Point Station	Somerset	3.4 OH	13433 NGRID I	1 Greater Rhode Islan Conceptual	Reliability	Reliability
2014 NPCC-NewEAC 2014 NPCC-NewEAC	100-120 100-12 100-120 100-12		12/2017 Otter River 12/2018 Somerset	East Winchendon Bell Rock	6 OH 3.7 UG	13433 NGRID I 13433 NGRID I	1 Central/Western M/Planned1 Greater Rhode Islan Conceptual	Reliability Reliability	Reliability Reliability
2014 NPCC-NewEAC	100-120 100-12		12/2016 West Walpole	Holbrook	14.7 OH	1998 NSTAR I	1 Greater Rhode Islan Conceptual 1 Greater Boston - Soi Planned	Reliability	Reliability
2014 NPCC-NewEAC	100-120 100-12		12/2017 Tewksbury	MA/NH Border	6.5 OH	13433 NGRID I	1 Greater Boston - No Conceptual	Reliability	Reliability
2014 NPCC-NewEAC	100-120 100-12		12/2016 Northfield Mt. Substation	Erving Substation	1.2 OH	20455 WMECO I	1 Pittsfield/Greenfield Planned	Reliability	Reliability
2014 NPCC-NewEAC	300-399 300-39	99 718	12/2015 West Farnum S/S	CT/RI Border	17.7 OH	13433 NGRID I	1 NEEWs Under Construct	ior Reliability	Reliability
2014 NPCC-NewEAC	300-399 300-39	99 718	12/2015 Millbury S/S	West Farnum S/S	20.7 OH	13433 NGRID I	1 NEEWs Planned	Reliability	Reliability
2014 NPCC-NewEAC	300-399 300-39		12/2015 Card S/S	Lake Road S/S	29.3 OH	4176 CL&P I	1 NEEWs Under Construct	•	Reliability
2014 NPCC-NewEAC	300-399 300-39		12/2015 Lake Road S/S	CT/RI Border	7.6 OH	4176 CL&P I	1 NEEWs Under Construct	•	Reliability
2014 NPCC-NewEAC 2014 NPCC-NewEAC	300-399 300-39 300-399 300-39		3/2015 Albion Road S/S 4/2015 Larrabee Road S/S	Coopers Mills S/S Coopers Mills S/S	21 OH 34.3 OH	3266 CMP I 3266 CMP I	1 MPRP Under Construct 1 MPRP Under Construct	•	Reliability Reliability
2014 NPCC-NewEDC	300-399 300-39		6/2018 Quebec/NH Border	Franklin	147 OH	TBD Northern Pas I	1 Northern Pass Trans Planned	Other	Hydro Integration
2014 NPCC-NewEDC	300-399 300-39		6/2018 Quebec/NH Border	Franklin	8 UG	TBD Northern Pas I	1 Northern Pass Trans Planned	Other	Hydro Integration
2014 NPCC-NewEAC	300-399 300-39		6/2018 Franklin	Deerfield	34 OH	TBD Northern Pas I	1 Northern Pass Trans Planned	Other	Hydro Integration
2014 NPCC-NewEAC	100-120 100-12		6/2015 Lakewood	Section 83B Tap	4 OH	3266 CMP	1 Lakewood Reinforc∈ Under Construct		Reliability
2014 NPCC-NewEAC	100-120 100-12	20 282	9/2017 County Rd S/S	Section 241A Tap	6.5 OH	3266 CMP I	1 Waterville/Winslow Planned	Reliability	Reliability
2014 NPCC-NewEAC	100-120 100-12		12/2017 Mystic	Chelsea	3.8 UG	1998 NSTAR I	1 Greater Boston - Cel Conceptual	Reliability	Reliability
2014 NPCC-NewEAC	100-120 100-12		12/2017 Mystic	Woburn	8 UG	1998 NSTAR I	1 Greater Boston - Cel Conceptual	Reliability	Reliability
2014 NPCC-NewEAC	100-120 100-12		12/2017 Sudbury	Hudson Wakafield Ict	9 OH	1998 NSTAR I	1 Greater Boston - Wc Conceptual	Reliability Reliability	Reliability
2014 NPCC-NewEAC 2014 NPCC-NewEAC	300-399 300-39 100-120 100-12		12/2018 Woburn 12/2018 Sudbury	Wakefield Jct Hudson	7 UG 0 UG	1998 NSTAR I 1998 NSTAR I	0.5 Greater Boston - No Conceptual 1 Greater Boston - W€Conceptual	Reliability Reliability	Reliability Reliability
2014 NPCC-NewEAC	100-120 100-12		12/2018 Stubbly 12/2015 Fitzwilliam S/S	Monadnock S/S	2 OH	15472 PSNH I	1 Western New Hamp Under Construct	•	Reliability
2014 NPCC-NewEAC	100-120 100-12		12/2015 Scobie S/S	Huse Rd. S/S	6 OH	15472 PSNH I	1 Southern New Ham Under Construct	•	Reliability
							·	•	-

2014 NPCC-NewEAC	100-120	100-120		340	12/2017 Madbury S/S	Portsmouth S/S		12 OH	15472 PSNH I	1 Seacost New Hamps	Planned	Reliability	Reliability
2014 NPCC-NewEAC	100-120	100-120		340	12/2017 Madbury S/S	Portsmouth S/S		1 UG	15472 PSNH I	1 Seacost New Hamps	Planned	Reliability	Reliability
2014 NPCC-NewEAC	100-120	100-120		340	12/2015 Scobie S/S	Chester S/S		6 OH	15472 PSNH I	1 Seacost New Hamps	Under Construction	Reliability	Reliability
2014 NPCC-NewEAC	100-120			282	12/2016 Coopers Mills	Highland Substation		22 OH	3266 CMP I	·		Reliability	Reliability
2014 NPCC-NewEAC		100-120		253	12/2017 Coolidge	Ascutney		14 OH	19899 VELCO I	1 Connecticut River S	•	Reliability	Reliability
2014 NPCC-NewEAC				345	6/2016 J147-Peaslee	H141-Great Bay		5.5 OH	15472 PSNH I	1 Peaslee Project	Under Construction	•	Reliability
					•	•				•		•	•
2014 NPCC-NewEAC		100-120		250	12/2017 Greenwich	Cos Cob		3 UG	4176 CL&P I	1 Greenwich Area		Reliability	Reliability
2014 NPCC-NewEAC		100-120		250	12/2017 Greenwich	Cos Cob		3 UG	4176 CL&P I	1 Greenwich Area		Reliability	Reliability
2014 NPCC-NewEAC	100-120	100-120		337	12/2016 Eagle	Bridge St.		4.6 OH	15472 PSNH I	1 Southern Area	Planned	Reliability	Reliability
2014 NPCC-NewEAC	100-120	100-120		337	12/2016 Bridge St.	Power St.		1.1 OH	15472 PSNH I	1 Southern Area	Planned	Reliability	Reliability
2014 NPCC-NewEAC	100-120	100-120		345	6/2016 Peaslee	Power St.		5.5 OH	15472 PSNH I	1 Southern Area	Planned	Reliability	Reliability
2014 NPCC-NewEAC	100-120	100-120		401	12/2017 Plumtree	Brookfield Jct.		3.4 OH	4176 CL&P I	1 SWCT	Planned	Reliability	Reliability
2014 NPCC-NewEAC				285	12/2017 Wilton	Norwalk		1.5 OH	4176 CL&P I	1 SWCT		Reliability	Reliability
2014 NPCC-NewEAC	100-120	100-120		255	12/2017 Peaceable	Ridgefield Jct.		0.1 OH	4176 CL&P I	1 SWCT		Reliability	Reliability
					•	•						•	•
2014 NPCC-NewEAC		100-120		201	12/2017 Bunker Hill	Baldwin Jct.		3 OH	4176 CL&P I	1 SWCT		Reliability	Reliability
2014 NPCC-NewEAC		100-120		201	12/2017 West Brookfield	West Brookfield Jct.		1.4 OH	4176 CL&P I	1 SWCT		Reliability	Reliability
2014 NPCC-NewEAC	100-120	100-120		255	12/2017 Wilton	Ridgefield Jct.		5.1 OH	4176 CL&P I	1 SWCT		Reliability	Reliability
2014 NPCC-NewEAC	100-120	100-120		255	12/2017 Towantic	Bunker Hill		6.1 OH	4176 CL&P I	1 SWCT	Planned	Fossil-Fired In	Reliability
2014 NPCC-NewEAC	100-120	100-120		255	12/2016 Manchester	Barbour Hill		7.6 OH	4176 CL&P I	1 GHCC	Planned	Reliability	Reliability
2014 NPCC-NewEAC	100-120	100-120		401	12/2018 Frost Bridge	Campville		10.4 OH	4176 CL&P I	1 GHCC	Planned	Reliability	Reliability
2014 NPCC-NewEAC	100-120	100-120		255	12/2017 Southington	Lake Ave Jct.		5.2 OH	4176 CL&P I	1 GHCC	Planned	Reliability	Reliability
2014 NPCC-NewEAC		100-120		250	12/2018 Newington	Southwest Hartford		4 UG	4176 CL&P I	1 GHCC		Reliability	Reliability
2014 NPCC-NewEAC		100-120		401	12/2018 Newington	Newington Tap		0.1 OH	4176 CL&P I	1 GHCC		Reliability	Reliability
												•	•
2014 NPCC-NewEAC		100-120		201	12/2017 South Meadow	Rood Ave		7.8 OH	4176 CL&P I	1 1779 Line Partial Re		Reliability	Reliability
2014 NPCC-NewEAC		100-120		255	12/2017 Rood Ave	Bloomfield		4.2 OH	4176 CL&P I	1 GHCC		Reliability	Reliability
2014 NPCC-NewEAC	300-399	300-399	TE	BD	12/2017 Scobie Pond	NH/MABorder		9.8 OH	15472 PSNH I	1 Greater Boston - No	Planned	Reliability	Reliability
2014 NPCC-NewEAC	100-120	100-120	TE	BD	12/2017 Power St.	NH/MABorder		3.7 OH	15472 PSNH I	1 Greater Boston - No	Planned	Reliability	Reliability
2014 NPCC-NewYAC	100-120		115	124	12/2017 Klinekill Tap		<10	ОН	NYSEG		Planned	Reliability	
2014 NPCC-NewYAC	300-399	345		1549	6/2015 Mainesburg			151 OH	NYSEG		Planned	Reliability	
2014 NPCC-NewYAC	300-399		345	1013	6/2016 Homer City			120 OH	NGRID/NYSEG			Reliability	
2014 NPCC-NewYDC	300-399		320	1000	12/2018 Leeds 345kV			72	West Point Partners			Reliability	
					-						•	-	
2014 NPCC-NewYAC	300-399		345	2177	12/2019 Niagara			66.4 OH	NYPA			Reliability	
2014 NPCC-NewYAC	100-120		115	129	12/2015 Gardenville			58.3 OH	NGRID			Reliability	
2014 NPCC-NewYAC	300-399		345	1013	12/2015 Five Mile Rd (New Station)			53 OH	NGRID		Planned	Reliability	
2014 NPCC-NewYAC	300-399		345	2177	12/2019 Dysinger Tap			40.2 OH	NYPA		Planned	Reliability	
2014 NPCC-NewYDC	300-399		320	1000	12/2018 Hertel 735kV (Quebec)			333 UG	TDI		Conceptual	Reliability	
2014 NPCC-NewYAC	300-399		345	1013	6/2016 Farmers Valley			31 OH	NGRID/NYSEG		Planned	Reliability	
2014 NPCC-NewYAC	300-399			1549	6/2015 Watercure Road			26 OH	NYSEG			Reliability	
2014 NPCC-NewYAC	300-399		345	2500	6/2016 Fraser			21.8 OH	NYSEG			Reliability	
					-							•	
2014 NPCC-NewYAC	100-120		115	937	6/2015 Battenkill			21.59	NGRID			Reliability	
2014 NPCC-NewYAC	100-120		115	648	12/2017 Greenbush			20.3 OH	NGRID			Reliability	
2014 NPCC-NewYAC	200-299		230	1080	12/2017 South Perry			20 OH	NYSEG		Conceptual	Reliability	
2014 NPCC-NewYAC	121-150		138	1980	12/2022 Ramapo			17 OH	O & R		Planned	Reliability	
2014 NPCC-NewYAC	121-150		138	846	6/2023 Riverhead			16.4 UG	LIPA		Conceptual	Reliability	
2014 NPCC-NewYAC	300-399		345	3030	6/2016 Ramapo			16 OH	O & R		Planned	Reliability	
2014 NPCC-NewYAC	100-120			250	12/2016 Elbridge			14.5 OH	NYSEG			Reliability	
2014 NPCC-NewYAC	100-120			1255	12/2017 Elbridge			14.5 OH	NYSEG			Reliability	
2014 NPCC-NewYAC	100-120		115	1233	6/2017 Elbhage 6/2017 Mohican			14.3 OH	NGRID		•		
			115	1011	•							Reliability	
2014 NPCC-NewYAC	300-399		345	1811	6/2016 Rock Tavern			13.7 OH	ConEd			Reliability	
2014 NPCC-NewYAC	300-399		345	632	6/2016 Goethals			12.95 UG	ConEd			Reliability	
2014 NPCC-NewYAC	100-120		115	220	12/2017 Clay			12.75 OH	NGRID		Planned	Reliability	
2014 NPCC-NewYAC	100-120		115	1114	6/2020 Saugerties			12.46 OH	CHGE		Planned	Reliability	
2014 NPCC-NewYAC	121-150		138		6/2017 West Bus			5.74 UG	LIPA		Conceptual	Reliability	
2014 NPCC-NewYAC	121-150		138	1062	12/2022 Sugarloaf			12 OH	O & R		Planned	Reliability	
2014 NPCC-NewYAC	100-120		115	775	6/2017 Wood Street			11.7 OH	NYSEG			Reliability	
2014 NPCC-NewYAC	200-299		230	1080	12/2017 Wethersfield			11.5 OH	NYSEG			Reliability	
2014 NPCC-NewYAC	100-120		115	1114	6/2020 Hurley Ave			11.4 OH	CHGE			Reliability	
					•						•	•	
2014 NPCC-NewYAC	100-120		115	1506	12/2016 Station 255 (New Station)			11.1	RGE			Reliability	
2014 NPCC-NewYAC	121-150		138	1399	6/2023 Riverhead			10.63 OH	LIPA		•	Reliability	
2014 NPCC-NewYAC	100-120		115	193	12/2017 Clay			10.24 OH	NGRID		Planned	Reliability	
2014 NPCC-NewYAC	100-120		115	1114	6/2020 High Falls			10.03 OH	CHGE		Planned	Reliability	
2014 NPCC-NewYAC	121-150		138		6/2020 Shore Rd			10 UG	LIPA		Conceptual	Reliability	
2014 NPCC-NewYAC	100-120		115	1506	12/2020 Station 255 (New Station)			9.6 OH	RGE		Planned	Reliability	
2014 NPCC-NewYAC	100-120		115	1114	6/2020 Galeville			8.96 OH	CHGE			Reliability	
2014 NPCC-NewYAC	121-150		138	825	6/2025 Northport			8.45 UG	LIPA			Reliability	
2014 NPCC-NewYAC	100-120		115	129	12/2015 Five Mile Rd (New Station)			8 OH	NGRID		•	Reliability	
2014 NPCC-NewYAC			115					7.77 OH	CHGE				
	100-120			1114	12/2020 Myers Corners						•	Reliability	
2014 NPCC-NewYAC	121-150		138	1604	12/2020 West Nyack (NY)			7 OH	O & R			Reliability	
2014 NPCC-NewYAC	121-150		138		6/2020 Valley Stream			7	LIPA		•	Reliability	
2014 NPCC-NewYAC	100-120		115		6/2017 Luther Forest			6.2 OH	NGRID			Reliability	
2014 NPCC-NewYAC	100-120		115	648	12/2017 Klinekill Tap			6.13 OH	NGRID		Planned	Reliability	
2014 NPCC-NewYAC	121-150		138	2087	6/2017 Pilgrim			6 OH	LIPA		Conceptual	Reliability	
2014 NPCC-NewYAC	100-120		115	1104	12/2016 Clay			7.3 OH	NGRID		Planned	Reliability	
2014 NPCC-NewYAC	121-150		138	2087	6/2017 West Bus			5.74 OH	LIPA			Reliability	
2014 NPCC-NewYAC	100-120		115	1114	6/2020 St. Pool			5.61 OH	CHGE		•	Reliability	
2014 NPCC-NewYAC	100-120		115	1280	6/2016 Pleasant Valley			5.53 OH	CHGE			Reliability	
2014 NPCC-NewYAC	100-120		115	1280	6/2016 Fleasant Valley			5.23 OH	CHGE			Reliability	
ZOIT IN CUINCWIAU	100-120		110	1200	0/2010 TOUG TIIII			J.23 UN	CIUL		. minicu	renability	

2014 NPCC-NewYAC	100-120	115		6/2017 Luther Forest		5.1 OH	NGRID		Conceptual Reliability	
2014 NPCC-NewYAC	121-150	138	1980	6/2017 Burns		5 OH	O & R		Planned Reliability	
2014 NPCC-NewYAC	121-150	138		6/2025 Newbridge		5 UG	LIPA		Conceptual Reliability	
2014 NPCC-NewYAC	100-120	115	1114	6/2020 Kerhonkson		4.97 OH	CHGE		Planned Reliability	
2014 NPCC-NewYAC	100-120	115	1114	6/2020 Modena		4.62 OH	CHGE		Planned Reliability	
2014 NPCC-NewYAC	300-399	345	800	6/2016 Gowanus		4.05 UG	ConEd		Planned Reliability	
2014 NPCC-NewYAC	300-399	345	3000	6/2018 North Rockland (New	Station)	4 OH	O & R/ConEd		Conceptual Reliability	
2014 NPCC-NewYAC	300-399	345	2177	12/2019 Station 255 (New Stat		3.8 OH	NYPA		Planned Reliability	
2014 NPCC-NewYAC	100-120	115	1255	6/2016 Station 67	,	3.5 OH	RGE		Planned Reliability	
2014 NPCC-NewYAC	100-120	115	1233	6/2019 Mohican		3.5 OH	NGRID		Conceptual Reliability	
2014 NPCC-NewYAC		115	1280	6/2019 E. Fishkill		3.32 OH	CHGE			
	100-120								·	
2014 NPCC-NewYAC	100-120	115	2008	12/2015 Station 33		2.97 UG	RGE		Planned Reliability	
2014 NPCC-NewYAC	100-120	115	1114	12/2020 Knapps Corners		2.88 OH	CHGE		Conceptual Reliability	
2014 NPCC-NewYAC	100-120	115	916	6/2015 Eastover Road (New S	Station)	2.6	NGRID		Planned Reliability	
2014 NPCC-NewYAC	100-120	115	1454	12/2020 Fishkill Plains		2.05 OH	CHGE		Conceptual Reliability	
2014 NPCC-NewYAC	200-299	230		12/2017 Cumberland Head		1.63 SM	NYPA		Conceptual Reliability	
2014 NPCC-NewYAC	300-399	345	1252	6/2016 Goethals		1.5 UG	ConEd		Planned Reliability	
2014 NPCC-NewYAC	300-399	345	1252	6/2016 Goethals		1.5 UG	ConEd		Planned Reliability	
2014 NPCC-NewYAC	100-120	115	2008	12/2015 Station 262		1.46 UG	RGE		Planned Reliability	
2014 NPCC-NewYAC	100-120	115	775	6/2016 Wood Street		1.34 OH	NYSEG		Planned Reliability	
2014 NPCC-NewYAC	100-120	115	1396	6/2015 Mortimer		1 OH	RGE		Planned Reliability	
2014 NPCC-NewYAC	100-120	115	1396	6/2015 Station 251		0.98 OH	RGE		Planned Reliability	
2014 NPCC-NewYAC	100-120	115		6/2015 Gardenville		0.3	NGRID		Planned Reliability	
2014 NPCC-NewYAC	300-399	345	2504	6/2016 Goethals		-1.5 UG	ConEd		Planned Reliability	
							LIPA		•	
2014 NPCC-NewYAC	121-150	138	2087	6/2017 Pilgrim		-11.74 OH			Conceptual Reliability	
2014 NPCC-NewYAC	100-120	115	937	6/2015 Luther Forest		-18.3	NGRID		Planned Reliability	
2014 NPCC-NewYAC	100-120	115	916	6/2015 Battenkill		-22.39	NGRID		Planned Reliability	
2014 NPCC-NewYAC	100-120	115	648	12/2017 Greenbush		-26.43 OH	NGRID		Planned Reliability	
2014 NPCC-NewYAC	200-299	230	1080	12/2017 Wethersfield		-31.5 OH	NYSEG		Planned Reliability	
2014 NPCC-NewYAC	300-399	345	2177	12/2019 Dysinger Tap		-44 OH	NYPA		Planned Reliability	
2014 NPCC-NewYAC	100-120	115	584	12/2015 Gardenville		-65.69 OH	NGRID		Planned Reliability	
2014 NPCC-NewYAC	300-399	345	2177	12/2019 Niagara		-70.2 OH	NYPA		Planned Reliability	
2014 NPCC-NewYAC	300-399	345	1013	6/2016 Homer City		-151.11 OH	NGRID/NYSEG		Planned Reliability	
2014 NPCC-NewYAC	300-399 34	45	1549	6/2015 Homer City		-177 OH	NYSEG		Planned Reliability	
2014 NPCC-NewYAC	300-399	345	1013	12/2015 Homer City		-204.11 OH	NGRID		Planned Reliability	
2014 NPCC-NewYDC	200-299	200	500	6/2016 Deans 500kV		82 UG	LIPA		Planned Reliability	
2014 NPCC-NewYAC	100-120	115	1114	6/2020 High Falls		10.03 OH	CHGE		Planned Reliability	
									•	
2014 NPCC-NewYAC	100-120	115	1114	6/2020 Galeville		8.96 OH	CHGE		Planned Reliability	
2014 NIDCC NITTO A C	100 130	120	TDD	C /2020 Mallan Charana		7.011	LIDA		Composition Deliability	
2014 NPCC-NewYAC	100-120	138		6/2020 Valley Stream		7 OH	LIPA		Conceptual Reliability	
2014 NPCC-NewYAC	100-120	138	TBD	6/2020 Shore Rd		10 UG	LIPA		Conceptual Reliability	
2014 NPCC-NewYAC 2014 NPCC-NewYAC	100-120 100-120	138 ° 115	TBD 937	6/2020 Shore Rd 6/2015 Luther Forest		10 UG 17.5 OH	LIPA NGRID		Conceptual Reliability Planned Reliability	
2014 NPCC-NewYAC	100-120	138	TBD	6/2020 Shore Rd		10 UG	LIPA		Conceptual Reliability	
2014 NPCC-NewYAC 2014 NPCC-NewYAC	100-120 100-120	138 ° 115	TBD 937	6/2020 Shore Rd 6/2015 Luther Forest		10 UG 17.5 OH	LIPA NGRID		Conceptual Reliability Planned Reliability	
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC	100-120 100-120 300-399	138 ¹ 115 345	TBD 937 3000	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown		10 UG 17.5 OH -9.5 OH	LIPA NGRID O&R/Coned		Conceptual Reliability Planned Reliability Conceptual Reliability	
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC	100-120 100-120 300-399 300-399	138 1 115 345 345 345	937 3000 3000	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown	Cumberland	10 UG 17.5 OH -9.5 OH 5.5 OH	LIPA NGRID O&R/Coned O&R/Coned	1 b0210.1	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 300-399 200-299 20	138 1 115 345 345 345 00-299	937 3000 3000 3000 700	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard		10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE		Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability	
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC 2014 PJM AC	100-120 100-120 300-399 300-399 300-399 200-299 20	138 3 115 345 345 345 00-299	937 3000 3000 3000 700 669	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton	Gloucester	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE I AE I	1 b1398.3.1	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC 2014 PJM AC 2014 PJM AC	100-120 100-120 300-399 300-399 300-399 200-299 20 200-299 20	138 1 115 345 345 345 00-299 00-299 21-150	937 3000 3000 3000 700 669 389	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run	Gloucester Hopetown	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE I AE I 14006 AEP I	1 b1398.3.1 1 b1032.2	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability	Economics / Congestion Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC 2014 PJM AC 2014 PJM AC 2014 PJM AC	100-120 100-120 300-399 300-399 300-399 200-299 20 200-299 20 121-150 12	138 ° 115 345 345 345 00-299 00-299 21-150 21-150	937 3000 3000 3000 700 669 389 389	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run	Gloucester Hopetown Circleville	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE I AE I 14006 AEP I	1 b1398.3.1 1 b1032.2 1 b1032.2	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability	Economics / Congestion Economics / Congestion Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 20 200-299 20 121-150 12 121-150 12	138 ° 115 ° 345 ° 345 ° 345 ° 00-299 ° 21-150 ° 21-150 ° 21-150 °	937 3000 3000 3000 700 669 389 389 389	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown	Gloucester Hopetown Circleville Delano	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE I AE I 14006 AEP I 14006 AEP I	1 b1398.3.1 1 b1032.2 1 b1032.2 1 b1032.3	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Planned Reliability	Economics / Congestion Economics / Congestion Economics / Congestion Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 20 200-299 20 121-150 12 121-150 12 121-150 12	138 ° 115 ° 345 ° 345 ° 345 ° 00-299 ° 00-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 °	937 3000 3000 3000 700 669 389 389 389 251	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton	Gloucester Hopetown Circleville Delano West Canton	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE I AE I 14006 AEP I I	1 b1398.3.1 1 b1032.2 1 b1032.2 1 b1032.3 1 b1034.1	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 20 200-299 20 121-150 12 121-150 12 121-150 12	138 1 115 345 345 345 345 00-299 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-	937 3000 3000 3000 700 669 389 389 389 251 251	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals	Gloucester Hopetown Circleville Delano West Canton Wayview	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE I AE I 14006 AEP I I	1 b1398.3.1 1 b1032.2 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Under Constructior Reliability Under Constructior Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 2121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 115 ° 345 ° 345 ° 345 ° 00-299 ° 00-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 °	937 3000 3000 3000 700 669 389 389 389 251 251 296	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro	Gloucester Hopetown Circleville Delano West Canton Wayview Highland	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE AE 14006 AEP	1 b1398.3.1 1 b1032.2 1 b1032.2 1 b1034.1 1 b1034.1 1 b1466.7	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 20 200-299 20 121-150 12 121-150 12 121-150 12 121-150 12 121-150 12 121-150 12	138 ° 115 ° 345 ° 345 ° 345 ° 00-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 °	937 3000 3000 3000 700 669 389 389 251 251 296 388	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE AE I 14006 AEP I I I I I I I I I I I I I I I I I I I	1 b1398.3.1 1 b1032.2 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 2121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 115 ° 345 ° 345 ° 345 ° 00-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 °	937 3000 3000 3000 700 669 389 389 389 251 251 296	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro	Gloucester Hopetown Circleville Delano West Canton Wayview Highland	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE AE 14006 AEP	1 b1398.3.1 1 b1032.2 1 b1032.2 1 b1034.1 1 b1034.1 1 b1466.7	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 2121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 115 ° 345 ° 345 ° 345 ° 00-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 °	937 3000 3000 3000 700 669 389 389 251 251 296 388	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE AE I 14006 AEP I I I I I I I I I I I I I I I I I I I	1 b1398.3.1 1 b1032.2 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 115 ° 345 ° 345 ° 345 ° 00-299 ° 00-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 °	937 3000 3000 3000 700 669 389 389 251 251 296 388 388	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE AE 14006 AEP	1 b1398.3.1 1 b1032.2 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Planned Reliability Planned Reliability Planned Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 115 ° 345 ° 345 ° 345 ° 00-299 ° 00-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 20+	937 3000 3000 3000 700 669 389 389 251 251 296 388 388 4257	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Dumont	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE AE I 14006 AEP I I	1 b1398.3.1 1 b1032.2 1 b1032.2 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Planned Reliability Planned Reliability Planned Reliability Planned Reliability Planned Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 115 ° 345 ° 345 ° 345 ° 345 ° 00-299 ° 00-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+ ° 00+	937 3000 3000 3000 700 669 389 389 251 251 296 388 388 4257 4257 251	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Sorenson Cherry Creek	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 17 OH 7 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned O&R/Coned AE AE AE 14006 AEP	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1659.14 1 b1662	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 115 ° 345 ° 345 ° 345 ° 345 ° 00-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-	937 3000 3000 3000 700 669 389 389 251 251 296 388 388 4257 4257 251 388	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton 6/2016 Jacksons Ferry	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Sorenson Cherry Creek Progress Park	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.4 OH 15.5 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE AE I 14006 AEP I I	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1659.14 1 b1662 1 b1663.1	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 2121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 115 ° 345 ° 345 ° 345 ° 345 ° 00-299 ° 20-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-	937 3000 3000 3000 700 669 389 389 251 251 296 388 388 4257 4257 4257 251 388 388	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Sorenson Cherry Creek Progress Park Wythe	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 23.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 15.4 OH 15.5 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE AE AE 14006 AEP	1 b1398.3.1 1 b1032.2 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1659.14 1 b1662 1 b1663.1	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 115 ° 345 ° 345 ° 345 ° 345 ° 00-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-	937 3000 3000 3000 700 669 389 389 389 251 251 296 388 388 4257 4257 251 388 388 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Sorenson Cherry Creek Progress Park Wythe Greenlawn	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 15.4 OH 20.1 OH 2 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE AE I AE I 14006 AEP I I	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1663.1 1 b1667	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 2121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 115 ° 345 ° 345 ° 345 ° 345 ° 00-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-	937 3000 3000 3000 700 669 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Greenlawn	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 23.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 15.4 OH 20 OH 20 OH 20 OH 20 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned O&R/Coned AE AE AE 14006 AEP	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1663.1 1 b1667	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 115 ° 345 ° 345 ° 345 ° 345 ° 300-299 ° 20-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21	937 3000 3000 3000 700 669 389 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Melmore 6/2016 Greenlawn 6/2016 Melmore	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 23.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 20H 20H 20H 20H 3.6 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned O&R/Coned AE AE I AE I 14006 AEP I I 14006 AEP I I 14006 AEP I I 14006 AEP I I I I I I I I I I I I I I I I I I I	1 b1398.3.1 1 b1032.2 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1663.1 1 b1667 1 b1667	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 115 ° 345 ° 345 ° 345 ° 345 ° 00-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-	937 3000 3000 3000 700 669 389 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Greenlawn 6/2016 Melmore 6/2016 Melmore	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tiffin Center	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 15.4 OH 20.1 OH 2 OH 2 OH 2 OH 3.6 OH 12.6 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned O&R/Coned AE AE I 14006 AEP I I I I I I I I I I I I I I I I I I I	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1667 1 b1667 1 b1667	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 345 ° 345 ° 345 ° 345 ° 345 ° 300-299 ° 20-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21	937 3000 3000 3000 700 669 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Melmore 6/2016 Tiffin Center	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tremont Center	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 20H 20H 20H 20H 20H 20H 21.6 OH 12.6 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned O&R/Coned AE AE I AE I 14006 AEP I I I I I I I I I I I I I I I I I I I	1 b1398.3.1 1 b1032.2 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1667 1 b1667 1 b1667 1 b1667 1 b1667	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 345 345 345 300-299 200-299 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150	937 3000 3000 3000 700 669 389 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Greenlawn 6/2016 Tiffin Center 6/2016 Tiffin Center	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tiffin Center Fremont Center Fremont Center	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 20.1 OH 2 OH 2 OH 2 OH 3.6 OH 12.6 OH 3.1 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned O&R/Coned AE AE I AE I 14006 AEP I I I I I I I I I I I I I I I I I I I	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1667	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 2121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 345 345 345 300-299 200-299 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150	937 3000 3000 3000 700 669 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Greenlawn 6/2016 Melmore 6/2016 Tiffin Center 6/2016 Tiffin Center	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tiffin Center Fremont Center Allen Allen	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 20 OH 20 OH 20 OH 20 OH 21 OH 21 OH 22 OH 3.6 OH 12.6 OH 3.1 OH 3.1 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned O&R/Coned AE AE I 14006 AEP I I I I I I I I I I I I I I I I I I I	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1667 1 b1818 1 b1818	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 3 345 345 345 300-299 200-299 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150	937 3000 3000 3000 700 669 389 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Melmore 6/2016 Tiffin Center 6/2016 Tiffin Center 6/2016 Sterling 6/2016 Milan	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tiffin Center Fremont Center Fremont Center Allen Allen	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 23.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 4 OH 14.8 OH 20.1 OH 2 OH 2 OH 2 OH 3.6 OH 12.6 OH 12.6 OH 3.1 OH 3.1 OH 3.1 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned O&R/Coned AE AE I AE I 14006 AEP I I I I I I I I I I I I I I I I I I I	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1667 1 b1818 1 b1818	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 2121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 3 345 345 345 300-299 200-299 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150	937 3000 3000 3000 700 669 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Greenlawn 6/2016 Melmore 6/2016 Tiffin Center 6/2016 Tiffin Center	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tiffin Center Fremont Center Allen Allen	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 20 OH 20 OH 20 OH 20 OH 21 OH 21 OH 22 OH 3.6 OH 12.6 OH 3.1 OH 3.1 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned O&R/Coned AE AE I 14006 AEP I I I I I I I I I I I I I I I I I I I	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1667 1 b1818 1 b1818	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 3 345 345 345 300-299 200-299 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150	937 3000 3000 3000 700 669 389 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167 167 167 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Melmore 6/2016 Tiffin Center 6/2016 Tiffin Center 6/2016 Sterling 6/2016 Milan	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tiffin Center Fremont Center Fremont Center Allen Allen	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 23.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 4 OH 14.8 OH 20.1 OH 2 OH 2 OH 2 OH 3.6 OH 12.6 OH 12.6 OH 3.1 OH 3.1 OH 3.1 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned O&R/Coned AE AE I AE I 14006 AEP I I I I I I I I I I I I I I I I I I I	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1667 1 b1818 1 b1818	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 2121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 345 345 345 345 345 345 345 345 345 345	937 3000 3000 3000 700 669 389 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167 167 167 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Greenlawn 6/2016 Tiffin Center 6/2016 Tiffin Center 6/2016 Sterling 6/2016 Milan 6/2016 Milan	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tiffin Center Fremont Center Fremont Center Allen Allen Allen	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 14.8 OH 20.1 OH 2 OH 2 OH 2 OH 3.6 OH 12.6 OH 12.6 OH 3.1 OH 3.1 OH 3.1 OH 3.1 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned O&R/Coned AE AE I AE I 14006 AEP I I I I I I I I I I I I I I I I I I I	1 b1398.3.1 1 b1032.2 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1659.14 1 b1659.14 1 b1662 1 b1663.1 1 b1667 1 b1667 1 b1667 1 b1667 1 b1667 1 b1667 1 b1818 1 b1818 1 b1818	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 115 ° 345 ° 345 ° 345 ° 345 ° 300-299 ° 20-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21	937 3000 3000 3000 700 669 389 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167 167 167 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 South Canton 8/2015 Wagenhals 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Greenlawn 6/2016 Melmore 6/2016 Tiffin Center 6/2016 Tiffin Center 6/2016 Sterling 6/2016 Milan 6/2016 Timber Switch 6/2016 Timber Switch	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tiffin Center Fremont Center Fremont Center Allen Allen Allen Allen Sorenson	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 23.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 20.1 OH 2 OH 2 OH 2 OH 2 OH 3.6 OH 12.6 OH 12.6 OH 3.1 OH 3.1 OH 3.1 OH 3.1 OH 3.1 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned O&R/Coned AE AE I AE I 14006 AEP I I I I I I I I I I I I I I I I I I I	1 b1398.3.1 1 b1032.2 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1667 1 b1818 1 b1818 1 b1818 1 b1818	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 2121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 345 345 345 300-299 20-299 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150	937 3000 3000 3000 700 669 389 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167 167 167 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 8/2015 South Canton 8/2016 Hopetown 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Melmore 6/2016 Tiffin Center 6/2016 Tiffin Center 6/2016 Sterling 6/2016 Milan 6/2016 Timber Switch 6/2016 Robison Park	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tiffin Center Fremont Center Fremont Center Allen Allen Allen Allen Sorenson Brues Tower 117	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 14.8 OH 20.1 OH 2 OH 2 OH 2 OH 3.6 OH 12.6 OH 12.6 OH 3.1 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned O&R/Coned AE AE I AE I 14006 AEP I I I I I I I I I I I I I I I I I I I	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1667 1 b1667 1 b1667 1 b1667 1 b1667 1 b1667 1 b1818 1 b1818 1 b1818 1 b1818 1 b1818	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 ° 115 ° 345 ° 345 ° 345 ° 345 ° 300-299 ° 20-299 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21-150 ° 21	937 3000 3000 3000 700 669 389 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167 167 167 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 8/2015 South Canton 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Greenlawn 6/2016 Melmore 6/2016 Tiffin Center 6/2016 Tiffin Center 6/2016 Tiffin Center 6/2016 Sterling 6/2016 Milan 6/2016 Timber Switch 6/2016 Robison Park 6/2016 Robison Park	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tiffin Center Fremont Center Fremont Center Allen Allen Allen Allen Sorenson Brues Tower 117 McClung	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 23.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 15.4 OH 20.1 OH 3.6 OH 12.6 OH 3.1 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE AE I 14006 AEP I I I I I I I I I I I I I I I I I I I	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1667 1 b1667 1 b1667 1 b1667 1 b1667 1 b1667 1 b1818 1 b1819 1 b1864.2 1 b1875	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 2121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 3 115 345 345 345 300-299 200-299 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150	937 3000 3000 3000 700 669 389 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167 167 167 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Pemberton 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Greenlawn 6/2016 Miffin Center 6/2016 Tiffin Center 6/2016 Tiffin Center 6/2016 Sterling 6/2016 Milan 6/2016 Robison Park 6/2016 Bradley 12/2017 Tower 117 8/2015 Conesville	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tiffin Center Fremont Center Fremont Center Allen Allen Allen Allen Sorenson Brues Tower 117 McClung Ohio Central	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 14.8 OH 20.1 OH 2 OH 2 OH 2 OH 3.6 OH 12.6 OH 12.6 OH 12.6 OH 3.1 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE AE I 14006 AEP I I 14006 AEP	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1667 1 b1667 1 b1667 1 b1667 1 b1667 1 b1818	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 3 115 345 345 345 300-299 20-299 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150	937 3000 3000 3000 700 669 389 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167 167 167 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Marysville 6/2016 Dumont 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Melmore 6/2016 Tiffin Center 6/2016 Tiffin Center 6/2016 Sterling 6/2016 Milan 6/2016 Timber Switch 6/2016 Robison Park 6/2016 Bradley 12/2017 Tower 117 8/2015 Conesville 8/2015 Bixby	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tiffin Center Fremont Center Fremont Center Allen Allen Allen Allen Sorenson Brues Tower 117 McClung Ohio Central	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 23.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 20.1 OH 2 OH 2 OH 2 OH 2 OH 3.6 OH 12.6 OH 12.6 OH 12.6 OH 3.1 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE AE I AE I 14006 AEP I I 14006 AEP	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1667 1 b1667 1 b1667 1 b1667 1 b1667 1 b1667 1 b1818	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 3 115 345 345 345 300-299 200-299 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150	937 3000 3000 3000 700 669 389 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167 167 167 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Greenlawn 6/2016 Melmore 6/2016 Tiffin Center 6/2016 Tiffin Center 6/2016 Timber Switch 6/2016 Robison Park 6/2016 Timber Switch 6/2016 Sterling 6/2016 Milan 6/2016 Timber Switch 6/2016 Robison Park 6/2016 Timber Switch 6/2016 Timber Switch 6/2016 Robison Park 6/2016 Timber Switch 6/2016 Robison Park 6/2016 Timber Switch 6/2016 Timber Switch 6/2016 Robison Park 6/2016 West Bellaire 6/2016 Bradley 12/2017 Tower 117 8/2015 Conesville 8/2015 Bixby 6/2016 Vassell	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tiffin Center Fremont Center Fremont Center Fremont Center Allen Allen Allen Allen Sorenson Brues Tower 117 McClung Ohio Central Ohio Central Corridor	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 15.5 OH 20.1 OH 2 OH 2 OH 2 OH 3.6 OH 12.6 OH 12.6 OH 12.6 OH 3.1 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned O&R/Coned AE AE I AE I 14006 AEP I I 14006 AEP	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1667 1 b1667 1 b1667 1 b1667 1 b1667 1 b1818 1 b1875 1 b1864.2 1 b1875 1 b2018 1 s0251	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 2121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 3 115 345 345 345 300-299 20-299 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150	937 3000 3000 3000 700 669 389 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167 167 167 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Greenlawn 6/2016 Greenlawn 6/2016 Tiffin Center 6/2016 Tiffin Center 6/2016 Sterling 6/2016 Sterling 6/2016 Timber Switch 6/2016 Robison Park 6/2016 Bradley 12/2017 Tower 117 8/2015 Conesville 8/2015 Bixby 6/2016 Vassell	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tiffin Center Fremont Center Fremont Center Allen Allen Allen Allen Sorenson Brues Tower 117 McClung Ohio Central Ohio Central Corridor Delaware	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 14.8 OH 20.1 OH 2 OH 2 OH 2 OH 3.6 OH 12.6 OH 12.6 OH 3.1 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned AE AE I AE I 14006 AEP I	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1667 1 b1667 1 b1667 1 b1667 1 b1667 1 b1818 1 b1875 1 b1875 1 b1875 1 b2018 1 s0251	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion
2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 NPCC-NewYAC 2014 PJM AC	100-120 100-120 300-399 300-399 200-299 200-299 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150 121-150	138 3 115 345 345 345 300-299 20-299 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150 21-150	937 3000 3000 3000 700 669 389 389 389 251 251 296 388 388 4257 4257 251 388 388 167 167 167 167 167 167 167 167 167 167	6/2020 Shore Rd 6/2015 Luther Forest 6/2018 Ladentown 6/2018 North Rockland 8/2015 Orchard 6/2016 Mickleton 8/2015 Biers Run 8/2015 Biers Run 6/2016 Hopetown 8/2015 Wagenhals 6/2016 Hillsboro 6/2016 Robison Park 6/2016 Dumont 6/2016 Marysville 6/2016 Jacksons Ferry 6/2016 Jacksons Ferry 6/2016 Melmore 6/2016 Greenlawn 6/2016 Melmore 6/2016 Tiffin Center 6/2016 Tiffin Center 6/2016 Timber Switch 6/2016 Robison Park 6/2016 Timber Switch 6/2016 Sterling 6/2016 Milan 6/2016 Timber Switch 6/2016 Robison Park 6/2016 Timber Switch 6/2016 Timber Switch 6/2016 Robison Park 6/2016 Timber Switch 6/2016 Robison Park 6/2016 Timber Switch 6/2016 Timber Switch 6/2016 Robison Park 6/2016 West Bellaire 6/2016 Bradley 12/2017 Tower 117 8/2015 Conesville 8/2015 Bixby 6/2016 Vassell	Gloucester Hopetown Circleville Delano West Canton Wayview Highland Auburn Auburn Sorenson Cherry Creek Progress Park Wythe Greenlawn Tiffin Center Tiffin Center Fremont Center Fremont Center Fremont Center Allen Allen Allen Allen Sorenson Brues Tower 117 McClung Ohio Central Ohio Central Corridor	10 UG 17.5 OH -9.5 OH 5.5 OH 4 OH 2.7 OH 1.7 OH 5.5 OH 23.5 OH 5.5 OH 4.1 OH 9 OH 7.5 OH 15.5 OH 15.5 OH 15.5 OH 15.5 OH 20.1 OH 2 OH 2 OH 2 OH 3.6 OH 12.6 OH 12.6 OH 12.6 OH 3.1 OH	LIPA NGRID O&R/Coned O&R/Coned O&R/Coned O&R/Coned AE AE I AE I 14006 AEP I I 14006 AEP	1 b1398.3.1 1 b1032.2 1 b1032.3 1 b1034.1 1 b1034.1 1 b1466.7 1 b1490 1 b1490 1 b1659.14 1 b1662 1 b1663.1 1 b1667 1 b1667 1 b1667 1 b1667 1 b1667 1 b1818 1 b1875 1 b1864.2 1 b1875 1 b2018 1 s0251	Conceptual Reliability Planned Reliability Conceptual Reliability Conceptual Reliability Conceptual Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Under Constructior Reliability Planned Reliability Under Constructior Reliability Planned Reliability	Economics / Congestion

2014 PJM	AC	121-150 121-150	323	6/2016 I. U. Purdue	Spy Run	2.5 OH	14006 AEP I	1 s0353	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 138	350	6/2018 Structure 415	New Station	3.75 OH	AEP I	1 b2344.2	Planned	Reliability	Economics / Congestion
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2014 PJM	AC	121-150 138	350	6/2018 New Station	Marcellus	1.95 OH	AEP I	1 b2344.3	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 138	350	6/2018 Structure 434	Marcellus	2.35 OH	AEP I	1 b2344.4	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 138	350	6/2018 Hogan	Mullin	3 OH	AEP I	1 b2410	Planned	Reliability	Economics / Congestion
2014 PJM	AC	300-399 345	900	6/2018 Sorenson	East Lima	32 OH	AEP I	1 n3460	Planned	Reliability	Economics / Congestion
				•						•	
2014 PJM	AC	200-299 200-299	525	6/2017 Conastone	Graceton	8.6 OH	4172 BGE I	1 b0497	Planned	Reliability	Economics / Congestion
2014 PJM	AC	100-120 100-120	262	6/2016 Westport	Wilkens Ave	3 UG	4172 BGE I	1 TOI152	Planned	Reliability	Economics / Congestion
				•						•	
2014 PJM	AC	200-299 200-299	525	6/2017 Graceton	Raphael Rd.	3 OH	4172 BGE I	1 b1251	Planned	Reliability	Economics / Congestion
2014 PJM	AC	100-120 115	200	6/2017 Raphael Road	Joppatowne	3 UG	BGE I	1 b2307	Planned	Reliability	Economics / Congestion
2014 PJM	AC	100-120 115	180	6/2018 Bestgate Tap	Waugh Chapel	3 UG	BGE I	1 b2308	Planned	Reliability	Economics / Congestion
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2014 PJM	AC	300-399 300-399	969	6/2017 Byron	Wayne	57 OH	ComEd I	1 b2141/n1606	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150	220	6/2018 West Milton	Eldean	18 OH	4922 Dayton I	1 b1572	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150	220	6/2016 Jay	Fort Recovery	11 OH	4922 Dayton I	1 s0326	Planned	Reliability	Economics / Congestion
				•	•		•			•	. •
2014 PJM	AC	121-150 121-150	223	12/2018 Plum	Universal	7.3 OH	5487 DLCO I	1 toi1340.2	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150		6/2016 Elrama	Dravosburg	-9.74 OH	5487 DLCO I	1 b2174.7	Planned	Reliability	Economics / Congestion
2014 PJM	AC	300-399 300-399	540	6/2016 Brunot Island	Carson	9 UG	5487 DLCO I	1 b0502	Planned	, Reliability	Economics / Congestion
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2014 PJM	AC	121-150 121-150	320	6/2016 Wye Mills	Church	7 OH	DPL I	1 b0879	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150	320	6/2018 Wye Mills	Easton	4 OH	DPL I	1 toi355	Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299 200-299	560	6/2016 W3-032A	Cartanza	2.5 OH	DPL I	1 n3405	Planned	Fossil-Fired	
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2014 PJM	AC	121-150 138	350	6/2019 Vienna	Loretto	17 OH	DPL I	1 b0750	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 138	350	6/2019 Loretto	Piney Grove	8 OH	DPL I	1 b0750	Planned	Reliability	Economics / Congestion
2014 PJM				•	•			1 b0877		•	
	AC	200-299 230	650	6/2019 Vienna	Steele	25 OH	DPL I		Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299 230	650	6/2016 Jenkins	Stanton	14 OH	PL I	1 b0910	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 138	350	6/2018 Piney Grove	Wattsville	8 OH	DPL I	1 b2288	Planned	Reliability	Economics / Congestion
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2014 PJM	AC	121-150 121-150	360	6/2016 Buckhannon	Weston	4 OH	FE(AP) I	1 b1840	Planned	Reliability	Reliability
2014 PJM	AC	121-150 121-150	360	6/2016 McDowell	Campbell	5.5 OH	FE(AP) I	1 b2124.4	Planned	Reliability	Reliability
2014 PJM	AC	121-150 121-150	360	6/2016 Kiesters	Campbell	7.5 OH	FE(AP) I	1 b2124.5	Planned	Reliability	Reliability
				•	•		• •			•	•
2014 PJM	AC	121-150 121-150 2	232/281	6/2021 Barberton	South Akron	8.1 OH	FE(ATSI) I	1 Can't confirm	Conceptual	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150 2	278/338	6/2020 Broadview	Clark	5 OH	FE(ATSI) I	1 Can't confirm	Conceptual	Reliability	Economics / Congestion
2014 PJM	AC		160/192	6/2020 Broadview		3.5 OH	FE(ATSI) I	1 Can't confirm	•	•	
	AC		-		East Springfield		, ,		Conceptual	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150 1	160/192	6/2020 Broadview	Tangy	3.5 OH	FE(ATSI) I	1 Can't confirm	Conceptual	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150 2	278/338	6/2020 Broadview	Urbana	5 OH	FE(ATSI) I	1 Can't confirm	Conceptual	Reliability	Economics / Congestion
			-	•				1 Can't confirm	•	•	
2014 PJM	AC		151/166	6/2021 Midway	Wauseon	-3.08 OH	FE(ATSI) I		Conceptual	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150 1	151/166	6/2021 Napoleon	Richland	-3.08 OH	FE(ATSI) I	1 Can't confirm	Conceptual	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150 1	151/166	6/2021 Richland	Stryker	-3.08 OH	FE(ATSI) I	1 Can't confirm	Conceptual	Reliability	Economics / Congestion
			131, 100	·	•		, ,		•	•	
2014 PJM	AC	300-399 300-399		8/2015 Niles	Highland	4.8 OH	FE(ATSI) I	1 b1934.1	Under Construction	or Reliability	Economics / Congestion
2014 PJM	AC	300-399 300-399		8/2015 Niles	Shenango	19 OH	FE(ATSI) I	1 b1934.1	Under Construction	or Reliability	Economics / Congestion
2014 PJM	AC	300-399 300-399		8/2015 Allen Junction	Midway	24 OH	FE(ATSI)	1 b1936	Under Construction	or Reliability	Economics / Congestion
				•	•					•	
2014 PJM	AC	300-399 300-399		8/2015 Midway	Lemoyne	24 OH	FE(ATSI) I	1 b1936	Under Construction	or Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150		6/2018 West Fremont	Groton	19 OH	FE(ATSI) I	1 b1959	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150		6/2018 Groton	Hayes	9 OH	FE(ATSI) I	1 b1959	Planned	Reliability	Economics / Congestion
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2014 PJM	AC	300-399 345	900	8/2015 Mansfield	Northfield	32 OH	FE(ATSI) I	1 b1924	Under Construction	or Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150		8/2015 Toronto	Sammis	6 OH	FE(ATSI)	1 b1977	Under Construction	or Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150		8/2015 Toronto	South Akron	64.9 OH	FE(ATSI)	1 b1977	Under Construction	•	
	AC			·						•	Economics / Congestion
2014 PJM	AC	121-150 121-150		8/2015 Toronto	Boardman	40.2 OH	FE(ATSI)	1 b1977	Under Construction	or Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150		8/2015 Toronto	Lowellville	51.2 OH	FE(ATSI)	1 b1977	Under Construction	or Reliability	Economics / Congestion
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2014 PJM	AC	121-150 121-150		6/2016 Holloway (AEP)	Brookside	92 OH	FE(ATSI)	1 b2019	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150		6/2016 Holloway (AEP)	Longview	93 OH	FE(ATSI)	1 b2019	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150		6/2016 Holloway (AEP)	Harmon #1	69 OH	FE(ATSI)	1 b2019	Planned	Reliability	Economics / Congestion
2014 PJM				, , ,						•	_
	AC	121-150 121-150		6/2016 Holloway (AEP)	Harmon #2	69 OH	FE(ATSI)	1 b2019	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150		6/2016 Holloway (AEP)	Cloverdale	72 OH	FE(ATSI)	1 b2019	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150		6/2016 Holloway (AEP)	Knox	66 OH	FE(ATSI)	1 b2019	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150		6/2016 Holloway (AEP)		3 OH				•	Economics / Congestion
	_				Burger #1		FE(ATSI)	1 b2019	Planned	Reliability	
2014 PJM	AC	121-150 121-150		6/2016 Holloway (AEP)	Burger #2	3 OH	FE(ATSI)	1 b2019	Planned	Reliability	Economics / Congestion
2014 PJM	AC	300-399 300-399		6/2016 Avon	Lake Avenue #1	8.36 OH	FE(ATSI)	1 Can't confirm	Planned	Reliability	Economics / Congestion
2014 PJM	AC	300-399 300-399		6/2016 Avon	Lake Avenue #2	8.36 OH	FE(ATSI)	1 Can't confirm	Planned	Reliability	Economics / Congestion
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2014 PJM	AC	300-399 300-399		6/2016 Lake Avenue	Beaver #1	7.93 OH	FE(ATSI)	1 Can't confirm	Planned	Reliability	Economics / Congestion
2014 PJM	AC	300-399 300-399		6/2016 Lake Avenue	Beaver #2	7.93 OH	FE(ATSI)	1 Can't confirm	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150		6/2016 Black River	Lake Avenue #1	3.04 OH	FE(ATSI)	1 Can't confirm	Planned	Reliability	Economics / Congestion
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2014 PJM	AC	121-150 121-150		6/2016 Black River	Lake Avenue #2	3.04 OH	FE(ATSI)	1 Can't confirm	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150		6/2016 Lake Avenue	Johnson #1	1.65 OH	FE(ATSI)	1 Can't confirm	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150		6/2016 Lake Avenue	Johnson #2	1.65 OH	FE(ATSI)	1 Can't confirm	Planned	, Reliability	Economics / Congestion
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2014 PJM	AC	121-150 121-150		6/2015 Dowling	Chrysler	3.3 OH	FE(ATSI)	1 b1927	Under Construction	or Reliability	Economics / Congestion
2014 PJM	AC	121-150 121-150		6/2015 Dowling	Levis Park	3.3 OH	FE(ATSI)	1 b1927	Under Construction	or Reliabilitv	Economics / Congestion
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2014 PJM	AC	200-299 230	650	6/2017 Whippany	Montville	6.4 OH	FE(JC) I	1 b2003	Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299 230	650	6/2017 Larrabee	Oceanview	16.2 OH	FE(JC) I	1 b2015	Planned	Reliability	Economics / Congestion
2014 PJM	AC	100-120 115	200	8/2015 Englishtown	Wyckoff	13 OH	FE(JC)	1 b1674	Under Construction	or Reliability	Economics / Congestion
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2014 PJM	AC	200-299 230	709	6/2017 NJT Aberdeen	NJT Red Bank	10.1 OH	FE(JC) I	1 b1690	Planned	Reliability	Economics / Congestion
2014 PJM	AC	100-120 100-120		6/2016 W3-099	Erie East	2.6 OH	FE(Penelec) I	1 n3343	Planned	Variable/Re	n∈Reliability
2014 PJM	AC	100-120 115	200	6/2018 Central City West	Bedford North	18 OH	FE(Penelec) I	1 b2450	Planned	Reliability	Economics / Congestion
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2014 PJM	AC	200-299 200-299	398	6/2018 Chichester	Linwood	2 OH	14940 PECO I	1 b1900	Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299 200-299		6/2016 Buzzard Point	Ritchie	10.83 OH	PEPCO I	1 b1125	Planned	Reliability	Economics / Congestion
2014 PJM	AC	400-599 400-599	3005	8/2015 Susquehanna	Roseland	146 OH	PL I	1 b0487	Under Construction	•	Economics / Congestion
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2014 PJM	AC	200-299 200-299	648	11/2017 West Pocono	North Pocono	10.6 OH	PL I	1 b1813.3	Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299 200-299	648	6/2016 Jenkins	West Pocono	14.7 OH	PL I	1 b1813.6	Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299 200-299	648	11/2016 Paupack	North Pocono	21.9 OH	PL I	1 b1813.8	Planned	, Reliability	Economics / Congestion
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2014 PJM	AC	121-150	121-150		6/2018 Essex	Kearny	2 OH	PSEG	1	1 b1589	Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299	200-299		8/2015 Hudson	Kearny	2 OH	PSEG	1	1 b1304.1	Under Construction	Reliability	Economics / Congestion
2014 PJM	AC	200-299	200-299		8/2015 Hudson	Kearny	2 OH	PSEG	1	1 b1304.1	Under Construction	Reliability	Economics / Congestion
2014 PJM	AC		200-299		8/2015 Roseland	Kearny	21.9 OH	PSEG		1 b1304.1	Under Construction	•	Economics / Congestion
2014 PJM	AC		200-299		8/2015 Roseland	•	21.9 OH	PSEG		1 b1304.1	Under Construction	•	Economics / Congestion
					•	Kearny						•	
2014 PJM	AC		200-299		8/2015 Bergen	Athenia	10 UG	PSEG		1 b1304.3	Under Construction	•	Economics / Congestion
2014 PJM	AC		200-299		8/2015 Hudson	South Waterfront	8 UG	PSEG		1 b1304.4/n1142	Under Construction	•	Economics / Congestion
2014 PJM	AC	200-299	200-299		6/2015 Mickleton	Gloucester	9 OH	PSEG	1	1 b1398.3	Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299	200-299		6/2016 Cox's Corner	Lumberton	4.3 OH	PSEG	1	1 b1787	Planned	Reliability	Economics / Congestion
2014 PJM	AC		200-299		8/2015 Athenia	Bergen	10 UG	PSEG		1 n1035	Under Construction	•	Reliability
2014 PJM	AC	200-299	230	650	6/2016 Sewaren	Metuchen	14 OH	PSEG		1 b2276.1	Planned	Reliability	Economics / Congestion
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2014 PJM	AC	200-299	230	650	6/2016 Sewaren	Metuchen	14 OH	PSEG		1 b2276.1		Reliability	Economics / Congestion
2014 PJM	AC	300-399	345	900	6/2018 North Ave	Bayway	6 OH	PSEG	1	1 b2436.60	Planned	Reliability	Economics / Congestion
2014 PJM	AC	300-399	345	900	6/2018 Airport	Bayway	3 OH	PSEG	1	1 b2436.70	Planned	Reliability	Economics / Congestion
2014 PJM	AC	300-399	345	900	6/2017 Linden "Z"	Bayway	2 OH	PSEG	1	1 b2436.83	Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	650	8/2015 Aldene	Springfield Road	8 OH	PSEG	1	1 b1399	Under Construction	Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	650	8/2015 Springfield Road	West Orange	7 OH	PSEG		1 b1399	Under Construction	•	Economics / Congestion
2014 PJM	AC	200-299	230	650	8/2015 Mickleton	•	11 OH	PSEG		1 b1398.3		•	_
					·	Gloucester					Under Construction	•	Economics / Congestion
2014 PJM	AC	200-299	230	650	8/2016 Gloucester	Camden	6 OH	PSEG		1 b1398	Under Construction	-	Economics / Congestion
2014 PJM	AC	121-150	121-150	236	6/2019 West Nyack	Harings Corner	0.26 OH	14154 RECO	1	1 Can't confirm	Conceptual	Reliability	Reliability
2014 PJM	AC	200-299	230	650	8/2015 Brambleton	BECO	11 OH	Dominion	1	1 b1503.2	Under Construction	Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	650	8/2015 Cannon Branch	Cloverhill	12 OH	Dominion	1	1 b1332.1	Under Construction	Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	650	8/2015 Cloverhill	Liberty	12 OH	Dominion		1 b1332.1	Under Construction	•	Economics / Congestion
2014 PJM	AC	200-299	230	650	8/2015 Shawboro	Aydlett	12 OH	Dominion		1 b1331	Under Construction	•	Economics / Congestion
					•	•						•	
2014 PJM	AC	200-299	230	650	7/2015 Trowbridge	Winfall	13 OH	Dominion		1 b1315	Under Construction	•	Economics / Congestion
2014 PJM	AC	200-299	230	1047	6/2016 Dooms	Lexington	39 OH	Dominion	1	1 b2360	Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	1047	6/2017 DTR	Scott's Run	4.5 OH	Dominion	1	1 b2361	Planned	Reliability	Economics / Congestion
2014 PJM	AC	400-599	500	3450	6/2018 Loudon	Brambleton	4.8 OH	Dominion	1	1 b2373	Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	800	6/2018 Glebe	Station C	2 OH	Dominion		1 b2443	Planned	Reliability	Economics / Congestion
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2014 PJM	AC	400-599	500	3450	1/2024 North Anna	Ladysmith	14.5 OH	Dominion		1 n0718.1	Planned	Reliability	Economics / Congestion
2014 PJM	AC	400-599	500	3450	6/2016 Heritage	Rawlings	14 OH	Dominion		1 n3290	Planned	Reliability	Economics / Congestion
2014 PJM	AC	100-120	115	231	6/2016 Staunton	Trimbles Mill	1.1 OH	Dominion	1	1 s0617	Planned	Reliability	Economics / Congestion
2014 PJM	AC	100-120	115	231	6/2016 Craigsville	Trimbles Mill	1.1 OH	Dominion	1	1 s0617	Planned	Reliability	Economics / Congestion
2014 PJM	AC	100-120	115	231	6/2016 Columbia	Cartersville	1.5 OH	Dominion	1	1 s0623	Planned	Reliability	Economics / Congestion
2014 PJM	AC	100-120	115	231	6/2016 Columbia	Bremo	1.5 OH	Dominion		1 s0623	Planned	Reliability	Economics / Congestion
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2014 PJM	AC	100-120	115	231	6/2016 Redhouse	Pamplin	2.6 OH	Dominion		1 s0625	Planned	Reliability	Economics / Congestion
2014 PJM	AC	100-120	115	231	6/2016 Redhouse	Farmville	2.6 OH	Dominion	1	1 s0625	Planned	Reliability	Economics / Congestion
2014 PJM	AC	151-199	161	400	6/2018 Summer Shade EKPC	Summer Shade	2 OH	EKPC	1	1 b2414	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2016 Upper Pittsgrove	Lewis	41 OH	AE	1	1 b2480.1	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2016 Monroe	Landis	11.5 OH	AE	1	1 b2480.2	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2016 Landis	Lewis	31 OH	AE		1 b2480.3	Planned	Reliability	Economics / Congestion
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2014 PJM	AC	121-150	138	400	6/2016 Cardiff	Lewis	5 OH	AE		1 b2481		Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2016 Yager	Azalea	11 OH	AEP	1	1 b2501.2	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2017 Nottingham	Holloway	0.1 OH	AEP	1	1 b2501.4	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2017 Nottingham	Brookside	0.1 OH	AEP	1	1 b2501.4	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2017 Nottingham	Holloway	0.1 OH	AEP	1	1 b2501.4	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2017 Nottingham	Harmon	0.1 OH	AEP		1 b2501.4	Planned	Reliability	Economics / Congestion
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2014 PJM	AC	121-150	138	400	6/2017 Nottingham	Holloway	0.1 OH	AEP		1 b2501.4	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2017 Nottingham	Harmon	0.1 OH	AEP	1	1 b2501.4	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2017 Nottingham	Holloway	0.1 OH	AEP	1	1 b2501.4	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2017 Nottingham	Reeds	0.1 OH	AEP	1	1 b2501.4	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2017 Nottingham	Holloway	0.1 OH	AEP	1	1 b2501.4	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2017 Nottingham	New Stacy	0.1 OH	AEP		1 b2501.4	Planned	Reliability	Economics / Congestion
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2014 PJM	AC	121-150	138	400	6/2017 Nottingham	Freebyrd	4 OH	AEP		1 b2501.4	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2017 Nottingham	Holloway	0.1 OH	AEP		1 b2501.4	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2017 Nottingham	Cloverdale	0.1 OH	AEP	1	1 b2501.4	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	12/2016 Freebyrd	South Cadiz	4.6 OH	AEP	1	1 b2502.3	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2019 Tiltonsville	Windsor	4.5 OH	AEP	1	1 b2555	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2019 Fremont	Pound	5 OH	AEP		1 b2600	Planned	Reliability	Economics / Congestion
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2014 PJM	AC	121-150	138	400	6/2019 East Huntington	Darrah Navy Station	2.5 OH	AEP		1 b2602.2	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2019 Sundial	New Station	3.2 OH	AEP		1 b2611.2	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2019 Baileysville	New Station	3.2 OH	AEP	1	1 b2611.2	Planned	Reliability	Economics / Congestion
2014 PJM	AC	300-399	345	1500	10/2016 Dumont	Eldeberry	0.1 OH	AEP	1	1 n4323	Planned	Reliability	Economics / Congestion
2014 PJM	AC	300-399	345	1500	10/2016 Sorenson	Eldeberry	0.1 OH	AEP	1	1 n4323	Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	11/2016 Blue Racer	Summerfield	0.1 OH	AEP		1 s0766		Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	11/2016 Blue Racer	Berne	0.1 OH	AEP		1 s0766		Reliability	Economics / Congestion
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2014 PJM	AC	121-150	138	400	3/2016 Burger	Customer	1.4 OH	AEP		1 s0769		Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	1047	6/2017 Remington CT	Warrenton	12 OH	Dominion		1 b2461		Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	1047	6/2017 Wheeler	Vint Hill	6 OH	Dominion	1	1 b2461.1	Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	1047	6/2017 Gainsville	Wheeler	6 OH	Dominion	1	1 b2461.2	Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	1047	6/2017 Vint Hill	Wheeler	0.1 OH	Dominion		1 b2461.3		Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	1047	6/2017 Loudoun	Wheeler	0.1 OH	Dominion		1 b2461.3		Reliability	Economics / Congestion
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2014 PJM	AC	200-299	230	1047	5/2016 Pacific	Brambleton	2 OH	Dominion		1 s0744.1		Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	1047	5/2016 Pacific	BECO	2 OH	Dominion		1 s0744.1		Reliability	Economics / Congestion
2014 PJM	AC	100-120	115	350	7/2016 Pointon	Jetersville	10 OH	Dominion	1	1 s0749	Planned	Reliability	Economics / Congestion
2014 PJM	AC	100-120	115	350	8/2016 New London	Altavista	10 OH	Dominion	1	1 s0750	Planned	Reliability	Economics / Congestion
2014 PJM	AC	100-120	115	350	4/2016 Chase City	Ridge Road	1.9 OH	Dominion		1 s0751.2		Reliability	Economics / Congestion
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2014 PJM	AC	100-120	115	350	4/2016 Kerr Dam	Ridge Road	1.9 OH		Dominion I	1 s0751.2 Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	12/2016 Potter	Valley	0.1 OH		DUQ I	1 s0670 Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	12/2016 Potter	Raccoon	0.1 OH		DUQ I	1 s0670 Planned	Reliability	Economics / Congestion
					•	Waldo Run	24 OH				•	·
2014 PJM	AC	121-150	138	400	12/2016 Oak Mound				FE(AP) I	1 b2475 Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2016 Shuman Hill	Fairview	20.2 OH		FE(AP) I	1 b2545.1 Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	6/2016 Shuman Hill	Willow Island	40.9 OH		FE(AP) I	1 b2545.1 Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	2/2016 Imperial	Hillman	4.3 OH		FE(AP) I	1 b2547.2 Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	12/2017 Gula	Cecil	0.1 OH		FE(AP) I	1 s0786 Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	12/2017 Gula	Windsor	0.1 OH		FE(AP)	1 s0786 Planned	Reliability	Economics / Congestion
					•						•	•
2014 PJM	AC	300-399	345	1500	6/2016 Lake Avenue	Avon	0.1 OH		FE(ATSI) I	1 s0663 Planned	Reliability	Economics / Congestion
2014 PJM	AC	300-399	345	1500	6/2016 Lake Avenue	Beaver	0.1 OH		FE(ATSI) I	1 s0663 Planned	Reliability	Economics / Congestion
2014 PJM	AC	300-399	345	1500	6/2016 Lake Avenue	Black River	0.1 OH		FE(ATSI) I	1 s0663 Planned	Reliability	Economics / Congestion
2014 PJM	AC	300-399	345	1500	6/2016 Lake Avenue	Johnson	0.1 OH		FE(ATSI) I	1 s0663 Planned	Reliability	Economics / Congestion
2014 PJM	AC	300-399	345	1500	6/2016 Lake Avenue	Avon	0.1 OH		FE(ATSI) I	1 s0663 Planned	Reliability	Economics / Congestion
2014 PJM					6/2016 Lake Avenue		0.1 OH		, ,		•	
	AC	300-399	345	1500	•	Beaver			FE(ATSI) I	1 s0663 Planned	Reliability	Economics / Congestion
2014 PJM	AC	300-399	345	1500	6/2016 Lake Avenue	Black River	0.1 OH		FE(ATSI) I	1 s0663 Planned	Reliability	Economics / Congestion
2014 PJM	AC	300-399	345	1500	6/2016 Lake Avenue	Johnson	0.1 OH		FE(ATSI) I	1 s0663 Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	500	12/2021 Mt. Vernon	Takoma	6 UG		PEPCO I	1 s0839 Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	500	12/2021 Mt. Vernon	Takoma	6 UG		PEPCO I	1 s0839 Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	500	12/2021 Mt. Vernon	Takoma	6 UG		PEPCO I	1 s0839 Planned	Reliability	Economics / Congestion
					•						•	
2014 PJM	AC	200-299	230	500	12/2021 Mt. Vernon	Takoma	6 UG		PEPCO I	1 s0839 Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	500	12/2020 New Harvard	Takoma	0.1 UG		PEPCO I	1 s0840 Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	500	12/2020 New Harvard	Mt. Vernon	0.1 UG		PEPCO I	1 s0840 Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	500	12/2020 New Harvard	Takoma	0.1 UG		PEPCO I	1 s0840 Planned	Reliability	Economics / Congestion
2014 PJM	AC	200-299	230	500	12/2020 New Harvard	Mt. Vernon	0.1 UG		PEPCO I	1 s0840 Planned	Reliability	Economics / Congestion
					•						•	
2014 PJM	AC	121-150	138	400	12/2017 New Harrison	Bethesda	0.1 OH		PEPCO I	1 s0841 Planned	Reliability	Economics / Congestion
2014 PJM	AC	121-150	138	400	12/2017 New Harrison	Van Ness	0.1 OH		PEPCO I	1 s0841 Planned	Reliability	Economics / Congestion
2014 SERC-E	AC	100-120	115	797	7/2016 Bucksville	Garden City	15 OH	17543	South Carolir F	1 Bucksville-Garden C Under Constructio	r Reliability	
2014 SERC-E	AC	100-120	115	240	12/2016 Bucksville	Myrtle Beach	12.5 OH	17543	South Carolir F	1 Bucksville-Myrtle Be Planned	Reliability	
2014 SERC-E	AC	100-120	115	352	12/2016 Cainhoy	Hamlin Tap	2 OH	17539	South Carolir I	1 Cainhoy-Hamlin 115 Planned	Reliability	
2014 SERC-E		100-120	115	240	5/2016 Carnes	Medway	2.9 OH	17543	South Carolir F	1 Carnes to Medway 2 Planned	Reliability	
	AC				•	•				•	•	
2014 SERC-E	AC	100-120	115	237	12/2017 Faber Place	Hagood	5 OH	17539	South Carolir I	1 Faber Place - Hagoo Planned	Reliability	
2014 SERC-E	AC	100-120	115	180	12/2017 Kendrick/Rosewood	Gills Creek	3 OH	17539	South Carolir I	1 Gills Creek 115 kV Li Under Constructio	r Reliability	
2014 SERC-E	AC	100-120	115	176	5/2016 Thomas Island	Jack Primus	3 OH	17539	South Carolir I	1 Jack Primus 115 kV Planned	Reliability	
2014 SERC-E	AC	200-299	230	948	4/2016 Lake Murray	Saluda River	6 OH	17539	South Carolir I	1 Lake Murray - Salud Under Constructio	r Reliability	
2014 SERC-E	AC	100-120	115	176	12/2015 Yemmassee/Burton	Laurel Bay	2 OH	17539	South Carolir I	1 Laurel Bay 115 kV liı Under Constructio	•	
					· ·	•				•	•	
2014 SERC-E	AC	200-299	230	850	6/2016 Riverview Sw Sta	Peach Valley Tie	20 OH	5416	Duke Energy I	1 London Creek 230 k Planned	Reliability	
2014 SERC-E	AC	200-299	230	948	5/2015 Lyles	Saluda River	4 OH	17539	South Carolir I	1 Lyles - Saluda River Under Constructio	r Reliability	
2014 SERC-E	AC	200-299	230	956	12/2018 Marion	Red Bluff	47 OH	17543	South Carolir F	1 Marion - Red Bluff 2 Planned	Reliability	
2014 SERC-E	AC	100-120	115	240	5/2016 Medway	Jefferies	15 OH	17543	South Carolir F	1 Medway to Jefferies Planned	Reliability	
2014 SERC-E	AC	200-299	230	948	5/2016 Pepperhill	Summerville	8 OH	17539	South Carolir I	1 Pepperhill-Summer Planned	Reliability	
2014 SERC-E	AC	100-120	115	240	6/2017 Perry Road	Myrtle Beach	5.5 OH	17543	South Carolir F	1 Perry Road-Myrtle B Planned	Reliability	
					•	•					•	a. Daliahilita
2014 SERC-E	AC	200-299	230	956	5/2017 Pomaria	Sandy Run	55 OH	17543	South Carolir F	1 Pomaria-Sandy Run Under Constructio		egi Reliability
2014 SERC-E	AC	200-299	230	956	6/2015 Purrysburg	McIntosh	5 OH	17543	South Carolir F	1 Purrysburg-McIntos Under Constructio	r Reliability	
2014 SERC-E	AC	200-299	230	956	7/2016 Richburg	Flat Creek	32 OH	17543	South Carolir F	1 Richburg-Flat Creek Under Constructio	r Nuclear Inte	egi Reliability
2014 SERC-E	AC	200-299	230	1195	6/2018 Richmond	Ft. Bragg Woodruff St Substa	6 OH	3046	Duke Energy I	1 Richmond - Ft. Brag Planned	Reliability	
2014 SERC-E	AC	200-299	230	956	5/2017 Sandy Run	Orangeburg	34 OH	17543	South Carolir F	1 Sandy Run-Orangeb Under Constructio	•	egi Reliahility
2014 SERC-E	AC	200-299	230	948	•		98 OH	17539	South Carolir I	-		•
					12/2018 VC Summer #2	St. George				1 VC Summer #2-St. G Under Constructio		-
2014 SERC-E	AC	200-299	230	956	4/2015 Winnsboro	Richburg	27 OH	17543	South Carolir F	1 Winnsboro-Richbur Under Constructio		egiReliability
2014 SERC-E	AC	200-299	230	956	6/2015 Winyah	Bucksville	32 OH	17543	South Carolir F	1 Winyah-Bucksville Under Constructio	r Reliability	
2014 SERC-N	AC	151-199	161	421	12/2023 5SHELBY MEM2	5BOLEN HUSE	10 OH	18642	Tennessee Va F	1 75 Cut In (MLGW) Planned	Reliability	Other
2014 SERC-N	AC	151-199	161	421	12/2023 5NE GATE 33	5BOLEN HUSE	6.3 OH	18642	Tennessee Va F	1 75 Cut In (MLGW) Planned	Reliability	Other
2014 SERC-N	AC	151-199	161	334	12/2022 5COLL-GATE86	5S COLLIERVL 83	6.36 OH	18642	Tennessee Va F	1 83 Cut In (MLGW) Planned	Reliability	Other
					•					•	•	
2014 SERC-N	AC	151-199	161	334	12/2022 5SHELTON 79	5S COLLIERVL 83	4.84 OH	18642	Tennessee Va F	1 83 Cut In (MLGW) Planned	Reliability	Other
2014 SERC-N	AC	151-199	161	223	12/2015 5FREEPORT #2	5MENDENHAL 89	11.1 OH	18642	Tennessee Va F	1 89 Cut in (MLGW) Planned	Reliability	Other
2014 SERC-N	AC	151-199	161	223	12/2015 5CLARKE RD71	5MENDENHAL 89	1.2 OH	18642	Tennessee Va F	1 89 Cut In (MLGW) Planned	Reliability	
2014 SERC-N	AC	151-199	161	532	6/2025 Battlefield	Craighead	1.37 OH	18642	Tennessee Va F	1 Battlefield (NES) Conceptual	Reliability	Other
2014 SERC-N	AC	151-199	161	532	6/2025 Battlefield	Sharondale	2.67 OH	18642	Tennessee Va F	1 Battlefield (NES) Conceptual	Reliability	Other
2014 SERC-N	AC	151-199	161	299	6/2015 Bluff City	Elizabethon	11.1 OH	18642	Tennessee Va F	1 Bluff City-Elizabethc Conceptual	Reliability	othe.
					•					·	•	
2014 SERC-N	AC	151-199	161	286	6/2019 Carthage	Philbert	4 OH	924	Associated El C	1 Carthage-Philbert Conceptual	Reliability	
2014 SERC-N	AC	300-399	345	1369	6/2016 Franks	Barnett	50 OH	924	Associated El C	1 Franks-Barnett Conceptual	Reliability	
2014 SERC-N	AC	100-120	115		12/2017 Fuller	Swamp Creek	10 OH	18642	Tennessee Va F	1 Fuller-Swamp Creek Conceptual	Reliability	
2014 SERC-N	AC	151-199	161	286	6/2019 Jasper	Philbert	16.7 OH	924	Associated El C	1 Jasper-Philbert Conceptual	Reliability	
2014 SERC-N	AC	151-199	161	286	6/2015 Kingdom City	Mexico North	20 OH	924	Associated El C	1 Kingdom City-Mexic Conceptual	Reliability	
					•						•	
2014 SERC-N	AC	151-199	161	286	11/2016 Maries	Rolla North Wye	20.76 OH	924	Associated El C	1 Maries-Rolla North 'Planned	Reliability	
2014 SERC-N	AC	121-150	138	245	6/2015 Oak Ridge	Longtown	10 OH	924	Associated El C	1 Oak Ridge-Longtowi Conceptual	Reliability	
2014 SERC-N	AC	151-199	161	286	11/2015 Rogersville	Holman	7 OH	924	Associated El C	1 Rogersville-Holman Under Constructio	r Reliability	
2014 SERC-N	AC	151-199	161	299	6/2017 Selmer	W. Adamsville	15 OH	18642	Tennessee Va F	1 Selmer-W. Adamsvil Conceptual	Reliability	
2014 SERC-N	AC	151-199	161	334	6/2015 Spring Creek	Nance	2.01 OH	18642	Tennessee Va F	1 Spring Creek-Nance Conceptual	Fossil-Fired	Integration
2014 SERC-N	AC	151-199	161	286	6/2015 Stella	Cassville	15 OH	924	Associated El C	1 Stella-Cassville Planned	Reliability	
					•						•	
2014 SERC-N	AC	121-150	138	245	5/2015 Stroud	Warwick	12 OH	924	Associated El C	1 Stroud-Warwick Under Constructio	•	
2014 SERC-N	AC	151-199	161	286	6/2015 Turkey Creek	Warsaw East	7 OH	924	Associated El C	1 Turkey Creek-Warsa Under Constructio	r Reliability	
2014 SERC-N	AC	151-199	161	299	6/2017 Union	Tupelo	16 OH	18642	Tennessee Va F	1 Union-Tupelo Conceptual	Fossil-Fired	Integration
2014 SERC-N	AC	151-199	161	450	5/2015 Volunteer	East Knox	13 OH	18642	Tennessee Va F	1 Volunteer-East Kno> Under Constructio		
2014 SERC-N	AC	151-199	161	299	12/2015 Wilson	Oakland	12.37 OH	18642	Tennessee Va F	1 Wilson-Oakland Conceptual	Fossil-Fired	Integration
			101	1			12.37 011			·		
2014 SERC-SE		8 OH AC		T	Big Creek T.S.	AL I		1 AL	Lynndell D.S. Alabama Pow 195	Big Creek T.SLynnd Planned	Reliability	
2014 SERC-SE		6 OH AC		1	North Brewton TS	AL I		1 AL	North Brewtc Alabama Pow 195	North Brewton TS-N Planned	Reliability	

2014 SERC-SE	4 OH A	С	1	Wire Road	AL	1	1	AL	Wire Road Ta	a Alabama Pow 195	Wire Road-Wire Roa Planned	Rel	iability	
2014 SERC-SE	2 OH A	С	1	North Mobile	AL	1	1	AL	Eight Mile D.:	SAlabama Pow 195	North Mobile-Eight Planned	Rel	iability	
2014 SERC-SE	3 OH A	С	1	Barnwell Tap	AL	1	1	AL	Turkey Hill	Alabama Pow 195	Barnwell Tap-Turkey Planned	Rel	iability	
2014 SERC-SE	9 OH A		1	Englewood Tap	AL	1	1	AL	North Mound	c Alabama Pow 195	Englewood Tap-Nor Planned		iability	
2014 SERC-SE	6 OH A		1	Moundville	AL	1				Alabama Pow 195	Moundville-Colonial Planned		iability	
2014 SERC-SE	60 OH A		1	Vogtle	GA	1			•	Georgia Pow€ 7140	Vogtle-Thomson Planned		clear Integ	ration
2014 SERC-SE	8 OH A		1	W. Brunswick	GA	1				Georgia Pow€7140	McManus - W. Brun Planned		iability	ation
			1			1				· ·			•	
2014 SERC-SE	3 OH A		1	Americus	GA	1				Georgia Pow€7140	Americus-North Am Planned		iability	
2014 SERC-SE	7 OH A		1	Cumming	GA	C				Georgia Trans 7197	Cumming-Sharon Sr Planned		iability	
2014 SERC-SE	12 OH A		0	Crisp #2		M			•	Municipal Ele 13100	· · · · · · · · · · · · · · · · · · ·		•	Other
2014 SERC-SE	5 OH A	С	1	Enterprise	AL	1	1	AL	South Enterp	Alabama Pow 195	Enterprise-South En Planned	Rel	iability	
2014 SERC-SE	7 OH A	С	1	Co Line Rd	AL	1	1	AL	ECI Prattville	Alabama Pow 195	Co Line Rd-ECI Pratt Planned	Rel	iability	
2014 SERC-SE	17 OH A	С	1	North Brewton TS	AL	1	1	AL	Alligator Swa	a Alabama Pow 195	North Brewton TS-A Planned	Rel	iability	
2014 SERC-SE	4.05 OH A	С	1	Cairo # 1	GA	M	1	GA	Brumbley Cre	e Municipal Ele 13100	Cairo #1 to Brumble Under Co	nstructior Rel	iability	
2014 SERC-SE	2.6 OH A	С	1	Elberton #1	GA	M	1	GA	Elberton #2	Municipal Ele 13100	Elberton #1 to Elber Planned	Rel	iability	
2014 SERC-SE	1.6 OH A	С	1	Griffin #1	GA	M	1			Municipal Ele 13100			iability	
2014 SERC-SE	12 OH A		0	Arnold Mill	GA	С				Georgia Trans 7197	Arnold Mill - Hopew Planned		iability	
2014 SERC-SE	5 OH A		1	Dailey Mill	GA	ī			•	Georgia Pow€ 7140	DaileyMill-Flippen Planned		iability	
2014 SERC-SE	3.4 OH A		1	South Tuscaloosa	AL	1				Alabama Pow 195	SouthTuscaloosa-All Planned		iability	
			1			1							•	
2014 SERC-SE	39 OH A		1	NorthBrewton	FL 	1			•	r Gulf Power C 7801	NorthBrewton-Alliga Under Co		-	
2014 SERC-SE	69 OH A		1	Holmes Creek	FL	1				Gulf Power C 7801	HolmesCrk-Highlanc Under Co			
2014 SERC-SE	16 OH A		1	Salem	AL	С				PowerSouth I 189	Salem to Bottoms N Planned		iability	
2014 SERC-SE	14 OH A	С	1	Bonifay	FL	С	1			PowerSouth I 189	Bonifay to Chipley 1 Concept	ual Rel	iability	
2014 SERC-SE	8 OH A	С	1	Southport	FL	С	1	FL	Bayou Georg	PowerSouth I 189	Southport to Bayou Concept	ual Rel	iability	
2014 SERC-SE	3.5 OH A	С	0	Dailey Mill	GA	С	1	GA	Flippen	Georgia Trans 7197	Dailey Mill - Flippen Planned	Rel	iability	
2014 SERC-SE	13 OH A	С	0	Danville	GA	С	1	GA	North Dudley	y Georgia Trans 7197	Danville - North Duc Planned	Rel	iability	
2014 SERC-SE	10 OH A	С	0	Mitchell Dam	AL	1	1	AL	Clanton Tap	Alabama Pow 195	MitchellDam-Clanto Planned	Rel	iability	
2014 SERC-SE	34 OH A	С	0	Clay	AL	1	1	AL	Rainbow City	/ Alabama Pow 195	Clay-RainbowCity Planned	Rel	iability	
2014 SERC-SE	5 OH A		0	, North Theodore	AL	1			•	Alabama Pow 195	NorthTheodore-PrayPlanned		iability	
2014 SERC-SE	25 OH A		0	South Bessemer	AL	1			Holt	Alabama Pow 195	SouthBessemer-Hol Planned		iability	
2014 SERC-SE	5 OH A		1	Dean Forest	GA					Georgia Pow€7140	Dean Forest-Millhav Planned		iability	
			1			N 4							•	
2014 SERC-SE	2.54 OH A		1	Dalton - Oostanaula 115k		M				•	Dalton Dalton-Oostanaula : Planned	Oth		
2014 SERC-SE	7 OH A		0	Belleville	AL	1				c Alabama Pow 195	Belleville-North Brev Planned		iability	
2014 SERC-SE	12 OH A		1	South Crestview	FL	I			•	Gulf Power Cc 7801	South Crestview-Gle Planned		iability	
2014 SERC-SE	4.7 OH A		1	McConnell Road	GA	С				Georgia Trans 7197	McConnell Road - ScPlanned		iability	
2014 SERC-SE	20 OH A	С	1	Athena	GA	1	1	GA	Bethabara	Georgia Pow€7140	Athena - Bethabara Planned	Rel	iability	
2014 SERC-SE	45 OH A	С	1	Athena	GA	1	1	GA	Russell	Georgia Pow€7140	Athena - Russell Planned	Rel	iability	
2014 SPP	AC 300-399	300-399	1426	6/1/2019 Arcadia 3	45 Redbud 345	5.0	ОН	14063	OGE		100% ledbud 345 kV Ckt 3	Planned I	Reliability	
2014 SPP	AC 200-299	200-299	541	12/2015 Channing 230	kV ⁻ County Interchange 230 kV	52.0	ОН	17698	SPS		100% County 230 kV Ckt 1	Planned I	Reliability	
2014 SPP	AC 200-299	200-299	541	12/2015 Channing 230	kV Dallam 230 kV	70.0	ОН	17698	SPS		100% g - XIT 230 kV Ckt 1	Planned I	Reliability	
2014 SPP	AC 300-399	300-399	1792	3/2018 Chisholm 345		72.0	ОН	343	AEP		100% t 345 kV Ckt 1 (AEP)		Reliability	
2014 SPP	AC 300-399	300-399	1792	3/2018 Chisholm 345			ОН	14063	OGE		100%: 345 kV Ckt 1 (OGE)		Reliability	
2014 SPP	AC 300-399	300-399	1792	3/2021 Woodward EHV 345			ОН	14063	OGE		100% ict EHV 345 kV Ckt 2		Reliability	
2014 SPP	AC 300-399	300-399	1792	•	· ·		ОН	14063	OGE				•	
											100% atonga 345 kV Ckt 2		Reliability	
2014 SPP	AC 300-399	300-399	1792	6/2017 Mathewson 3			OH	14063	OGE		100% lewson 345 kV Ckt 2		Reliability	
2014 SPP	AC 300-399	300-399	1792	3/2018 Elm Creek 345			ОН		ITCGP		100% 345 kV Ckt 1 (ITCGP)		Reliability	
2014 SPP	AC 300-399	300-399	1792	12/2016 Elm Creek 345			ОН		WR		100% it 345 kV Ckt 1 (WR)		Reliability	
2014 SPP	AC 300-399	300-399	1792	6/2016 Hoskins 345	· ·		ОН	13337	NPPD		100% Neligh 345 kV Ckt 1	Planned I	Reliability	
2014 SPP	AC 300-399	300-399	1792	1/2018 Cherry County 345	kV Gerald Gentleman Station	110.0	ОН	13337	NPPD		100% tleman 345 kV Ckt 1	Planned I	Reliability	
2014 SPP	AC 300-399	300-399	1792	1/2018 Cherry County 345	kV Holt County 345 kV	117.0	ОН	13337	NPPD		100% olt Co. 345 kV Ckt 1	Planned I	Reliability	
2014 SPP	AC 300-399	300-399	1792	6/2020 Tuco Interchange 345	kVı County Interchange 345 kV	107.0	ОН	17698	SPS		100% oakum 345 kV Ckt 1	Planned I	Reliability	
2014 SPP	AC 300-399	300-399	1792	6/2020 County Interchange 345	kV Hobbs Interchange 345 kV	52.0	ОН	17698	SPS		100% oakum 345 kV Ckt 1	Planned I	Reliability	
2014 SPP	AC 200-299	300-399	797	6/2017 East Manhattan 230	kV effrey Energy Center 230 kV	30.0	ОН	22500	WR		100%!30 kV Ckt 1 Rebuild	Planned I	Reliability	
2014 SPP	AC 121-150	121-150	586		kV Energy Center West 138 kV		ОН		WR		100% - Viola 138 kV Ckt 1		Reliability	
2014 SPP	AC 121-150	121-150	314	6/2020 Sumner County 138	• .		ОН		WR		100% - Viola 138 kV Ckt 1		Reliability	
2014 SPP	AC 121-130 AC 200-299	300-399	541	12/2015 Junction Interchange 230			ОН	17698	SPS		100% - Viola 138 kV Ckt 1 100% Runner 230 kV Ckt 1		Reliability	
													•	
2014 SPP	AC 100-120	100-120	176	6/2018 Broken Bow Wi			OH	13337	NPPD		100% d - Ord 115 kV Ckt 1		Reliability	
2014 SPP	AC 121-150	121-150	316	12/2016 Darlington Road 138			OH	343	AEP		100% e 138 kV Ckt 1 (AEP)		Reliability	
2014 SPP	AC 121-150	121-150	316	12/2016 Darlington Road 138			ОН	14063	OGE		100% : 138 kV Ckt 1 (OGE)		Reliability	
2014 SPP	AC 300-399	300-399	1792	6/2018 Junction Interchange 345			ОН	17698	SPS		100% Kiowa 345 kV Ckt 1		Reliability	
2014 SPP	AC 300-399	300-399	1792	6/2018 iina Draw Substation 345	kV North Loving Sub 345 kV	18.2	ОН	17698	SPS		100% Loving 345 kV Ckt 1	Planned I	Reliability	
2014 SPP	AC 300-399	300-399	1792	6/2018 Junction Interchange 345	kV North Loving Sub 345 kV	20.4	ОН	17698	SPS		100% Loving 345 kV Ckt 1	Planned I	Reliability	
2014 SPP	AC 300-399	300-399	1195	1/2019 latan 1	61 Stranger 161 kV	6.5	ОН	56211	GMO	1	100% e Conversion (GMO)	Planned I	Reliability	
2014 SPP	AC 300-399	300-399	1195	1/2019 latan 1	61 Stranger 161 kV	11.6	ОН	22500	WR		100% ge Conversion (WR)	Planned I	Reliability	
2014 SPP	AC 121-150	121-150	286	•	kV nogex Wilburton Tap 138 kV		ОН	343	AEP		100% .38 kV Ckt 1 Rebuild		, Reliability	
2014 SPP	AC 121-150	121-150	286	4/2023 nogex Wilburton Tap 138	•		ОН	343	AEP		100% 38 kV Ckt 1 Rebuild		Reliability	
2014 SPP	AC 121-150 AC 121-150	121-150	286	4/2023 Sardis 138			ОН	343	AEP		100% 38 kV Ckt 1 Rebuild		Reliability	
2014 SPP	AC 121-150 AC 121-150	121-150	286	4/2023 Sardis 138 4/2023 Clayton 138	•		ОН	343	AEP		100% .38 kV Ckt 1 Rebuild		Reliability	
				•									•	
2014 SPP	AC 121-150	121-150	286	4/2023 Nashoba 138			OH	343	AEP		100% 38 kV Ckt 1 Rebuild		Reliability	
2014 SPP	AC 121-150	121-150	286	4/2023 Bethel 138			ОН	343	AEP		100% 38 kV Ckt 1 Rebuild		Reliability	
	400 400	100-120	304	Walkemeyer 115			ОН	17698	SPS		100% p 115 kV Ckt 1 (SPS)		Reliability	
2014 SPP	AC 100-120		304	Walkemeyer 115	kV New Sub	0.5	ОН		SEPC	•	100% 115 kV Ckt 1 (SEPC)	Planned I	Reliability	
2014 SPP 2014 SPP	AC 100-120 AC 100-120	100-120	304	waikeilleyei 113	NV NEW SUB						, ,		•	
		100-120 100-120	304	6/2019 North Liberal 115			ОН		TBD	1	TBD meyer 115 kV Ckt 1	Planned I	Reliability	
2014 SPP	AC 100-120 AC 100-120			•			ОН	6958		M GP&L	TBD:meyer 115 kV Ckt 1		Reliability	Economics / Congestion
2014 SPP 2014 SPP	AC 100-120 AC 100-120 AC 121-150	100-120	304	6/2019 North Liberal 115	KV Walkemeyer 115 kV Firewheel	21.0 4.1 OH	ОН	6958 2442	GARLAND		TBD:meyer 115 kV Ckt 1	Rel	Reliability iability	Economics / Congestion Other
2014 SPP 2014 SPP 2014 TRE-ERCOT A	AC 100-120 AC 100-120 AC 121-150 AC 121-150	100-120 138	304	6/2019 North Liberal 115 5/2016 Apollo	KV Walkemeyer 115 kV Firewheel	21.0 4.1 OH		2442	GARLAND	M GP&L	TBD meyer 115 kV Ckt 1 Lookout 138 kV new Planned	Rel Rel	Reliability iability iability	·
2014 SPP 2014 SPP 2014 TRE-ERCOT A 2014 TRE-ERCOT A	AC 100-120 AC 100-120 AC 121-150 AC 121-150 AC 300-399	100-120 138 138	304 478	6/2019 North Liberal 115 5/2016 Apollo 9/2019 328	KV Walkemeyer 115 kV Firewheel 53 32852	21.0 4.1 OH 10 OH		2442	GARLAND BTU CTT	M GP&L	TBD :meyer 115 kV Ckt 1 Lookout 138 kV new Planned BRYN_4576_Annex_ Planned	Rel Rel Rel	Reliability iability iability iability	Other

2014 TRE ERCOT AC	121 150	120		5/2017 7anith	Vat.	C 4 OH	0001 CND	1 Katu Area Unaradas Diamad	Daliability	Othor
2014 TRE-ERCOT AC 2014 TRE-ERCOT AC	121-150 121-150	138 138	838	5/2017 Zenith 6/2015 MARINE	Katy Surfside/Quintana	6.4 OH 1.5 OH	8901 CNP 8901 CNP	, , , ,	Reliability Other	Other
2014 TRE-ERCOT AC	300-399	345	3147	5/2018 Gibbons Creek	Zenith	63 OH	8901 CNP		Reliability	Economics / Congestion
2014 TRE-ERCOT AC	121-150	138	838	5/2016 Tanner	Addicks/Satsuma	1.9 OH	8901 CNP	·	Other	Economics / Congestion
2014 TRE-ERCOT AC	300-399	345	030	6/2016 Hill Country	Skyline	11 OH	16604 CPS M		Reliability	
2014 TRE-ERCOT AC	121-150	138		6/2016 VH Braunig	Grandview	2.1 OH	16604 CPS M	·	Reliability	
2014 TRE-ERCOT AC	121-150	138		6/2021 Masterson Rd.	Cagnon-Howard	20 OH	16604 CPS M	_	Other	
2014 TRE-ERCOT AC	121-150	138		3/2015 Green Mountain	Stonegate	11.5 OH	16604 CPS M		Reliability	
2014 TRE-ERCOT AC	121-150	138	220	12/2015 Highway 32	Wimberley	4 OH	14626 PEC C		Reliability	
2014 TRE-ERCOT AC	121-150	138	129	9/2018 Blumenthal	Kendall CTEC-Mountain Top	8.4 OH	11269 LCRA TSC S		Reliability	
2014 TRE-ERCOT AC	121-150	138	221	6/2015 Parkway	EC Mornhinweg	8 OH	11269 LCRA TSC S	1 Parkway to EC Morr Planned	Reliability	
2014 TRE-ERCOT AC	121-150	138	235	6/2014 Highway 123	Cushman	6.2 OH	11269 LCRA TSC S	1 Cushman-Highway 1 Under Constructior I	Reliability	
2014 TRE-ERCOT AC	121-150	138	441	5/2014 Menger Creek	Menger Creek Tap	2.9 OH	11269 LCRA TSC S	1 Menger Creek Trans Planned	Reliability	
2014 TRE-ERCOT AC	121-150	138	446	8/2019 Leander	Round Rock	13 OH	11269 LCRA TSC S	1 Leander - Parmer - F Planned	Reliability	
2014 TRE-ERCOT AC	300-399	345	1959	5/2019 Zorn	Marion	18 OH	11269 LCRA TSC S	1 Zorn to Marion 2nd Planned	Reliability	
2014 TRE-ERCOT AC	300-399	345	1959	5/2020 Gilleland Creek	Clear Springs	4 OH	11269 LCRA TSC S	1 Cut T511 Gilleland C Conceptual	Reliability	
2014 TRE-ERCOT AC	300-399	345		5/2026 Liggett	Trinity Switch	12.8 OH	44372 ONCOR I		Reliability	Other
2014 TRE-ERCOT AC	121-150	138		5/2023 Lavon Switch	Allen Switch	8.9 OH	44372 ONCOR I	·	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		5/2024 Coppell	North Lake	4.8 OH	44372 ONCOR I	·	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		5/2024 Saldo Switch	Cedar Valley Switch	7 OH	44372 ONCOR I	·	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		5/2021 Allen Switch	West Plano Switch	3.5 OH	44372 ONCOR I	·	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		5/2015 Collin	Austin Ranch Junction	11.6 OH	44372 ONCOR I	·	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		12/2015 NW Carrollton	Austin Ranch Junction	9.4 OH	44372 ONCOR I	·	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		5/2017 Roanoke Switch	Elizabeth Creek	3.8 OH	44372 ONCOR I	·	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		5/2017 Hicks Switch	Elizabeth Creek	30.4 OH	44372 ONCOR I	•	Reliability	Other
2014 TRE-ERCOT AC	300-399	345		5/2025 Southeast Nacogdoches	Lufkin Switch	8 OH	44372 ONCOR I		Reliability	Other
2014 TRE-ERCOT AC	121-150	138		12/2014 Lamesa	Buzzard Draw Goldsmith Junction	21.5 OH	44372 ONCOR I 44372 ONCOR I	1 Lamesa - Buzzard Di Under Construction I	•	Other
2014 TRE-ERCOT AC	121-150 121-150	138 138		5/2014 Odessa North Switch	North Main Switch	13.3 OH 4.4 OH		1 Odessa North - Gold Under Constructior I 1 North Main Switch (Conceptual	Reliability	Other
2014 TRE-ERCOT AC 2014 TRE-ERCOT AC	300-399	345		5/2018 North Main Tap 5/2014 Oklaunion	Fisher Road	4.4 OH 6.9 OH	44372 ONCOR I 44372 ONCOR I	1 Riley (Oklaunion) - F Under Construction	•	Other Other
2014 TRE-ERCOT AC	121-150	138		12/2016 Permian Basin	Culberson	88.7 OH	44372 ONCOR 1	, ,	Reliability	Other
2014 TRE-ERCOT AC	300-399	345		7/2024 Moss	Permian Basin	90 OH	44372 ONCOR I	•	Reliability	Other
2014 TRE-ERCOT AC	300-399	345		7/2024 Moss 7/2024 Odessa EHV	Moss	15 OH	44372 ONCOR I	·	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		5/2015 Collin	Frisco (Brazos)	1.9 OH	44372 ONCOR I	•	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		5/2021 Midland County Northwest	,	7.2 OH	44372 ONCOR I	·	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		12/2015 Morgan Creek	Cosden	32.5 OH	44372 ONCOR I	•	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		5/2015 McDonald Road	Garden City East	19 OH	44372 ONCOR I		Reliability	Other
2014 TRE-ERCOT AC	121-150	138		1/2015 Spraberry Tap	Aruba	6.8 OH	44372 ONCOR I	1 Aruba 138 kV POI Under Construction	•	Other
2014 TRE-ERCOT AC	121-150	138		12/2015 Spraberry	Garden City East	33 OH	44372 ONCOR I		Reliability	Other
2014 TRE-ERCOT AC	121-150	138		12/2015 Midessa	Midessa South	9.4 OH	44372 ONCOR I	·	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		12/2015 Odessa	Midessa South	10 OH	44372 ONCOR I	•	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		5/2016 Midessa South	Spraberry	16 OH	44372 ONCOR I	1 Midessa South - Spr Conceptual	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		5/2018 Paul Davis	Paul Davis Tap	12 OH	44372 ONCOR I	1 Paul Davis - Paul Da Conceptual	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		5/2018 Paul Davis	Texaco Mabee	10 OH	44372 ONCOR I	1 Paul Davis - Texaco Conceptual	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		5/2019 Texaco Mabee Tap	Texaco Mabee	11.4 OH	44372 ONCOR I	1 Texaco Mabee Tap - Conceptual	Reliability	Other
2014 TRE-ERCOT AC	121-150	138		12/2016 Midkiff	Garden City	20 OH	44372 ONCOR I	1 Midkiff - Garden Cit Conceptual	Reliability	Other
2014 TRE-ERCOT AC	300-399	345	1477	6/2016 Loma Alta	N Edinburgh	106.5 OH	17008 SLU I	1 New 345kV line fror Planned	Reliability	Other
2014 TRE-ERCOT AC	121-150	138	376	7/2015 Sales Ranch	Glass Ranch	10 OH	17008 SLU I	1 SLU_GlassRanch_ad Planned	Reliability	Other
2014 TRE-ERCOT AC	300-399	345	1084	7/2015 Telephone Road	Amoco Tap	32.8 OH	17008 SLU I		Reliability	Other
2014 TRE-ERCOT AC	300-399	345	1084	10/2015 Vealmoor	Longdraw	11.4 OH	17008 SLU I		Reliability	Other
2014 TRE-ERCOT AC	121-150	138	376	10/2015 Rocky Rd	Coates	7 OH	17008 SLU I		Reliability	Other
2014 TRE-ERCOT AC	121-150	138	376	10/2015 Tall City	Glass Ranch	10 OH	17008 SLU I		Reliability	Other
2014 TRE-ERCOT AC	300-399	345	1801	7/2016 White River	Abernathy	51 OH	17008 SLU I		Reliability	Other
2014 TRE-ERCOT AC	121-150	138	376	7/2016 Boyd	Stiles	6 OH	17008 SLU I		Reliability	Other
2014 TRE-ERCOT AC	121-150	138	240	8/2016 Tilden	Fowlerton	17 OH	17583 STEC C		Reliability	Other
2014 TRE-ERCOT AC 2014 TRE-ERCOT AC	121-150 121-150	138 138	240 240	8/2016 Fowlerton 12/2016 Oaks	Reveille Loxley	30 OH 6 OH	17583 STEC C 17583 STEC C		Reliability Reliability	Other Other
2014 TRE-ERCOT AC	121-150	138	240	7/2015 Oaks 7/2015 Magill	Tenaris	4.5 OH	17583 STEC C	1 Tenaris 138 kV static Under Construction	•	Reliability
2014 TRE-ERCOT AC	300-399	345	240	6/2016 Gilleland Substation	Techridge Substation	4.3 OH 8 OH	1015 AEN M		Reliability	Reliability
2014 TRE-ERCOT AC	121-150	138		6/2022 PICACHO	CFE	8.8 OH	3278 AEP TCC I	·	Reliability	Renability
2014 TRE-ERCOT AC	121-150	138		3/2019 ESCONDIDO	WEST BATESVILLE	46.2 OH	3278 AEP TCC I	•	Reliability	
2014 TRE-ERCOT AC	121-150	138		5/2015 Lobo	Rio Bravo	26 OH	3278 AEP TCC I	Lobo to Molina, buil Under Construction	•	
2014 TRE-ERCOT AC	121-150	138		12/2020 AIRLINE	WESTSIDE	6.22 OH	3278 AEP TCC I	•	Economics /	Congestion
2014 TRE-ERCOT AC	121-150	138		12/2016 KENEDY SWITCHING STATION		16.9 OH	3278 AEP TCC I	Kenedy Switch to Ti Under Construction		Congestion
2014 TRE-ERCOT AC	121-150	138		6/2015 Lon Hill	Kingsville	1.6 OH	3278 AEP TCC	Bunsen: Build new f Under Construction	•	
2014 TRE-ERCOT AC	121-150	138		5/2015 MOLINA	ZAPATA	2 OH	3278 AEP TCC	Molina to Zapata: C Under Construction		
2014 TRE-ERCOT AC	121-150	138		12/2016 BARNEY DAVIS	NAVAL BASE	7 OH	3278 AEP TCC I	·	Reliability	
2014 TRE-ERCOT AC	121-150	138		12/2017 COLETO CREEK	TULETA	56 OH	3278 AEP TCC	•	Reliability	
2014 TRE-ERCOT AC	121-150	138		12/2020 AIRLINE	HOLLY	1.69 OH	3278 AEP TCC		Economics /	Congestion
2014 TRE-ERCOT AC	121-150	138		5/2016 MCCOLL ROAD & NORTH M	(PHARR	2.2 OH	3278 AEP TCC	Pharr 138 kV Loop Under Constructior I		
2014 TRE-ERCOT AC	121-150	138		12/2016 Esmeralda	Yucca	13 OH	3278 AEP TNC I	Esmeralda to Yucca: Planned	Reliability	
2014 TRE-ERCOT AC	121-150	138		12/2017 Cassava	Yucca	12.3 OH	3278 AEP TNC I	Cassava to Yucca: RiPlanned	Reliability	
2014 TRE-ERCOT AC	121-150	138		12/2016 Solstice	Clovis	4.5 OH	3278 AEP TNC I	Solstice to Clovis: Bt Planned	Variable/Rer	newable Integration
2014 TRE-ERCOT AC	121-150	138	700	6/2015 Pockrus	Spencer	3.8 OH	5078 DME M		Reliability	Economics / Congestion
2014 TRE-ERCOT AC	121-150	138		6/2017 TNMP	Princeton South	3.5 OH	40051 TNMP	_	Reliability	Economics / Congestion
2014 TRE-ERCOT AC	121-150	138		6/2018 TNMP	Longneck	7.5 OH	40051 TNMP	•	Reliability	Economics / Congestion
2014 TRE-ERCOT AC	121-150	138		9/2015 CMC Tap	CMC (SMI)	2.2 OH	7752 GVEC C	CMC Tap to CMC (SI Planned	Other	

2014 TRE ERCOT AC	121 150	120	F/2017 Marian	Cibala	4.91.01	7752 675	· ·		Marian to Cibala T I Dlannad	Faan amiss /	Congestion
2014 TRE-ERCOT AC 2014 TRE-ERCOT AC	121-150	138	5/2017 Marion	Cibolo	4.81 OI 8.5 OI				Marion to Cibolo T-I Planned	Economics /	Congestion
	121-150	138	10/2016 Gillett	Nopal					Gillett Sub (LCRA) to Planned	Other	
2014 TRE-ERCOT AC	300-399	345	6/2016 Lobo	North Edinburg	156 OI		l		Lobo to North Edink Under Construc	•	
2014 WECC-US AC	200-299		•	Parachute	18	15466 PSC	. I		100 Rifle - Parachute Planned	Reliability	
2014 WECC-US AC		300-399 1200	6/2019 Pawnee	Daniels Park	124	15466 PSC	 		100 Pawnee - Daniels Pa Planned	Reliability	
2014 WECC-US AC	200-299	, ,	9/2023 Alamosa County, CO	Huerfano County, CO	93	30151 TSGT	•	40 / 60	San Luis Valley-Calu Conceptual	Reliability	Variable/Renewable Integration
2014 WECC-US AC		200-299	9/2017 Sidney, NB	Peetz, CO	5	30151 TSGT			100 Sidney-Peetz Logan Planned	Reliability	Variable/Renewable Integration
2014 WECC-US AC	300-399		12/2023 Lamar, CO area	Denver, CO area	400-599	30151 TSGT			50 Lamar - Front Range Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC	100-120	100-120 219	12/2015 La Junta BHCE 100-120 kV	' b La Junta TSGT 100-120 kV b) 1 OI	H 20101 BHCE	E I		50 La Junta Interconne Planned	Reliability	
2014 WECC-US AC	100-120	100-120 219	12/2015 Baculite Mesa 100-120 kV	b Overton 100-120 kV bus	4 OI	H 20101 BHCE	E I		100 Baculite Mesa-Over Planned	Reliability	
2014 WECC-US AC	100-120	100-121 219	12/2015 Nyberg 115 kV	Boone 115 kV	11 OI	H 20101 BHCE	E I		Boone-Nyberg 115 Planned	Reliability	Economics or Congestion
2014 WECC-US AC	100-120	100-122 219	12/2015 West Station 115 kV	Desert Cove 115 kV	4 OI	H 20101 BHCE	E I		West Station-Desert Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299	200-299 TBD	12/2023 Parachute	Rifle	31 OI	H 15466 PSC	1		100 Parachute - Cameo Conceptual	Reliability	
2014 WECC-US AC	200-299	200-299 576	6/2016 Arvada	Ridge	10 OI	H 15466 PSC	1		100 Cherokee - Ridge 23 Planned	Reliability	
2014 WECC-US AC	100-120	100-120 TBD	6/2019 Glenwood	Rifle	26 OI	H 15466 PSC	1		100 Glenwood - Rifle Up Conceptual	Reliability	
2014 WECC-US AC	200-299	200-299	12/2017 Limon, CO	Calhan, CO	55	30151 TSGT	ī		100 Big Sandy - Calhan 2 Planned	Reliability	Other
2014 WECC-US AC	100-120	100-120	12/2014 Monfort	DCP Substation	2.5 OI	H 15466 PSC	I		Monfort - DCP 115 Planned	Reliability	
2014 WECC-US AC	100-120	100-120	12/2019 Gilman	Avon	12 OI	H 15466 or 8 PSC o	or HCE I/C		Gilman - Avon 115 Conceptual	Reliability	
2014 WECC-US AC	200-299	200-299	11/2018 Wheeler	Wolf Ranch	18.5 OI	H 15466 PSC	ĺ		Wheeler - Middle Fc Planned	Reliability	
2014 WECC-US AC	100-120		12/2017 Poncha	Malta	52 OI		ı		Poncha - Malta 115 Planned	Reliability	
2014 WECC-US AC		100-120	6/2015 Bruch	Brush	3 01		ı		Brush - Brush SS 115 Planned	Reliability	
2014 WECC-US AC		100-120 TBD	4/2016 Prairie Center	Bromley	4 01		·		United Power Sys In Under Construc	•	Economics or Congestion
2014 WECC-US AC		100-120 TBD	12/2018 Sterling Ranch	Sterling Ranch Tap	3 01				Sterling Ranch Tap 1 Planned	Reliability	Economics of confession
2014 WECC-US AC		100-120 239	8/2016 Grandview 115kV	Compark 115kV	1.5 0				100 Grandview-Comparl Planned	Reliability	
2014 WECC-US AC	200-299		·	Osage 200-299 kV bus	60	ВНР	ı		100 Teckla-Osage 200-2! Planned	Reliability	
2014 WECC-US AC		200-299 558 200-299 558	·	•	75	ВНР	<u>'</u>		_	Reliability	
			1/2016 Osage 200-299 kV bus	Lange 200-299 kV bus					100 Osage-Lange 200-29 Planned	•	Foonamies or Congostion
2014 WECC-US AC		100-120 217/189	6/2015 South Cheyenne Sub	North Range Sub	13 0				South Cheyenne-No Under Construc	•	Economics or Congestion
2014 WECC-US AC		200-299 613	9/2015 Shiprock, NM	La Plata County, CO	40	30151 TSGT			100 Shiprock-Kiffen Can Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299		12/2015 Burlington, CO	Wray, CO	56	30151 TSGT			100 Burlington-Wray 20 Planned	Economics o	•
2014 WECC-US AC		100-120 166		To Be Determined	37	30151 TSGT			50 Pagosa-Ignacio 100- Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC		100-120 166	,	Montrose County, CO	8	30151 TSGT			50 East Montrose-Sout Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC	200-299		9/2017 Sidney, NB	Peetz, CO	5	30151 TSGT			100 Sidney-Peetz Logan Planned	Reliability	Variable/Renewable Integration
2014 WECC-US AC	300-399	300-399	12/2018 Lamar, CO area	Denver, CO area	400-599	30151 TSGT			50 Lamar - Front Range Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC	200-299	200-299	12/2017 Limon, CO	Calhan, CO	55	30151 TSGT	Ī		100 Big Sandy - Calhan 2 Planned	Reliability	Other
2014 WECC-US AC	200-299	200-299 576	10/2015 Rifle	Parachute	18	15466 PSC	1		100 Rifle - Parachute Planned	Reliability	
2014 WECC-US AC	300-399	300-399 1200	6/2019 Pawnee	Daniels Park	124	15466 PSC	1		100 Pawnee - Daniels Pa Planned	Reliability	
2014 WECC-US AC	300-399	300-399 (2) 1700	9/2023 Huerfano County, CO	Pueblo, CO	43	30151 TSGT	C/I	40 / 60	Calumet-Comanche Conceptual	Reliability	Variable/Renewable Integration
2014 WECC-US AC	200-299	200-299 613	9/2015 Huerfano County, CO	Pueblo, CO	7	30151 TSGT	C/I	40 / 60	Calumet-Walsenbur Conceptual	Reliability	Variable/Renewable Integration
2014 WECC-US AC	200-299	300-399 (2) 613	9/2023 Alamosa County, CO	Huerfano County, CO	93	30151 TSGT	C/I	40 / 60	San Luis Valley-Calu Conceptual	Reliability	Variable/Renewable Integration
2014 WECC-US AC	200-299	200-299	9/2017 Sidney, NB	Peetz, CO	5	30151 TSGT	7		100 Sidney-Peetz Logan Planned	Reliability	Variable/Renewable Integration
2014 WECC-US AC	300-399		12/2023 Lamar, CO area	Denver, CO area	400-599	30151 TSGT			50 Lamar - Front Rangε Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC		100-120 219		•					50 La Junta Interconne Planned	Reliability	3
2014 WECC-US AC		100-120 219	•		4 01				100 Baculite Mesa-Overl Planned	Reliability	
2014 WECC-US AC		100-121 219	-	Boone 115 kV	11 0				Boone-Nyberg 115 k Planned	Reliability	Economics or Congestion
2014 WECC-US AC	100-120			Desert Cove 115 kV	4 0				West Station-Desert Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299		12/2013 West Station 113 kV	Rifle	31 0		- '		100 Parachute - Cameo Conceptual	Reliability	Economics of Congestion
2014 WECC-US AC	200-299		-	Ridge	10 0		ı I		100 Cherokee - Ridge 23 Planned	Reliability	
			•	Rifle			<u>'</u>		_	•	
2014 WECC-US AC	100-120		6/2019 Glenwood		26 OI		. '		100 Glenwood - Rifle Up Planned	Reliability	Other
2014 WECC-US AC		200-299	12/2017 Limon, CO	Calhan, CO	55	30151 TSGT			100 Big Sandy - Calhan 2 Planned	Reliability	Other
2014 WECC-US AC	200-299		12/2014 Teckla 200-299 kV bus	Osage 200-299 kV bus	60	ВНР	l		100 Teckla-Osage 200-29 Planned	Reliability	
2014 WECC-US AC		200-299 554	12/2015 Osage 200-299 kV bus	Lange 200-299 kV bus	75	ВНР	. I		100 Osage-Lange 200-29 Planned	Reliability	
2014 WECC-US AC	100-120		12/2014 Happy Jack Sub	North Range Sub	1	CLFP			100 Happy Jack-North R Under Construc	•	
2014 WECC-US AC		100-120 222	4/2014 Archer Sub	East Business Park Sub	1.25 O				100 CPGS Interconnectic Under Construc		
2014 WECC-US AC		100-120 222	12/2014 South Cheyenne Sub	North Range Sub	13 OI				South Cheyenne-No Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299		•	La Plata County, CO	40	30151 TSGT			100 Shiprock-Kiffen Can Planned	Reliability	Economics or Congestion
2014 WECC-US AC		200-299 613	12/2015 Burlington, CO	Wray, CO	56	30151 TSGT			100 Burlington-Wray 20 Planned	Economics o	•
2014 WECC-US AC	100-120			To Be Determined	37	30151 TSGT			50 Pagosa-Ignacio 100- Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC	100-120	100-120 166	12/2016 Montrose, CO	Montrose County, CO	8	30151 TSGT	С		50 East Montrose-Sout Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC	200-299	200-299	9/2017 Sidney, NB	Peetz, CO	5	30151 TSGT			100 Sidney-Peetz Logan Planned	Reliability	Variable/Renewable Integration
2014 WECC-US AC	300-399	300-399	12/2018 Lamar, CO area	Denver, CO area	400-599	30151 TSGT	Ī		50 Lamar - Front Range Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC	200-299	200-299	12/2017 Limon, CO	Calhan, CO	55	30151 TSGT	Г		100 Big Sandy - Calhan 2 Planned	Reliability	Other
2014 WECC-US AC	151-199	151-199 271	3/2015 CACHANILLA ENTQ.	STA. ISABEL - RIO NUEVO	1.86451212 O	H CFE	F		100 CACHANILLA ENTQ. Under Construc	tior Reliability	Reliability
2014 WECC-US AC	200-299	200-299 388	4/2015 SANTA ISABEL ENTQ.	LA ROSITA - WISTERIA	9.4468614 OI	H CFE	F		100 SANTA ISABEL ENTC Under Construc	tior Reliability	Reliability
2014 WECC-US AC	151-199	151-199 271	4/2015 SANTA ISABEL	MEXICALI II	8.45245494 OI	H CFE	F		100 SANTA ISABEL Under Construc	tior Reliability	Reliability
2014 WECC-US AC	200-299	200-299 388	4/2016 LA JOVITA ENTQ.	PRESIDENTE JUAREZ - CIPRE	E: 11.6842759 OI	H CFE	F		100 LA JOVITA ENTQ. Planned	Fossil-Fired	In Fossil-Fired Integration
2014 WECC-US AC	151-199	151-199 271	4/2016 SANTA ISABEL	MEXICALI II	8.39030454 OI	H CFE	F		100 SANTA ISABEL Under Construc	tior Reliability	Reliability
2014 WECC-US AC	200-299		1/2017 EJIDO SAN LUIS ETQ CHAF	UI PARQUE INDUSTRIAL SAN L	.l 3.97762585 OI		F		100 EJIDO SAN LUIS ETQ Planned	•	In Fossil-Fired Integration
2014 WECC-US AC	200-299			SAN LUIS REY-PQUE IND SA			F		100 EJIDO SAN LUIS ENT Planned		In Fossil-Fired Integration
2014 WECC-US AC	200-299			TECNOLOGICO	6.83654444 OI		F		100 MEXICALI II Planned	Reliability	Reliability
2014 WECC-US AC	151-199		2/2017 GONZALEZ ORTEGA ENTQ				F		100 GONZALEZ ORTEGA Planned	Reliability	Reliability
2014 WECC-US AC	100-120			EL ENCINAL	5.34493474 OI		F		100 TECATE II Planned	Reliability	Reliability
2014 WECC-US AC	200-299		•	PRESIDENTE JUAREZ - LOMA			F		100 LA JOVITA ENTQ. Planned	•	In Fossil-Fired Integration
2014 WECC-US AC	200-299		•	CERRO PRIETO II	12.4300808 O		F		100 CUCAPAH Planned	Reliability	Reliability
2014 WECC-US AC	200-299		•	LA ROSITA - CERRO PRIETO			, F		100 CUCAPAH ENTQ. Planned	Reliability	Reliability
2014 WECC-US AC	200-299		•	LA ROSITA - CERRO PRIETO			E		100 CERRO PRIETO III EN Planned	Reliability	Reliability
2014 WECC-US AC	200-299		•				E		100 SANCHEZ TABOADA Planned	Reliability	Reliability
							г с			•	•
2014 WECC-US AC	400-599	-1 00-333 440	4/2019 SEIS DE ABRIL	PINACATE	127.408328 OI	II UFE	Г		100 SEIS DE ABRIL Planned	Reliability	Reliability

2044 14/500 110 40										
2014 WECC-US AC	100-120	100-120	120	4/2019 CARDENAS ENTQ.	EL RUBI - PRESIDENTE JUARE	8.07955252 OH	CFE	F	100 CARDENAS ENTQ. Planned	Reliability Reliability
2014 WECC-US AC	200-299	200-299	388	4/2019 CHAPULTEPEC	KM 43	13.6730889 OH	CFE	F	100 CHAPULTEPEC Planned	Reliability Reliability
2014 WECC-US AC	100-120	100-120	120	6/2019 FRONTERA ENTQ.	INDUSTRIAL - UNIVERSIDAD	3.72902424 OH	CFE	F	100 FRONTERA ENTQ. Planned	Reliability Reliability
2014 WECC-US AC		200-299	388	10/2019 RUIZ CORTINES ENTQ	EJIDO SAN LUIS - HIDALGO	1.86451212 OH	CFE	F	100 RUIZ CORTINES ENT Planned	Reliability Reliability
2014 WECC-US AC		100-120	120	4/2021 LA ENCANTADA ENTQ	LA HERRADURA-METROPOLI		CFE	F	100 LA ENCANTADA ENT Planned	Reliability Reliability
		200-299	388	6/2021 KM 43	EL ARRAJAL	77.688005 OH	CFE	r F	100 KM 43 Planned	·
2014 WECC-US AC				•				•		
2014 WECC-US AC		100-120	120	6/2021 EL ARRAJAL	SAN FELIPE	14.916097 OH	CFE	F	100 EL ARRAJAL Planned	Reliability Reliability
2014 WECC-US AC	100-120	100-120	120	4/2022 VALLE DORADO ENTQ.	EL GALLO-CIPRES	1.24300808 OH	CFE	F	100 VALLE DORADO ENT Planned	Reliability Reliability
2014 WECC-US AC	100-120	100-120	120	4/2022 EL DORADO	SAN FELIPE	3.72902424 OH	CFE	F	100 EL DORADO Planned	Reliability Reliability
2014 WECC-US AC	151-199	151-199	271	10/2022 AEROPUERTO MEXICALI EN	T MEXICALI OTECERRO PRIET	8.70105656 OH	CFE	F	100 AEROPUERTO MEXICPlanned	Reliability Reliability
2014 WECC-US AC	151-199	151-199	271	10/2022 CERRO PRIETO I	CERRO PRIETO IV	3.72902424 OH	CFE	F	100 CERRO PRIETO I Planned	Reliability Reliability
2014 WECC-US AC	151-199	151-199	271	10/2022 AEROPUERTO MEXICALI EN	TGLZ, ORTEGA - CERRO PRIET	8.70105656 OH	CFE	F	100 AEROPUERTO MEXICPlanned	Reliability Reliability
2014 WECC-US AC		200-299	388	10/2022 AEROPUERTO MEXICALI EN		14.916097 OH	CFE	F	100 AEROPUERTO MEXICPlanned	Reliability Reliability
				•				F		
2014 WECC-US AC		200-299	388	10/2023 CUCAPAH	SANCHEZ TABOADA	9.3225606 OH	CFE	•	100 CUCAPAH Planned	Reliability Reliability
2014 WECC-US AC		100-120	120	1/2025 TECATE I ENTQ.	TECATE II - HERRADURA	0.12430081 OH	CFE	F	100 TECATE I ENTQ. Planned	Reliability Reliability
2014 WECC-US AC	100-120	100-120	120	1/2025 TECRA ENTQ.	LA HERRADURA - TECATE	0.31075202 OH	CFE	F	100 TECRA ENTQ. Planned	Reliability Reliability
2014 WECC-US AC	100-120	100-120	120	1/2025 METROPOLI POT. ENTQ.	PANAMERICANA FRACC-PRE	21.1311374 OH	CFE	F	100 METROPOLI POT. E Planned	Reliability Reliability
2014 WECC-US AC	100-120	100-120	120	1/2025 METROPOLI POT.	TIJUANA I	10.1926663 OH	CFE	F	100 METROPOLI POT. Planned	Reliability Reliability
2014 WECC-US AC	100-120	100-120	120	4/2025 TIJUANA I	INDUSTRIAL	7.45804848 OH	CFE	F	100 TIJUANA I Planned	Reliability Reliability
2014 WECC-US AC	200-299	200-299	388	10/2025 LT CC ENSENADA	LA HERRADURA	99.4406464 OH	CFE	F	100 LT CC ENSENADA Planned	Reliability Reliability
2014 WECC-US AC		200-299	388	4/2026 CIPRES	CAÑON	52.2063393 OH	CFE	F	100 CIPRES Planned	Reliability Reliability
2014 WECC-US AC		100-120	TBD	12/2015 San Mateo			14328 PG&E			·
				•	Bay Meadows	4.5			100 Bay Meadows 4/0 C Planned	·
2014 WECC-US AC		200-299	683	12/2016 Contra Costa Substation (Ar		54	14328 PG&E	ı	100 Contra Costa - Mora Planned	Reliability Deliverability
2014 WECC-US AC	200-299	200-299	TBD	12/2015 Embarcadero	Potrero	3	14328 PG&E	ı	100 Embarcadero-Potrei Planned	Reliability Reliability
2014 WECC-US AC	100-120	100-120	TBD	6/2017 Missouri Flat	Gold Hill	25	14328 PG&E	1	100 Missouri Flat - Gold Planned	Reliability Reliability
2014 WECC-US AC	200-299	200-299	1366	5/2015 Newark Substation (Fremor	Ravenswood Substation (Me	18	14328 PG&E	1	100 Newark - Ravenwoo Planned	Reliability Reliability
2014 WECC-US AC		200-299	683	10/2015 Pittsburg Substation (Pittsb	•	62	14328 PG&E	I	100 Pittsburg - Tesla 200 Planned	Reliability Economics or Congestion
2014 WECC-US AC	200-299	200-299	TBD	5/2018 Rio Oso	Gold Hill	28.5	14328 PG&E	1	100 Rio Oso-Atlantic and Planned	Reliability Reliability
2014 WECC-US AC	138/69	200 255	.55	6/2015 Los Coches	Los Coches	20.0	16609 SDGE	•	Upgrade Los Coches Planned	Reliability Reliability
	-								, -	·
2014 WECC-US AC	138/69			6/2015 Los Coches	Los Coches		16609 SDGE		Upgrade Los Coches Planned	Reliability Reliability
2014 WECC-US AC	200-299			6/2017 Southern Orange County	Southern Orange County		16609 SDGE		Southern Orange Cc Planned	Reliability Reliability
2014 WECC-US AC	138/69			6/2015 Talega	Talega		16609 SDGE		Replace Talega 138/ Planned	Reliability Reliability
2014 WECC-US AC	200-299	200-299	478	4/2015 Rector CA	Springville CA	38	17609 SCE	I	SCE: 100% San Joaquin Cross V Under Constructi	ior Reliability
2014 WECC-US AC	400-599	400-599	3950 Amr	2/2015 Tehachapi CA	Mira Loma CA	250	17609 SCE	1	SCE: 100% Tehachapi Renewab Under Constructi	ior Variable/Renewable Integration
2014 WECC-US AC	121-150	1	38	6/2014 Sycamore	Chicarita	6 OH	16609 SDGE		100 TL 13820, Sycamore Planned	Reliability Reliability
2014 WECC-US AC	200-299		30	6/2017 Bay Boulevard		ОН	16609 SDGE		100 Bay Boulevard 230/ Planned	Reliability Reliability
2014 WECC-US AC	200-299			12/2017 SONGMESA 230 kV substati	on	OII	16609 SDGE		•	Reliability Reliability
			30	•	on				100 South Orange Count Planned	·
2014 WECC-US AC	200-299		30	6/2015 Talega			16609 SDGE		100 Talega Area Dynami Planned	Reliability Reliability
2014 WECC-US AC	400-599		00	3/2015 East County			16609 SDGE		100 East County 500kV S Planned	Renewable In Reliability
2014 WECC-US AC	121-150	1	38	6/2018 Trabuco	Capistrano		16609 SDGE	I	100 TL13834 Trabuco-Ca Planned	Reliability Reliability
2014 WECC-US AC	100-120	1	15	5/2019 McCall	Reedley	ОН	14328 PG&E	1	McCall-Reedley #2 1Conceptual	Reliability Reliability
ZOIT WEEC OS THE									,	
2014 WECC-US AC	200-299	2	30	5/2019 Midway	Kern	ОН	14328 PG&E	I	Midway-Kern PP #2 Conceptual	Reliability Reliability
2014 WECC-US AC								I	Midway-Kern PP #2 Conceptual	Reliability Reliability
2014 WECC-US AC 2014 WECC-US AC	400-599	50	00	6/2020 Delaney	Colorado	ОН	14328 PG&E	l M	Midway-Kern PP #2 Conceptual New Delaney-Colora Conceptual	Reliability Reliability Economics or Economics or Congestion
2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC	400-599 200-299	200-299	00 950	6/2020 Delaney 7/2015 Haskell CA	Colorado Castaic CA	OH 12	14328 PG&E 11208 LADWP	I M	Midway-Kern PP #2 Conceptual New Delaney-Colora Conceptual LDWP - 100% Barren Ridge Renew Conceptual	Reliability Reliability Economics or Economics or Congestion Variable/Rene Economics or Congestion
2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC	400-599 200-299 200-299	200-299 200-299	00 950 950	6/2020 Delaney 7/2015 Haskell CA 7/2015 Barren Ridge CA	Colorado Castaic CA Haskell CA	OH 12 61	14328 PG&E 11208 LADWP 11208 LADWP	М	Midway-Kern PP #2 Conceptual New Delaney-Colora Conceptual LDWP - 100% Barren Ridge Renew Conceptual LDWP - 100% Barren Ridge Renew Conceptual	Reliability Reliability Economics or Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion
2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC	400-599 200-299 200-299 200-299	200-299 200-299 200-299	950 950 950 650	6/2020 Delaney 7/2015 Haskell CA 7/2015 Barren Ridge CA 7/2015 Barren Ridge CA	Colorado Castaic CA Haskell CA Rinaldi CA	OH 12 61 76	14328 PG&E 11208 LADWP 11208 LADWP 11208 LADWP	M M	Midway-Kern PP #2 Conceptual New Delaney-Colora Conceptual LDWP - 100% Barren Ridge Renew Conceptual LDWP - 100% Barren Ridge Renew Conceptual LDWP - 100% Barren Ridge Renew Conceptual	Reliability Reliability Economics or Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion
2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC	400-599 200-299 200-299 200-299 200-299	200-299 200-299 200-299 200-299	950 950 950 650 400-599	6/2020 Delaney 7/2015 Haskell CA 7/2015 Barren Ridge CA 7/2015 Barren Ridge CA 8/2014 Scattergood Generating Sta	Colorado Castaic CA Haskell CA Rinaldi CA t Olympic Receiving Station K	OH 12 61 76 12	14328 PG&E 11208 LADWP 11208 LADWP 11208 LADWP 11208 LADWP	М	Midway-Kern PP #2 Conceptual New Delaney-Colora Conceptual LDWP - 100% Barren Ridge Renew Conceptual LDWP - 100% Barren Ridge Renew Conceptual LDWP - 100% Barren Ridge Renew Conceptual LADWP - 100% Scattergood-Olympi Planned	Reliability Reliability Economics or Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Reliability Economics or Congestion
2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC	400-599 200-299 200-299 200-299 200-299	200-299 200-299 200-299	950 950 950 650	6/2020 Delaney 7/2015 Haskell CA 7/2015 Barren Ridge CA 7/2015 Barren Ridge CA	Colorado Castaic CA Haskell CA Rinaldi CA t Olympic Receiving Station K	OH 12 61 76 12	14328 PG&E 11208 LADWP 11208 LADWP 11208 LADWP	M M	Midway-Kern PP #2 Conceptual New Delaney-Colora Conceptual LDWP - 100% Barren Ridge Renew Conceptual LDWP - 100% Barren Ridge Renew Conceptual LDWP - 100% Barren Ridge Renew Conceptual	Reliability Reliability Economics or Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion
2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC	400-599 200-299 200-299 200-299 200-299	200-299 200-299 200-299 200-299	950 950 950 650 400-599	6/2020 Delaney 7/2015 Haskell CA 7/2015 Barren Ridge CA 7/2015 Barren Ridge CA 8/2014 Scattergood Generating Sta	Colorado Castaic CA Haskell CA Rinaldi CA t Olympic Receiving Station K Wilmington Receiving Statior	OH 12 61 76 12	14328 PG&E 11208 LADWP 11208 LADWP 11208 LADWP 11208 LADWP	M M M	Midway-Kern PP #2 Conceptual New Delaney-Colora Conceptual LDWP - 100% Barren Ridge Renew Conceptual LDWP - 100% Barren Ridge Renew Conceptual LDWP - 100% Barren Ridge Renew Conceptual LADWP - 100% Scattergood-Olympi Planned	Reliability Reliability Economics or Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Reliability Economics or Congestion
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2014 WECC-US AC	400-599 200-299 200-299 200-299 200-299 200-299 200-299	200-299 200-299 200-299 200-299 200-299 200-299	950 950 950 650 400-599 159 836 650	6/2020 Delaney 7/2015 Haskell CA 7/2015 Barren Ridge CA 7/2015 Barren Ridge CA 8/2014 Scattergood Generating Sta 2/2017 Harbor Generating Station 8/2015 Nortridge Receiving Station 6/2018 Valley Receiving Station	Colorado Castaic CA Haskell CA Rinaldi CA t Olympic Receiving Station K Wilmington Receiving Station Tarzana Receiving Station Rinaldi CA	OH 12 61 76 12 OH OH OH	14328 PG&E 11208 LADWP	M M M M M	Midway-Kern PP #2 Conceptual New Delaney-Colora Conceptual LDWP - 100% Barren Ridge Renew Conceptual LDWP - 100% Barren Ridge Renew Conceptual LDWP - 100% Barren Ridge Renew Conceptual LADWP - 100% Scattergood-Olympi Planned LADWP - 100% Wilmington Bypass Planned LADWP - 100% Northridge-Tarzana Planned LADWP - 100% Re-conductor both \ Planned	Reliability Reliability Economics or Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Reliability Economics or Congestion
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2014 WECC-US AC	400-599 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299	200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299	950 950 950 650 400-599 159 836 650 761 430 430 430 430 388 388 388 388 388 388 388 3	6/2020 Delaney 7/2015 Haskell CA 7/2015 Barren Ridge CA 7/2015 Barren Ridge CA 8/2014 Scattergood Generating Stat 2/2017 Harbor Generating Station 8/2015 Nortridge Receiving Station 6/2018 Valley Receiving Station 6/2016 Haskell CA 10/2018 La Jovita MX 10/2015 La Jovita MX 10/2018 El Cañon MX 10/2018 Ensenada 4/2014 Cucapah 4/2014 Cucapah 4/2014 Cucapah 4/2014 Cucapah 4/2016 Santa Isabel 4/2016 Santa Isabel 4/2018 Ejido San Luis	Colorado Castaic CA Haskell CA Rinaldi CA t Olympic Receiving Station K Wilmington Receiving Station Tarzana Receiving Station Rinaldi CA Rinaldi CA Lomas MX La Herradura MX El Ciprés MX La Herradura MX Mexicali MX Sanchez Taboada MX Cerro Prieto II MX La Rosita MX Tecnologico MX La Rosita MX Tecnologico MX La Rosita MX Chapultepec San Luis Rey Parque Industrial Parque Industrial Herradura Santa Isabel Rio Nuevo Bay Meadows Moraga Substation (Orinda, Potrero Gold Hill Ravenswood Substation (Me	OH 12 61 76 12 10 OH OH OH OH OH 30 OH 50 OH 52 OH 49.7 OH 14.29 OH 14.29 OH 14.91 OH 15.4 OH	14328 PG&E 11208 LADWP 11208 CFE	M M M M M M F F F F F F F F F F F F F F	Midway-Kern PP #2 Conceptual New Delaney-Colora Conceptual LDWP - 100% Barren Ridge Renew Conceptual LADWP - 100% Scattergood-Olympi Planned LADWP - 100% Wilmington Bypass Planned LADWP - 100% Re-conductor both \ Planned LADWP - 100% Re-conductor Haske Planned LADWP - 100% Re-conductor Haske Planned 100 La Jovita Planned 100 La Jovita Planned 100 El Cañon Planned 100 Ensenada Planned 100 Cucapah Planned 100 Cucapah Planned 100 Cucapah Planned 100 Cucapah Planned 100 Santa Isabel Planned 100 Santa Isabel Planned 100 Santa Isabel Planned 100 Ejido San Luis Planned 100 Embarcadero-Potrei Planned 100 Embarcadero-Potrei Planned 100 Embarcadero-Potrei Planned	Reliability Reliability Economics or Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Reliability Economics or Congestion Fossil-Fired In Fossil-Fired Integration Fossil-Fired In Fossil-Fired Integration Reliability
2014 WECC-US AC	400-599 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299	200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299	950 950 950 650 400-599 159 836 650 761 430 430 430 430 388 388 388 388 388 388 388 3	6/2020 Delaney 7/2015 Haskell CA 7/2015 Barren Ridge CA 7/2015 Barren Ridge CA 8/2014 Scattergood Generating Stat 2/2017 Harbor Generating Station 8/2015 Nortridge Receiving Station 6/2018 Valley Receiving Station 6/2016 Haskell CA 10/2018 La Jovita MX 10/2018 El Cañon MX 10/2018 El Cañon MX 10/2018 Ensenada 4/2014 Cucapah 4/2014 Cucapah 4/2014 Cucapah 4/2014 Cucapah 4/2016 Santa Isabel 4/2016 Santa Isabel 4/2018 Ejido San Luis	Colorado Castaic CA Haskell CA Rinaldi CA t Olympic Receiving Station K Wilmington Receiving Station Tarzana Receiving Station Rinaldi CA Rinaldi CA Lomas MX La Herradura MX El Ciprés MX La Herradura MX Mexicali MX Sanchez Taboada MX Cerro Prieto II MX La Rosita MX Tecnologico MX La Rosita MX Tecnologico MX La Rosita MX Chapultepec San Luis Rey Parque Industrial Parque Industrial Herradura Santa Isabel Rio Nuevo Bay Meadows Moraga Substation (Orinda, Potrero Gold Hill Ravenswood Substation (Me	OH 12 61 76 12 OH OH OH OH OH 30 OH 50 OH 52 OH 49.7 OH 14.29 OH 14.29 OH 14.91 OH 20.5 OH 11 OH 15.4 OH 15.4 OH 15.4 OH 6.6 OH 6.6 OH 6.6 OH 6.6 OH 7 OH 4.5 54 3 25 18	14328 PG&E 11208 LADWP 11208 CFE	M M M M M M F F F F F F F F F F F F F F	Midway-Kern PP #2 Conceptual New Delaney-Colora Conceptual LDWP - 100% Barren Ridge Renew Conceptual LADWP - 100% Scattergood-Olympi Planned LADWP - 100% Wilmington Bypass Planned LADWP - 100% Northridge-Tarzana Planned LADWP - 100% Re-conductor both \ Planned LADWP - 100% Re-conductor Haske Planned 100 La Jovita Planned 100 El Cañon Planned 100 El Cañon Planned 100 Eucapah Planned 100 Cucapah Planned 100 Cucapah Planned 100 Cucapah Planned 100 Cucapah Planned 100 Santa Isabel Planned 100 Santa Isabel Planned 100 Santa Isabel Planned 100 Santa Isabel Planned 100 Ejido San Luis Planned 100 Embarcadero-Potrei Planned 100 Embarcadero-Potrei Planned 100 Missouri Flat - Gold Planned	Reliability Reliability Economics or Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Reliability Economics or Congestion Fossil-Fired In Fossil-Fired Integration Reliability Reliability Fossil-Fired In Fossil-Fired Integration Reliability
2014 WECC-US AC	400-599 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299	200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299	950 950 950 650 400-599 159 836 650 761 430 430 430 430 00 800 388 388 388 388 388 388 388	6/2020 Delaney 7/2015 Haskell CA 7/2015 Barren Ridge CA 7/2015 Barren Ridge CA 8/2014 Scattergood Generating Stat 2/2017 Harbor Generating Station 8/2015 Nortridge Receiving Station 6/2018 Valley Receiving Station 6/2016 Haskell CA 10/2018 La Jovita MX 10/2015 La Jovita MX 10/2018 El Cañon MX 10/2018 Ensenada 4/2014 Cucapah 4/2014 Cucapah 4/2014 Cucapah 4/2014 Cucapah 4/2016 Santa Isabel 4/2016 Santa Isabel 4/2018 Ejido San Luis	Colorado Castaic CA Haskell CA Rinaldi CA t Olympic Receiving Station K Wilmington Receiving Station Tarzana Receiving Station Rinaldi CA Rinaldi CA Lomas MX La Herradura MX El Ciprés MX La Herradura MX Mexicali MX Sanchez Taboada MX Cerro Prieto II MX La Rosita MX Tecnologico MX La Rosita MX Tecnologico MX La Rosita MX Chapultepec San Luis Rey Parque Industrial Parque Industrial Herradura Santa Isabel Rio Nuevo Bay Meadows Moraga Substation (Orinda, Potrero Gold Hill Ravenswood Substation (Metatelsa Substation (Livermore, Gold Hill	OH 12 61 76 12 10 OH OH OH OH OH 30 OH 50 OH 52 OH 49.7 OH 14.29 OH 14.29 OH 14.29 OH 14.91 OH 15.4 OH 15.4 OH 15.4 OH 15.4 OH 15.4 OH 15.4 OH 4.5 OH 6.6 OH 6.6 OH 6.6 OH 6.5 OH 7 OH 4.5 54 3 25 18 62	14328 PG&E 11208 LADWP 11208 CFE	M M M M M M F F F F F F F F F F F F F F	Midway-Kern PP #2 Conceptual New Delaney-Colora Conceptual LDWP - 100% Barren Ridge Renew Conceptual LDWP - 100% Barren Ridge Renew Conceptual LDWP - 100% Barren Ridge Renew Conceptual LDWP - 100% Scattergood-Olympi Planned LADWP - 100% Wilmington Bypass Planned LADWP - 100% Northridge-Tarzana Planned LADWP - 100% Re-conductor both \ Planned LADWP - 100% Re-conductor Haske Planned LADWP - 100% Re-conductor Haske Planned 100 La Jovita Planned 100 El Cañon Planned 100 El Cañon Planned 100 Cucapah Planned 100 Cucapah Planned 100 Cucapah Planned 100 Cucapah Planned 100 Santa Isabel Planned 100 Santa Isabel Planned 100 Santa Isabel Planned 100 Ejido San Luis Planned	Reliability Reliability Economics or Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Reliability Reliability Resilability Reliability
2014 WECC-US AC	400-599 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299	200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299	950 950 950 650 400-599 159 836 650 761 430 430 430 430 00 800 388 388 388 388 388 388 388	6/2020 Delaney 7/2015 Haskell CA 7/2015 Barren Ridge CA 7/2015 Barren Ridge CA 8/2014 Scattergood Generating Stat 2/2017 Harbor Generating Station 8/2015 Nortridge Receiving Station 6/2018 Valley Receiving Station 6/2016 Haskell CA 10/2018 La Jovita MX 10/2018 El Cañon MX 10/2018 El Cañon MX 10/2018 Ensenada 4/2014 Cucapah 4/2014 Cucapah 4/2014 Cucapah 4/2014 Cucapah 4/2016 Santa Isabel 4/2016 Santa Isabel 4/2018 Ejido San Luis	Colorado Castaic CA Haskell CA Rinaldi CA t Olympic Receiving Station K Wilmington Receiving Station Tarzana Receiving Station Rinaldi CA Rinaldi CA Lomas MX La Herradura MX El Ciprés MX La Herradura MX Mexicali MX Sanchez Taboada MX Cerro Prieto II MX La Rosita MX Tecnologico MX La Rosita MX Chapultepec San Luis Rey Parque Industrial Parque Industrial Herradura Santa Isabel Rio Nuevo Bay Meadows Moraga Substation (Orinda, Potrero Gold Hill Ravenswood Substation (Meaterless Substation (Livermore,	OH 12 61 76 12 10 OH OH OH OH OH 30 OH 50 OH 52 OH 49.7 OH 14.29 OH 14.29 OH 14.29 OH 14.91 OH 15.4 OH 15.4 OH 15.4 OH 15.4 OH 15.4 OH 15.4 OH 4.5 OH 6.6 OH 6.6 OH 6.6 OH 6.5 OH 7 OH 4.5 54 3 25 18 62	14328 PG&E 11208 LADWP 11208 CFE	M M M M M M F F F F F F F F F F F F F F	Midway-Kern PP #2 Conceptual New Delaney-Colora Conceptual LDWP - 100% Barren Ridge Renew Conceptual LADWP - 100% Scattergood-Olympi Planned LADWP - 100% Wilmington Bypass Planned LADWP - 100% Northridge-Tarzana Planned LADWP - 100% Re-conductor both \ Planned LADWP - 100% Re-conductor Haske Planned 100 La Jovita Planned 100 El Cañon Planned 100 El Cañon Planned 100 Eucapah Planned 100 Cucapah Planned 100 Cucapah Planned 100 Cucapah Planned 100 Cucapah Planned 100 Santa Isabel Planned 100 Santa Isabel Planned 100 Santa Isabel Planned 100 Ejido San Luis Planned 100	Reliability Reliability Economics or Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Variable/Rene Economics or Congestion Reliability Reliability Resilability Reliability Resilability Reliability

2014 WECC-US AC	139/60	6/2015 Los Cochos	Los Coches		16609 SDGE	Lingrada Las Cashas Diannad	Deliability Deliability
2014 WECC-US AC	138/69 200-299	6/2015 Los Coches 6/2017 Southern Orange County	Southern Orange County		16609 SDGE	Upgrade Los Coches Planned Southern Orange Cc Planned	Reliability Reliability Reliability Reliability
2014 WECC-US AC	138/69	6/2015 Talega	Talega		16609 SDGE	Replace Talega 138/ Planned	Reliability Reliability
2014 WECC-US AC	200-299 200-299 478	4/2014 Rector CA	Springville CA	38	17609 SCE I	SCE: 100% San Joaquin Cross V Under Construct	•
2014 WECC-US AC	400-599 400-599 3950 Amp	2/2015 Tehachapi CA	Mira Loma CA	250	17609 SCE I	SCE: 100% Tehachapi Renewal: Under Construct	ior Variable/Renewable Integration
2014 WECC-US AC	200-299 220 988	6/2014 Barre CA	Ellis CA	12.7	17609 SCE I	SCE: 100% Reconfigure Barre-E Planned	Reliability
2014 WECC-US AC	121-150 138	6/2014 Sycamore	Chicarita	6 OH	16609 SDGE	100 TL 13820, Sycamore Planned	Reliability Reliability
2014 WECC-US AC	200-299 230	6/2015 Bay Boulevard	P	ОН	16609 SDGE	100 Bay Boulevard 230/Planned	Reliability Reliability
2014 WECC-US AC 2014 WECC-US AC	200-299 230 200-299 230	12/2017 SONGMESA 230 kV substa 6/2015 Talega	tion		16609 SDGE 16609 SDGE	100 South Orange Count Planned 100 Talega Area Dynami Planned	Reliability Reliability Reliability Reliability
2014 WECC-US AC	400-599 500	3/2014 East County			16609 SDGE	100 Falega Alea Dyllailli Plailled	Renewable In Reliability
2014 WECC-US AC	200-299 200-299 950	7/2015 Haskell CA	Castaic CA	12	11208 LADWP M	LDWP - 100% Barren Ridge Renew Conceptual	Variable/Rene Economics or Congestion
2014 WECC-US AC	200-299 200-299 950	7/2015 Barren Ridge CA	Haskell CA	61	11208 LADWP M	LDWP - 100% Barren Ridge Renew Conceptual	Variable/Rene Economics or Congestion
2014 WECC-US AC	200-299 200-299 650	7/2015 Barren Ridge CA	Rinaldi CA	76	11208 LADWP M	LDWP - 100% Barren Ridge Renew Conceptual	Variable/Rene Economics or Congestion
2014 WECC-US AC	200-299 200-299 400-599	8/2014 Scattergood Generating St	at Olympic Receiving Station k	12	11208 LADWP M	LADWP - 100: Scattergood-Olympi Planned	Reliability Economics or Congestion
2014 WECC-US AC	200-299 240 977-1334	10/2018 2055	491S	24.85484 OH	AESO I	AltaLink - 100 1004-1 787-7 - So Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	200-299 240 1006-127	4/2015 244S	2075\$	82.3254438 OH 39.2706472 OH	AESO I	AltaLink - 100 1035L-1 737-13 - I Planned	Economic or c Reliability
2014 WECC-US AC 2014 WECC-US AC	200-299 240 958-1213 200-299 240 958-1213	9/2015 266S 9/2015 237S	138S 266S	39.2706472 OH 39.2706472 OH	AESO I AESO I	AltaLink - 100 1037-1 787-1 - So⊦Planned AltaLink - 100 1037-2 787-1 - So⊦Planned	Variable/Rene Economics or congestion Variable/Rene Economics or congestion
2014 WECC-US AC	200-299 240 958-1213	9/2015 2575 9/2015 266S	138\$	39.2706472 OH	AESO I	AltaLink - 100 1037-2 787-1 - 30 Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	200-299 240 958-1213	9/2015 237S	266S	39.2706472 OH	AESO I	AltaLink - 100 1038-2 787-1 - So Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	200-299 240 499-499	9/2015 59S	138\$	4.349597 OH	AESO I	AltaLink - 100 1048L-1 787-1 - Sc Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	200-299 240 499-499	9/2015 59S	138S	4.349597 OH	AESO I	AltaLink - 100 1049L-1 787-1 - Sc Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	200-299 240 800-960	6/2015 102S	74S	11.184678 OH	AESO I	AltaLink - 100 1064-1 1117-4 - F(Planned	Reliability Economics or congestion
2014 WECC-US AC	200-299 240 800-960	6/2015 102S	74S	11.184678 OH	AESO I	AltaLink - 100 1065-1 1117-4 - F Planned	Reliability Economics or congestion
2014 WECC-US AC	200-299 240 481-599	5/2015 63S	2875	22.2264407 OH	AESO I	AltaLink - 100 1082-1 813-34 - R Planned	Economics or Reliability
2014 WECC-US AC 2014 WECC-US AC	200-299 240 466-599 200-299 240 547-811	9/2015 63S 4/2015 324S	288S 2075S	59.3285031 OH 3.106855 OH	AESO I AESO I	AltaLink - 100 1083-1 813-32 - R Planned AltaLink - 100 1087L-1 737-14 - I Planned	Economics or Reliability Economic or c Reliability
2014 WECC-US AC	200-299 240 931-1210	4/2015 324S	2075S	3.11306871 OH	AESO I	AltaLink - 100 1087L-1 737-14 - Franned AltaLink - 100 1088L-1 737-13 - I Planned	Economic or c Reliability
2014 WECC-US AC	200-299 240 600-720	5/2015 SS-65	237S	27.4645982 OH	AESO I	AltaLink - 100 10061-1 737-13 - 17 Ianned	Reliability Economics or congestion
2014 WECC-US AC	200-299 240 600-720	5/2015 SS-65	237S	27.4645982 OH	AESO I	AltaLink - 100 1107-1 1117-1 - F(Planned	Reliability Economics or congestion
2014 WECC-US AC	200-299 240 489-600	11/2015 SS-65	SS-25	4.5360083 OH	AESO I	AltaLink - 100 1109-1 1117-2 - F. Planned	Reliability Economics or congestion
2014 WECC-US AC	200-299 240 550-610	7/2017 289S	89S	9.3827021 OH	AESO I	AltaLink - 100 1112-1 850-2 - So Planned	Reliability Economics or congestion
2014 WECC-US AC	200-299 240 977-1212	6/2015 170S	167S	13.670162 OH	AESO I	AltaLink - 100 1116L-10A 1101-3 Planned	Reliability Economics or congestion
2014 WECC-US AC	200-299 240 977-1212	4/2016 8985	167\$	34.796776 OH	AESO I	AltaLink - 100 1117L-10A 1101-5 Planned	Reliability Economics or congestion
2014 WECC-US AC	200-299 240 989-1225	7/2017 367S	PETROLIA	13.670162 OH	AESO I	AltaLink - 100 1139-1,1139-2 85 Planned	Reliability Economics or congestion
2014 WECC-US AC 2014 WECC-US AC	200-299 240 550-610 400-599 500 1222-321	7/2017 289S 10/2018 491S	89S 1201L	9.3827021 OH 3.728226 OH	AESO I AESO I	AltaLink - 100 1140-1 850-2 - So Planned AltaLink - 100 1201-2b 787-7 - S Planned	Reliability Economics or congestion Variable/Rene Economics or congestion
2014 WECC-US AC	400-599 500 1222-321	10/2018 4913 10/2018 520S	4918	127.729023 OH	AESO I	AltaLink - 100 1201-25 787-7 - 3 Flanned AltaLink - 100 1235-1,1235-2 78 Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	400-599 500 4030-403	4/2015 12S	2029S	1.9647751 OH	AESO I	ATCO Electric 12L70-1,12L70-2 - 7 Planned	Economic or c Reliability
2014 WECC-US AC	400-599 500 4027-402	4/2015 12S	2029S	0.98238755 OH	AESO I	ATCO Electric 12L85-1 737-15 - I Planned	Economic or c Reliability
2014 WECC-US AC	121-150 138 117-120	4/2016 255S	504S	38.7549093 OH	AESO I	AltaLink - 100 161L-10A 787-11 · Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	121-150 138 85-99	7/2017 197S	289S	41.010486 OH	AESO I	AltaLink - 100 174-1a 850-3 - So Planned	Reliability Economics or congestion
2014 WECC-US AC	121-150 138 287-287	9/2017 SS-54	SS-41	6.49332695 OH	AESO I	Enmax - 100% 41.84L-1 1354-1 - Planned	Economics or Reliability
2014 WECC-US AC	121-150 138 122-161	4/2015 639S	80L	23.6866625 OH	AESO I	AltaLink - 100 418 -01,418 -02,418 - Planned	Economics or Reliability
2014 WECC-US AC 2014 WECC-US AC	121-150 138 122-157 121-150 138 252-314	4/2015 281S 5/2015 214S	80L 287S	14.5835774 OH 1.864113 OH	AESO I AESO I	AltaLink - 100 418-04 813-2 - Re Planned AltaLink - 100 419-1 813-34 - Re Planned	Economics or Reliability Economics or Reliability
2014 WECC-US AC	121-150 138 252-314 121-150 138 252-314	5/2015 214S	287S	1.864113 OH	AESO I	AltaLink - 100419-1 813-34 - Re Planned	Economics or Reliability
2014 WECC-US AC	121-150 138 252-314	9/2015 331S	288S	1.864113 OH	AESO I	AltaLink - 100421-1 813-32 - Re Planned	Economics or Reliability
2014 WECC-US AC	121-150 138 252-314	9/2015 331S	288S	1.864113 OH	AESO I	AltaLink - 100 422-1 813-32 - Re Planned	Economics or Reliability
2014 WECC-US AC	121-150 138 252-314	10/2016 212S	332S	8.55627867 OH	AESO I	AltaLink - 100 423-1 813-3 - Red Planned	Economics or Reliability
2014 WECC-US AC	121-150 138 174-237	9/2015 194S	63S	3.05714532 OH	AESO I	AltaLink - 100 426-1,426-2,426-3,4 Planned	Economics or Reliability
2014 WECC-US AC	121-150 138 252-314	9/2016 63\$	247S	5.92787934 OH	AESO I	AltaLink - 100 427-1,427-2 813-1 Planned	Economics or Reliability
2014 WECC-US AC 2014 WECC-US AC	121-150 138 120-148 121-150 138 260-286	6/2015 818S 5/2015 65S	167S 237S	0.7456452 OH 11.1908917 OH	AESO I AESO I	AltaLink - 100 428L-10A 1101-3 · Planned AltaLink - 100 434-1 1117-1 - Fo Planned	Reliability Economics or congestion
2014 WECC-US AC	121-150 138 260-286 121-150 138 354-466	7/2017 305S	367S	8.077823 OH	AESO I	AltaLink - 100434-1 1117-1 - For Planned	Reliability Economics or congestion Reliability Economics or congestion
2014 WECC-US AC	121-150 138 120-149	7/2017 434S	367S	8.1399601 OH	AESO I	AltaLink - 100 452-1 850-1 - Sou Planned	Reliability Economics or congestion
2014 WECC-US AC	121-150 138 354-466	7/2017 305S	367S	8.077823 OH	AESO I	AltaLink - 100 453-1 850-1 - Sou Planned	Reliability Economics or congestion
2014 WECC-US AC	121-150 138 354-466	7/2017 149S	289S	1.242742 OH	AESO I	AltaLink - 100 454-1 850-2 - Sou Planned	Reliability Economics or congestion
2014 WECC-US AC	121-150 138 354-466	7/2017 149S	289S	1.242742 OH	AESO I	AltaLink - 100 455-1 850-2 - Sou Planned	Reliability Economics or congestion
2014 WECC-US AC	121-150 138 120-148	6/2015 651S	167S	1.864113 OH	AESO I	AltaLink - 100 457L-10A 1101-3 · Planned	Reliability Economics or congestion
2014 WECC-US AC	121-150 138 267-267	9/2017 SS-54	SS-65	6.5243955 OH	AESO I	Enmax - 100% 54.81L-1 1354-1 - Planned	Economics or Reliability
2014 WECC-US AC 2014 WECC-US AC	121-150 138 122-165	9/2015 138S	603L 608AL	2.6718953 OH 6.74187535 OH	AESO I AESO I	AltaLink - 100 603-2a 787-1 - So Planned AltaLink - 100 608L-1 787-1 - So Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	121-150 138 119-161 121-150 138 260-286	9/2015 138S 11/2015 678S	237S	19.5110494 OH	AESO I	AltaLink - 100 606L-1 787-1 - 301 Planned	Variable/Rene Economics or congestion Reliability Economics or congestion
2014 WECC-US AC	121-150 138 81-165	4/2016 649S	244\$	0.7456452 OH	AESO I	AltaLink - 100 674-10A,674-10B Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	121-150 138 365-500	4/2016 523S	244S	31.06855 OH	AESO I	AltaLink - 100 676-10A 787-6 - S Planned	Variable/Rene Economics or congestion
2014 WECC-US DC	400-599 500 N/A	8/2015 2029S	28S	N/A OH	AESO I	ATCO Electric 737 Energization 16 Planned	Economic or c Reliability
2014 WECC-US DC	400-599 500 N/A	6/2015 510S	511S	N/A OH	AESO I	AltaLink - 100 737 WATL 500 kV Li Planned	Economic or c Reliability
2014 WECC-US AC	121-150 138 98-145	7/2017 38\$	522S	28.8005459 OH	AESO I	AltaLink - 100 780-1a 850-3 - So Planned	Reliability Economics or congestion
2014 WECC-US AC	121-150 138 157-	10/2020 963S	763S	24.85484 OH	AESO I	ATCO Floating 7/1/20 1 211/3-4 - I Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	121-150 138 109-150 121-150 138 109-150	4/2016 7LA139	819S 707S	24.233469 OH	AESO I	ATCO Electric 7L139-1 811-4 - CcPlanned	Variable/Rene Economics or congestion
2014 WECC-US AC 2014 WECC-US AC	121-150 138 109-150 121-150 138 157-218	4/2016 7LA139 10/2020 774S	707S 932S	28.583066 OH 0.9941936 OH	AESO I AESO I	ATCO Electric 7L139-2 811-4 - Cı Planned ATCO Electric 7L141-1 1113-5 - I Planned	Variable/Ren∈Economics or congestion Variable/Ren∈Economics or congestion
2014 WECC-US AC	121-150 138 137-218 121-150 138 109-140	8/2015 875S	2011\$	0.0621371 OH	AESO I	ATCO Electric 7L141-1 1113-3 - Frialmed ATCO Electric 7L170-1 1267-1 - , Planned	Reliability Economics or congestion
2014 WECC-US AC	121-150 138 95-130	4/2016 700S	707S	43.49597 OH	AESO I	ATCO Electric 7L70-1a 811-4 - C Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	121-150 138 89-119	11/2015 678S	525S	26.9799288 OH	AESO I	AltaLink - 100 850-1a 1117-5 - Fc Planned	Reliability Economics or congestion

2014 WECC-US AC	121-150	138 85-90	4/2016 253S	179S	32.3056997 OH		AESO	I	AltaLink - 100 876L-10A 787-11 · Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	121-150	138 96-150	9/2015 429S	288S	9.2584279 OH		AESO	1	AltaLink - 100 883-1a 813-32 - R Planned	Economics or Reliability
2014 WECC-US AC	121-150	138 67-165	4/2016 895S	244S	39.5502642 OH		AESO	1	AltaLink - 100 892-10A,892-10B Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	200-299	240 466-599	7/2017 289S	288S	22.5557673 OH		AESO	1	AltaLink - 100 910-1a 850-2 - So Planned	Reliability Economics or congestion
2014 WECC-US AC	200-299	240 341-488	9/2015 59S	237S	15.5094202 OH		AESO	1	AltaLink - 100 911-5d 787-1 - So Planned	Variable/Ren∈Economics or congestion
2014 WECC-US AC	200-299	240 481-599	7/2017 289S	86S	19.8341623 OH		AESO	1	AltaLink - 100 914-1a 850-2 - So Planned	Reliability Economics or congestion
2014 WECC-US AC	200-299	240 491-599	4/2015 356S	2075S	33.0382961 OH		AESO	i	AltaLink - 100 923L-1 737-14 - N Planned	Economic or c Reliability
2014 WECC-US AC	200-299	240 499-499	9/2015 370\$	138S	33.7963687 OH		AESO	i	AltaLink - 100 967L-1 787-1 - Soi Planned	Variable/Rene Economics or congestion
			·							
2014 WECC-US AC	200-299	240 874-1103	1/2020 2515	251S	60.1859951 OH		AESO		AltaLink - 100 984-1 787-10 - So Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	200-299	240 874-1103	1/2020 251S	251S	60.1859951 OH		AESO	ı	AltaLink - 100 987-1 787-10 - So Planned	Variable/Ren∈Economics or congestion
2014 WECC-US AC	200-299	240 874-1103	1/2020 120S	251 S	31.9943928 OH		AESO	I	AltaLink - 100 991-1 787-8 - Sou Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	200-299	240 977-1334	10/2018 205S	491S	24.85484 OH		AESO	1	AltaLink - 100 992-1 787-7 - Sou ⁻ Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	200-299	240 549-759	8/2015 888S	2011S	58.9743216 OH		AESO	1	ATCO Electric 9L07-1 1267-1 - A Planned	Reliability Economics or congestion
2014 WECC-US AC	200-299	240 550-842	10/2018 951S	2011S	34.4923042 OH		AESO	1	ATCO Electric 9L07-2 1186-1 - Tl Planned	Reliability Economics or congestion
2014 WECC-US AC	200-299	240 753-831	9/2016 888S	2079S	45.4843572 OH		AESO	1	ATCO Electric 9L08-1b 1180-2 - Planned	Economic or c Reliability
2014 WECC-US AC	200-299	240 416-632	10/2018 8885	951S	24.4820174 OH		AESO	i	ATCO Electric 9L30-1a,9L30-2a 1Planned	Reliability Economics or congestion
2014 WECC-US AC	200-299	240 753-1049		963S	20.7537914 OH		AESO		ATCO Electric 9L30-1a,5L50-2a - Frianned	,
			9/2020 946S							Variable/Rene Economics or congestion
2014 WECC-US AC	200-299	240 753-1049	12/2020 972S	755S	8.077823 OH		AESO		ATCO Electric 9L49-1 1113-1 - H Planned	Variable/Rene Economics or congestion
2014 WECC-US AC	200-299	240 1309-144	3/2015 939S	960S	47.224196 OH		AESO	ı	ATCO Electric 9L57-3a 1180-1 - I Planned	Economic or c Reliability
2014 WECC-US AC	200-299	240 550-842	10/2018 848S	951S	18.7654042 OH		AESO	I	Unspecified E 9L58-1a 1186-1 - Planned	Reliability Economics or congestion
2014 WECC-US AC	200-299	240 753-1049	10/2020 959S	946S	56.7498134 OH		AESO	1	ATCO Electric 9L65-1 1113-3 - H Planned	Variable/Ren∈Economics or congestion
2014 WECC-US AC	200-299	240 550-842	10/2018 888S	951S	24.4820174 OH		AESO	1	ATCO Electric 9L68-1 1186-1 - Tl Planned	Reliability Economics or congestion
2014 WECC-US AC	200-299	240 416-527	3/2015 888S	960S	24.233469 OH		AESO	1	ATCO Electric 9L74-1 1180-1 - N Planned	Economic or c Reliability
2014 WECC-US AC	200-299	240 498-648	6/2015 898S	825S	44.6765749 OH		AESO	i	ATCO Electric 9L81-1 1101-4 - Cl Planned	Reliability Economics or congestion
2014 WECC-US AC	200-299	240 550-842	8/2015 885S	2011S	46.2859258 OH		AESO	i	ATCO Electric 9L89-1 1267-1 - Al Planned	,
			•							,
2014 WECC-US AC	200-299	240 754-1147	3/2015 960S	2079\$	49.70968 OH		AESO		ATCO Electric 9L95-1 1180-1 - N Planned	Economic or c Reliability
2014 WECC-US AC	400-599	500 3500-350	3/2019 GENESEE	951S	304.47179 OH		AESO	ı	Unspecified E L1244-1 838-2 - Fc Planned	Economic or c Reliability
2014 WECC-US AC	200-299	240 1680-168	5/2019 939S	951S	62.1371 OH		AESO	I	Unspecified E L998-1 838-1 - Foi Planned	Economic or c Reliability
2014 WECC-US AC	400-599 4	.00-599 3000 Amp	1/2015 Nicola BC	Meridian BC	153	NA	всн	S	100 400-599 kV Line (5L; Planned	Economics or Other
2014 WECC-US AC	200-299 2	.00-299 2386 Amr	6/2015 Sundance, BC	Bear Mountain, BC	60.23	NA	всн	S	100 Dawson Creek / Che Planned	Economics or Other
2014 WECC-US AC		.00-599	10/2018 Nichola, BC	Vassuax Lake, BC	0	NA	всн	S	100 5L98 (50%) Series Cc Planned	Economics or Other
2014 WECC-US AC	200-299	287	3/2015 Kitimat, BC	Kemano, BC	0	NA	RTA	ı	100 Kitmat Kemano (359 Planned	Economics or Other
				·	0			·	•	
2014 WECC-US AC		.00-599	12/2023 Site C, BC	Peace Canyon	0	NA	ВСН	5	100 5L5 and 5L6 (Site C†Planned	Economics or Other
2014 WECC-US AC		00-299	6/2016 Ingledow, BC	Mclellan (via Fleetwood)	16	NA	ВСН	S	100 Fraser Valley West F Planned	Economics or Other
2014 WECC-US AC		.00-299	10/2021 Horne Payne	West End (via Murrin, Cathe	10.4	NA	всн	S	100 West End Substatio Planned	Economics or Other
2014 WECC-US AC	400-599 4	00-599	10/2018 Williston, BC	Skeena, BC	0	NA	ВСН	S	100 Prince George Terra Planned	Economics or Other
2014 WECC-US AC	400-599 4	.00-599	4/2023 Kenedy, BC	Mclise, BC	0	NA	ВСН	S	100 Series Compensatio Planned	Economics or Other
2014 WECC-US AC	200-299 2	.00-299	6/2019 Skeena, BC	Kitimat, BC	39	NA	всн	S	100 Terrace - Kitimat Tra Planned	Economics or Reliability
2014 WECC-US AC		00-299	8/2015 George Tripp, BC	Horsy, BC	2.63	NA	ВСН	S	100 Vancouver Island Ca Planned	Economics or Reliability
2014 WECC-US AC		00-299	4/2019 Bob Quinn, BC	Bob Quinn, BC	0	NA	ВСН	S	100 Bob Quinn SVC Add Planned	Economics or Other
					0			5		
2014 WECC-US AC		00-299	4/2019 Skeena, BC	Treat Creek, BC	50	NA	BCH	3	100 Series Compensatio Planned	Economics or Other
2014 WECC-US AC		00-299	3/2019 GMS, BC	Sundance, BC	53	NA	ВСН	5	100 Peace Region Electri Planned	Economics or Other
2014 WECC-US AC	400-599 4	.00-599	4/2023 Williston, BC	Williston, BC	0	NA	ВСН	S	100 Williston 500 kV Shι Planned	Economics or Other
2014 WECC-US AC	200-299 2	00-299	10/2019 Coquitlam,BC	Vancouver, BC	18.7	NA	ВСН	S	100 Metro North Area R Planned	Economics or Reliability
2014 WECC-US AC	121-150 1	.21-150	10/2015 Merritt,BC	Highland, BC	21.75	NA	всн	S	100 Merritt Area Transm Planned	Economics or Other
2014 WECC-US DC	400-599 4	.00-599 3000	6/2015 GENESEE AB	102S	225	n/a	AESO	1	AltaLink - 100 737 - Edmonton to (Planned	Economics or Reliability
2014 WECC-US DC	400-599 4	.00-599 3000	12/2014 125	28S	310	n/a	AESO	1	ATCO Electric 737 - Edmonton to (Planned	Economics or Reliability
2014 WECC-US AC		.00-599 3400-599	4/2017 GENESEE AB	939S	304	n/a	AESO	i	TBD 838 - Fort McMurra Planned	Economics or Reliability
2014 WECC-US AC		.00-599 3400-599	4/2017 939S	951S	304	n/a	AESO	· .	TBD 838 - Fort McMurra Planned	Economics or Reliability
			•							•
2014 WECC-US AC	200-299	240 754	6/2014 12S	135	17	n/a	AESO		ATCO Electric 629 - Heartland Trai Planned	Reliability Economics or Congestion
2014 WECC-US AC	200-299	240 1275	7/2017 491S	312S	24	n/a	AESO	ı	AltaLink - 100 787 - South Alberta Planned	Variable/Ren∈Economics or Congestion
2014 WECC-US AC	200-299	240 1275	6/2014 312S	103S	24	n/a	AESO	I	AltaLink - 100 1343 - Fidler Substa Planned	Variable/Rene Economics or Congestion
2014 WECC-US AC	200-299	240 1103	3/2018 103S	Etzicom Coulee	22	n/a	AESO	1	AltaLink - 100 787 - South Alberta Planned	Variable/Ren∈ Economics or Congestion
2014 WECC-US AC	200-299	240 1103	5/2017 Journault	120S	32	n/a	AESO	1	AltaLink - 100 787 - South Alberta Planned	Variable/Rene Economics or Congestion
2014 WECC-US AC	200-299	240 1103	2/2015 Etzicom Coulee	Whitla	60	n/a	AESO	1	AltaLink - 100 787 - South Alberta Planned	Variable/Rene Economics or Congestion
2014 WECC-US AC	200-299	240 1275	5/2017 Whitla	244S	55	n/a	AESO	1	AltaLink - 100 787 - South Alberta Planned	Variable/Rene Economics or Congestion
2014 WECC-US AC	200-299	240 tbd	7/2015 59S	2375	150	n/a	AESO	i	AltaLink - 100 1116 -Foothills Area Planned	Variable/Rene Economics or Congestion
2014 WECC-US AC	200-299	240 tbd	•	SS-65	29				AltaLink - 100 1117 - Foothills Area Planned	_
			5/2015 237S			n/a	AESO	ı		Reliability Economics or Congestion
2014 WECC-US AC	400-599 4	•	1/2015 Nicola BC	Meridian BC	153	NA	ВСН	5	100 400-599 kV Line (5L) Planned	Economics or Other
2014 WECC-US AC	200-299	287 3004 Amr	5/2014 Skeena, BC	Bob Quinn, BC	340	NA	ВСН	S	100 Northwest Transmis Planned	Economics or Other
2014 WECC-US AC	200-299 2	.00-299 2386 Amr	4/2015 Sundance, BC	Bear Mountain, BC	60.23	NA	ВСН	S	100 Dawson Creek / Che Planned	Economics or Other
2014 WECC-US AC	400-599 4	00-599	10/2014 Mica, BC	Nicola, BC	0	NA	ВСН	S	100 5L71 and 5L72 (50% Planned	Economics or Other
2014 WECC-US AC	400-599 4	.00-599	10/2018 Nichola, BC	Vassuax Lake, BC	0	NA	BCH	S	100 5L98 (50%) Series CoPlanned	Economics or Other
2014 WECC-US AC	200-299	287	11/2014 Kitimat, BC	Kemano, BC	0	NA	RTA	I	100 Kitmat Kemano (359 Planned	Economics or Other
2014 WECC-US AC	400-599 4		4/2021 Site C, BC	Peace Canyon	0	NA	всн	S	100 5L5 and 5L6 (Site C1Planned	Economics or Other
2014 WECC-US AC	200-299 2		10/2014 Ingledow, BC	Mclellan (via Fleetwood)	16	NA	ВСН	S	100 Fraser Valley West F Planned	Economics or Other
2014 WECC-US AC	200-299 2		10/2014 Highedow, BC	West End (via Murrin, Cathe		NA	ВСН	S	100 West End Substation Planned	Economics or Other
				•				J		
2014 WECC-US AC	121-150 1	•	12/2014 Ellison	Sexsmith	3.3	NA	FBC	ı	100 Ellison to Sexsmith 7 Planned	Reliability Other
2014 WECC-US AC	400-599 4		6/2017 Williston, BC	Skeena, BC	0	NA	ВСН	S	100 Prince George Terra Planned	Economics or Other
2014 WECC-US AC	400-599 4		10/2022 Kenedy, BC	Mclise, BC	0	NA	ВСН	S	100 Series Compensatio Planned	Economics or Other
2014 WECC-US AC	200-299 2	.00-299	6/2014 Bob Quinn, BC	Tatogga, BC	57	NA	ВСН	S	100 Iskut Expansion proj Planned	Economics or Other
2014 WECC-US AC	200-299 2	00-299	6/2019 Skeena, BC	Kitimat, BC	39	NA	ВСН	S	100 Terrace - Kitimat Tra Planned	Economics or Reliability
2014 WECC-US AC	200-299 2	00-299	8/2015 George Tripp, BC	Horsy, BC	2.63	NA	ВСН	S	100 Vancouver Island Ca Planned	Economics or Reliability
2014 WECC-US AC		00-299	11/2015 Bob Quinn, BC	Bob Quinn, BC	0	NA	ВСН	S	100 Bob Quinn SVC Add Planned	Economics or Other
2014 WECC-US AC	200-299 2		6/2018 Skeena, BC	Treat Creek, BC	n	NA	ВСН	ς	100 Series Compensatio Planned	Economics or Other
2014 WECC-US AC	200-299 2		12/2018 GMS, BC	Sundance, BC	53	NA		S	100 Peace Region Electri Planned	Economics or Other
							BCH	s c	_	
2014 WECC-US AC	400-599 4	・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	4/2023 Williston, BC	Williston, BC	0	NA	BCH	3	100 Williston 500 kV Shι Planned	Economics or Other

2014 WECC-US AC	200-299 200-299	10/2018 Coquitlam,BC	Vancouver, BC	18.7	NA BCH	S	100 Metro North Area R Planned	Economics of	or Reliability
2014 WECC-US AC	525 525 4936 @ -!	5/2021 Castle Rock, WA	Troutdale, OR	70 OH	1738 BPA	F	100 Castle Rock-Troutda Planned		ne Economics or Congestion
2014 WECC-US AC	525 525 4936 @ -!	12/2015 Clyde, WA	Central Ferry, WA	38 OH	1738 BPA	F	100 Central Ferry-Lower Under Construct		
2014 WECC-US AC	115 115 TBD	11/2016 Caribu County, ID	Caribu County, ID	22 OH	1738 BPA	F	100 Hooper Springs-Low Planned	Reliability	Reliability
2014 WECC-US AC	525 525 4936 @ -!	11/2015 The Dalles, OR	Goldendale, WA	28 OH	1738 BPA	F	100 Big Eddy-Knight 500 Under Construct	tior Variable/Re	n∈Economics or Congestion
2014 WECC-US AC	100-120 100-120 100 @ 86	6/2015 Rocky Reach	Chelan	29 OH	3413 CHPD	M	1 Rocky Reach-Chelan Under Construct	tior Reliability	Other
2014 WECC-US AC	200-240 200-240 559 @ 86	2/2015 Rocky Reach	Columbia	21.4 OH	3413 CHPD	M	1 Rocky Reach-Colum Under Construct	•	Other
2014 WECC-US AC	200-299 200-299 555	3/2014 Douglas Switchyard	Rapids Switchyard	13 OH	5326 DOPD	M	100 Douglas-Rapids 200 Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299 200-299 555	6/2016 Rapids Switchyard	Columbia Substation	9 OH	5326 DOPD	M	100 Rapids-Columbia 20 Planned	Reliability	Economics or Congestion
2014 WECC-US AC	100-120 100-120 100	12/2016 Watson Draw Tap Switch	Gold Creek Substation	13.68 OH	5286 OKPD	M	100 So. Pateros-Twisp 1 Planned	Reliability	Economics
2014 WECC-US AC	100-120 100-120 100	12/2016 Gold Creek Substation	Twisp Switchyard	14.48 OH	5286 OKPD	M	100 No. Pateros-Twisp 1 Planned	Reliability	Economics
2014 WECC-US AC 2014 WECC-US AC	100-120 100-120 100 100-120 100-120 239	12/2019 Tonasket Switchyard	Aeneas Substation	16.05 OH 7 OH	5286 OKPD GCPD	M M	100 Tonasket/Aeneas 1C Conceptual 1 Rocky Ford - Dover - Planned	Reliability Reliability	Economics Reliability
2014 WECC-US AC	200-299 230 565	5/2017 Rocky Ford 6/2018 Walters Ferry, ID	Larson SW of Kuna, ID	13	9191 IPC	IVI I	100 Hemingway-Boardin Conceptual	Other	Reliability Other
2014 WECC-US AC	400-599 500 3000	6/2020 Walters Ferry, ID	Boardman, OR	300	9191 IPC 9191 IPC	' 	unknown at t Hemingway-Boardin Conceptual	Other	Other
2014 WECC-US AC	300-399 300-399 1386	6/2024 American Falls, ID	Pocatello, ID	32	9191 IPC	i	100 Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC	300-399 400-599 2079	6/2024 Shoshone, ID	Pocatello, ID	-84	9191 IPC	i	100 Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC	300-399 300-399 1386	6/2024 Shoshone, ID	Pocatello, ID	-32	9191 IPC	1	100 Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC	400-599 500 3000	6/2024 Hollister, ID	Walters Ferry, ID	161	9191 IPC	1	unknown at t Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC	400-599 400-599 3000	6/2024 Downey, ID	American Falls, ID	55	9191 IPC	1	unknown at t Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC	400-599 400-599 3000	6/2024 Shoshone, ID	American Falls, ID	84	9191 IPC	1	100 Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC	400-599 500 3000	6/2024 Hollister, ID	Shoshone, ID	34	9191 IPC	1	unknown at t Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC	400-599 500 3000	6/2024 Shoshone, ID	Walters Ferry, ID	126	9191 IPC	1	100 Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC	121-150 138 287	6/2018 King, ID	Wood River, ID	59	9191 IPC	1	100 King-Wood River Re Planned	Reliability	Other
2014 WECC-US AC	121-150 138 90	6/2018 King, ID	Wood River, ID	-59	9191 IPC	1	100 King-Wood River Re Planned	Reliability	Other
2014 WECC-US AC	121-150 138 200	6/2020 Wood River, ID	Ketchum, ID	10	9191 IPC	1	100 Wood River-Ketchur Planned	Reliability	Other
2014 WECC-US AC	200-299 230 559	6/2018 SW of Kuna, ID	NE of Kuna, ID	16	9191 IPC	1	100 Bowmont-Hubbard Planned	Other	Other
2014 WECC-US AC	400-599 400-599 From 220	1/2018 Broadwater or Colstrip	Garrison- BPA Existing Line Exist	_	13902 NWMT		30 400-599 kV Upgrade Planned	•	ne Economics or Congestion
2014 WECC-US AC	300-399 300-399 1163	6/2015 Sigurd, UT	Central,UT	165	14354 PACE	1	100 Sigurd-Red Butte 30 Planned	Reliability	Economics or Congestion
2014 WECC-US AC	400-599 400-599 3681.5	Carbon County, WY	Mona, UT	400	14354 PACE	1	100 Aeolus-Clover 400-5 Planned		or Variable/Renewable Integration
2014 WECC-US AC	300-399 300-399 1332 200-299 200-299 888	South Jordan, UT	SLC,UT	28	14354 PACE	1	100 Oquirrh-Terminal 3(Planned		or Reliability
2014 WECC-US AC 2014 WECC-US AC	200-299 200-299 888 400-599 400-599 3681.5	Windstar,WY Carbon County, WY	Carbon County, WY	76 154	14354 PACE 14354 PACE	1	100 Windstar-Aeolus 20 Planned 100 Aeolus-Anticline/Bri Planned		or Congestion or Congestion
2014 WECC-US AC	400-599 400-599 3681.5	Rock Springs, WY	Rock Springs, WY Downey, ID	203	14354 PACE	'	100 Aeolus-Alticilie/Bri Flamled 100 Anticline/Bridger-Pc Planned		or Congestion
2014 WECC-US AC	300-399 300-399 1163		un St. George, UtahBurricane, l	170	14354 PACE	i	100 Red Butte - St. Georg Planned		or Reliability
2014 WECC-US AC	200-299 200-299 888	Aeolus, WY	Dave Johnston substation, W	70	14354 PACE	·	100 DJ- Aeolus 200-299 Planned		or Congestion
2014 WECC-US AC	121-150 121-150 200	11/2017 Evanston, WY	Park City, UT	70	14354 PACE	i	100 Southwest Wyomin Under Construct		Economics or Congestion
2014 WECC-US AC	121-150 121-150 200	11/2017 Heber, UT	Midway, UT	10	14354 PACE	i	100 Jordanelle - Midway Planned	Reliability	Economics of Congestion
2014 WECC-US AC	200-299 200-299 400-599	11/2017 Wallula	McNary	29.04 OH	14354 PACW	I	100 Wallula to McNary 7 Planned	Economics of	or Reliability
2014 WECC-US AC	200-299 200-299 400-599	1/2018 Vantage	Pomona Heights	66.27 OH	14354 PACW	1	100 Vantage to Pomona Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299 200-299 400-599	5/2019 Grants Pass New Substation	on Grants Pass	17.5 OH	14354 PACW	1	100 Grants Pass New Su Planned	Reliability	-
2014 WECC-US AC	200-299 200-299 574	6/2018 Blue Lake	Gresham	6.1 OH	15248 PGN	1	PGE 100 % Blue Lake - Gresham Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299 200-299 574	6/2018 Blue Lake	Troudale	1.5 OH	15248 PGN	1	PGE 100 % Blue Lake - Troutdal Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299 200-299 574	6/2018 Blue Lake	Troudale	1.5 OH	15248 PGN	1	PGE 100 % Blue Lake - Troutdal Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299 200-299 574	6/2018 Horizon	St. Mary's/Trojan	4.4 OH	15248 PGN	I	PGE 100 % Horizon - St. Marys/ Planned	Reliability	Economics or Congestion
2014 WECC-US AC	100-120 100-120 168	6/2018 Harrison	Marquam	1.6 OH	15248 PGN	1	PGE 100 % Harrison - Marquam Planned	Reliability	Economics or Congestion
2014 WECC-US AC	100-120 100-120 219	6/2019 Orenco	Sunset	2.7 OH	15248 PGN		PGE 100 % Orenco - Sunset 10C Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299 200-299 733	10/2016 Sumner WA	Puyallup WA	8	15400-599 PSE	1	100 Pierce County Planned	Reliability	
2014 WECC-US AC	100-120 100-120 314	11/2016 Kirkland WA	Sammamish WA	5.2	15400-599 PSE	1	100 North King County Planned	Reliability	
2014 WECC-US AC 2014 WECC-US AC	100-120 100-120 314 100-120 100-120 314	11/2022 Federal Way WA 11/2022 Berrydale WA	Puyallup WA Enumclaw WA	6.3 18	15400-599 PSE 15400-599 PSE	1	100 South King County Planned 100 South King County Planned	Reliability Reliability	
2014 WECC-US AC	100-120 100-120 314	11/2020 Puyallup WA	Lacey WA	15	15400-599 PSE	' '	100 Pierce and Thurston Planned	Reliability	
2014 WECC-US AC	100-120 100-120 TBD	11/2018 Lacey WA	Yelm WA	15	15400-599 PSE	, I	100 Thurston County Planned	Reliability	
2014 WECC-US AC	100-120 100-120 TBD	11/2022 Ferndale WA	Custer WA	8	15400-599 PSE	i	100 Whatcom County Planned	Reliability	
2014 WECC-US AC	100-120 100-120 314	11/2024 Sumner WA	Auburn WA	2.5	15400-599 PSE	1	100 South King County Planned	Reliability	
2014 WECC-US AC	100-120 100-120 314	11/2022 Sumner WA	Auburn WA	2.3	15400-599 PSE	1	100 South King County Planned	Reliability	
2014 WECC-US AC	100-120 100-120 314	11/2023 Berrydale WA	Snoqualmie WA	10	15400-599 PSE	1	100 King County Planned	Reliability	
2014 WECC-US AC	100-120 100-120 314	11/2022 Sumas WA	Everson WA	10	15400-599 PSE	1	100 Whatcom County Planned	Reliability	
2014 WECC-US AC	100-120 100-120 314	11/2025 Renton WA	Bellevue WA	7	15400-599 PSE	1	100 King County Planned	Reliability	
2014 WECC-US AC	100-120 200-299 TBD	11/2018 Manchester WA	Poulsbo WA	15	15400-599 PSE	1	100 Kitsap County Planned	Reliability	
2014 WECC-US AC	200-299 200-299 TBD	11/2018 Sammamish WA	Renton WA	16	15400-599 PSE	1	100 King County Planned	Reliability	
2014 WECC-US AC	100-120 100-120 TBD	11/2023 Kenmore WA	Kirkland WA	4	15400-599 PSE	I	100 King County Planned	Reliability	
2014 WECC-US AC	200-299 200-299 1042	10/2014 Lacey WA	Lacey WA	10	15400-599 PSE	-	100 Thurston County Planned	Reliability	
2014 WECC-US AC	400-599 400-599 4936 @ -!	5/2021 Castle Rock, WA	Troutdale, OR	70 OH	1738 BPA	F	100 Castle Rock-Troutda Planned		ne Economics or Congestion
2014 WECC-US AC	400-599 400-599 4936 @ -!	12/2015 Clyde, WA	Central Ferry, WA	38 OH	1738 BPA	r	100 Lower Monumental Planned		ne Economics or Congestion
2014 WECC-US AC 2014 WECC-US AC	121-150 138 TBD 400-599 400-599 4936 @ -!	11/2016 Caribu County, ID 11/2015 The Dalles, OR	Caribu County, ID Goldendale, WA	22 OH 28 OH	1738 BPA 1738 BPA	F F	100 Hooper Springs-Low Planned 100 Big Eddy-Knight 500 Planned	Reliability Variable/Re	Reliability ne Economics or Congestion
2014 WECC-US AC	100-120 100-120 TBD	12/2021 Rocky Reach	Chelan #1	28 OH 29 OH	3413 CHPD	M	1 Rocky Reach-Chelan Conceptual	Reliability	Other
2014 WECC-US AC	200-299 200-299 555	3/2014 Douglas Switchyard	Rapids Switchyard	13 OH	5326 DOPD	M	100 Douglas-Rapids 200 Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299 200-299 555	6/2016 Rapids Switchyard	Columbia Substation	9 OH	5326 DOPD	M	100 Bouglas-Napids 200 Flanned	Reliability	Economics or Congestion
2014 WECC-US AC	100-120 100-120 100	12/2016 Watson Draw Tap Switch	Gold Creek Substation	13.68 OH	5286 OKPD	M	100 So. Pateros-Twisp 1(Planned	Reliability	Economics
2014 WECC-US AC	100-120 100-120 100	12/2016 Gold Creek Substation	Twisp Switchyard	14.48 OH	5286 OKPD	М	100 No. Pateros-Twisp 1 Planned	Reliability	Economics
2014 WECC-US AC	100-120 100-120 100	12/2019 Tonasket Switchyard	Aeneas Substation	16.05 OH	5286 OKPD	M	100 Tonasket/Aeneas 10 Conceptual	Reliability	Economics
2014 WECC-US AC	100-120 100-120 239	5/2017 Rocky Ford	Larson	7 OH	GCPD	M	1 Rocky Ford - Dover - Planned	Reliability	Reliability
2014 WECC-US AC	200-299 200-299 565	6/2018 Walters Ferry, ID	Bowmont, ID	13	9191 IPC	1	100 Hemingway-Boardr Conceptual	Other	Other
2014 WECC-US AC	400-599 400-599 3000	6/2020 Walters Ferry, ID	Boardman, OR	300	9191 IPC	I	unknown at t Hemingway-Boardr Conceptual	Other	Other
2014 WECC-US AC	300-399 300-399 1386	6/2024 American Falls, ID	Pocatello, ID	32	9191 IPC	I	100 Gateway West Tran Conceptual	Other	Other

2044.14/500.146	200 200	400 500	2070	6/2024 61		0.4	0404 100		100.0	0.1	0.1
2014 WECC-US AC		400-599	2079	6/2024 Shoshone, ID	Pocatello, ID	-84	9191 IPC	1	100 Gateway West Tran: Conceptual	Other	Other
2014 WECC-US AC	300-399		1386	6/2024 Shoshone, ID	Pocatello, ID	-32	9191 IPC	l	100 Gateway West Tran: Conceptual	Other	Other
2014 WECC-US AC		400-599	3000	6/2019 Hollister, ID	Walters Ferry, ID	161	9191 IPC	I .	unknown at t Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC		400-599	3000	6/2019 Downey, ID	American Falls, ID	55	9191 IPC	l	unknown at t Gateway West Tran: Conceptual	Other	Other
2014 WECC-US AC	400-599	400-599	3000	6/2019 Shoshone, ID	American Falls, ID	84	9191 IPC	I	100 Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC	400-599	400-599	3000	6/2019 Hollister, ID	Shoshone, ID	34	9191 IPC		unknown at t Gateway West Tran: Conceptual	Other	Other
2014 WECC-US AC	400-599	400-599	3000	6/2021 Shoshone, ID	Walters Ferry, ID	126	9191 IPC		100 Gateway West Tran: Conceptual	Other	Other
2014 WECC-US AC	121-150		138 287	6/2014 Bowmont, ID	Nampa. ID	9	9191 IPC	1	100 Bowmont-Happy Va Planned	Other	Other
2014 WECC-US AC	121-150		138 287	6/2018 King, ID	Wood River, ID	59	9191 IPC	1	100 King-Wood River Re Planned	Reliability	Other
2014 WECC-US AC	121-150		138 90	6/2018 King, ID	Wood River, ID	-59	9191 IPC	1	100 King-Wood River Re Planned	Reliability	Other
2014 WECC-US AC	121-150		138 200	6/2020 Wood River, ID	Ketchum, ID	10	9191 IPC	1	100 Wood River-Ketchur Planned	Reliability	Other
2014 WECC-US AC	400-599	400-599	From 220	1/2018 Broadwater or Colstrip	Garrison- BPA Existing Line	Existing Circuit	13902 NWMT	I	30 400-599 kV Upgrad∈Planned	Variable/Rei	ne Economics or Congestion
2014 WECC-US AC	200-299	200-299	From 337	7/2014 Mill Creek, MT	AMPS Substation, ID	Existing Circuit	13902 NWMT	I	100 Path 18 46 MW Upg Planned	Economics of	or None
2014 WECC-US AC		300-399	1163	6/2015 Sigurd, UT	Central,UT	165	14354 PACE	ı	100 Sigurd-Red Butte 30 Planned	Reliability	Economics or Congestion
2014 WECC-US AC		400-599	3681.5	Carbon County, WY	Mona, UT	400	14354 PACE	l	100 Aeolus-Clover 400-5 Planned	•	or Variable/Renewable Integration
2014 WECC-US AC			1332	South Jordan, UT	SLC,UT	28	14354 PACE	i	100 Oquirrh-Terminal 30 Planned	Economics of	_
2014 WECC-US AC		200-299	888	Windstar, WY	Carbon County, WY	76	14354 PACE	i	100 Windstar-Aeolus 20 Planned		or Congestion
2014 WECC-US AC		400-599	3681.5	Carbon County, WY	Rock Springs, WY	154	14354 PACE	i	100 Aeolus-Anticline/Bri Planned		or Congestion
2014 WECC-US AC		400-599	3681.5	Rock Springs, WY	Downey, ID	203	14354 PACE	i	100 Anticline/Bridger-Pc Planned		or Congestion
2014 WECC-US AC		300-399	1163		• .	170	14354 PACE	1	100 Sigurd-Three Peaks- Planned		_
				Sigurd, UT	Hurricane, Utah			ı	_	Economics of	•
2014 WECC-US AC		200-299	888	Aeolus, WY	Dave Johnston substation, W		14354 PACE	1	100 DJ- Aeolus 200-299 Planned		or Congestion
2014 WECC-US AC	200-299		400-599	12/2017 Wallula	McNary	29.04 O		l	100 Wallula to McNary 2 Planned	Economics of	•
2014 WECC-US AC	200-299		400-599	12/2016 Vantage	Pomona Heights	66.27 O			100 Vantage to Pomona Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299		400-599	12/2019 Table Mtn	Grants Pass	17.5 0			100 Table Mtn to Grants Planned	Reliability	
2014 WECC-US AC	200-299		900	6/2018 Blue Lake	Gresham	6.1 O			PGE 100 % Blue Lake - Gresham Planned	Reliability	Economics or Congestion
2014 WECC-US AC		200-299	797	6/2018 Blue Lake	Troudale	1.5 O		I	PGE 100 % Blue Lake - Troutdal Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299	200-299	900	6/2018 Blue Lake	Troudale	1.5 O	0H 15248 PGN	1	PGE 100 % Blue Lake - Troutdal Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299	200-299	900	6/2018 Horizon	St. Mary's/Trojan	4.4 O	0H 15248 PGN	1	PGE 100 % Horizon - St. Mary's, Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299	200-299	733	10/2016 Sumner WA	Puyallup WA	8	15400-599 PSE	1	100 Pierce County Planned	Reliability	
2014 WECC-US AC	100-120	100-120	314	11/2016 Kirkland WA	Sammamish WA	5.2	15400-599 PSE	1	100 North King County Planned	Reliability	
2014 WECC-US AC	100-120	100-120	314	11/2022 Federal Way WA	Puyallup WA	6.3	15400-599 PSE	1	100 South King County Planned	Reliability	
2014 WECC-US AC	100-120	100-120	314	11/2022 Berrydale WA	Enumclaw WA	18	15400-599 PSE	I	100 South King County Planned	Reliability	
2014 WECC-US AC	100-120	100-120	314	11/2020 Puyallup WA	Lacey WA	15	15400-599 PSE	ı	100 Pierce and Thurston Planned	Reliability	
2014 WECC-US AC	100-120		TBD	11/2018 Lacey WA	Yelm WA	15	15400-599 PSE	ı	100 Thurston County Planned	Reliability	
2014 WECC-US AC			TBD	11/2022 Ferndale WA	Custer WA	8	15400-599 PSE	i	100 Whatcom County Planned	Reliability	
2014 WECC-US AC	100-120		314	11/2024 Sumner WA	Auburn WA	2.5	15400-599 PSE	i	100 South King County Planned	Reliability	
2014 WECC-US AC			314	11/2024 Sumner WA 11/2022 Sumner WA	Auburn WA	2.3	15400-599 PSE	' '	100 South King County Planned	Reliability	
				•				ı		•	
2014 WECC-US AC	100-120		314	11/2023 Berrydale WA	Snoqualmie WA	10	15400-599 PSE	1	100 King County Planned	Reliability	
2014 WECC-US AC	100-120		314	11/2022 Sumas WA	Everson WA	10	15400-599 PSE	1	100 Whatcom County Planned	Reliability	
2014 WECC-US AC	100-120		314	11/2025 Renton WA	Bellevue WA	/	15400-599 PSE		100 King County Planned	Reliability	
2014 WECC-US AC	100-120		TBD	11/2018 Manchester WA	Poulsbo WA	15	15400-599 PSE		100 Kitsap County Planned	Reliability	
2014 WECC-US AC	200-299		TBD	11/2018 Sammamish WA	Renton WA	16	15400-599 PSE		100 King County Planned	Reliability	
2014 WECC-US AC	100-120		TBD	11/2023 Kenmore WA	Kirkland WA	4	15400-599 PSE	I	100 King County Planned	Reliability	
2014 WECC-US AC	200-299	200-299	TBD	10/2014 Lacey WA	Lacey WA	10	15400-599 PSE	ı	100 Thurston County Planned	Reliability	
2014 WECC-US AC	100-120	100-120	150	1/2017 New Bowdoin Sub	Pump Station No. 9	48	CMEPC	С	100 Pump Station No.9 Planned	Reliability	Other-serve new load
2014 WECC-US AC	121-150			11/2016 Evanston, WY	Park City, UT	70	14354 PACE	1	100 Southwest Wyomin Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299	200-299	576	6/2016 Rifle	Parachute	18	15466 PSC	1	100 Rifle - Parachute Planned	Reliability	
2014 WECC-US AC	300-399	300-399	1200	6/2019 Pawnee	Daniels Park	124	15466 PSC	1	100 Pawnee - Daniels Pa Planned	Reliability	
2014 WECC-US AC	200-299	300-399	(2) 613	9/2023 Alamosa County, CO	Huerfano County, CO	93	30151 TSGT	C/I	40 / 60 San Luis Valley-Calu Conceptual	Reliability	Variable/Renewable Integration
2014 WECC-US AC	200-299	200-299		9/2017 Sidney, NB	Peetz, CO	5	30151 TSGT		100 Sidney-Peetz Logan Planned	Reliability	Variable/Renewable Integration
2014 WECC-US AC	300-399	300-399		12/2023 Lamar, CO area	Denver, CO area	400-599	30151 TSGT		50 Lamar - Front Rangε Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC	100-120	100-120	219	12/2015 La Junta BHCE 100-120 kV l	b La Junta TSGT 100-120 kV b	1 0	OH 20101 BHCE	ı	50 La Junta Interconne Planned	Reliability	•
2014 WECC-US AC	100-120		219	12/2015 Baculite Mesa 100-120 kV k		4 0		ı	100 Baculite Mesa-Overl Planned	Reliability	
2014 WECC-US AC	100-120		219	12/2015 Nyberg 115 kV	Boone 115 kV	11 0		ı	Boone-Nyberg 115 Planned	Reliability	Economics or Congestion
2014 WECC-US AC	100-120		219	12/2015 West Station 115 kV	Desert Cove 115 kV	4 0		i	West Station-Desert Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299		TBD	12/2023 Parachute	Rifle	31 0		1	100 Parachute - Cameo Conceptual	Reliability	
2014 WECC-US AC	200-299		576	6/2016 Arvada	Ridge	10 0		·	100 Cherokee - Ridge 23 Planned	Reliability	
2014 WECC-US AC			TBD	6/2019 Glenwood	Rifle	26 O			100 Glenwood - Rifle Up Conceptual	Reliability	
2014 WECC-US AC	200-299		יטטי	12/2017 Limon, CO	Calhan, CO	55 55	30151 TSGT	•	100 Gieriwood - Kirle Op Conceptual 100 Big Sandy - Calhan 2 Planned	Reliability	Other
2014 WECC-US AC				12/2017 Limon, CO 12/2014 Monfort	DCP Substation	2.5 O		1	Monfort - DCP 115 Planned	Reliability	Julei
				-				1		•	
2014 WECC-US AC	100-120			12/2019 Gilman	Avon	12 0		1/C	Gilman - Avon 115 Conceptual	Reliability	
2014 WECC-US AC	200-299			11/2018 Wheeler	Wolf Ranch	18.5 0		l	Wheeler - Middle Fc Planned	Reliability	
2014 WECC-US AC	100-120			12/2017 Poncha	Malta	52 0		I .	Poncha - Malta 115 Planned	Reliability	
2014 WECC-US AC	100-120			6/2015 Bruch	Brush	3 0		I	Brush - Brush SS 115 Planned	Reliability	_
2014 WECC-US AC			TBD	4/2016 Prairie Center	Bromley	4 0			United Power Sys In Under Construct	•	Economics or Congestion
2014 WECC-US AC	100-120		TBD	12/2018 Sterling Ranch	Sterling Ranch Tap	3 0			Sterling Ranch Tap 1 Planned	Reliability	
2014 WECC-US AC			239	8/2016 Grandview 115kV	Compark 115kV	1.5 0		С	100 Grandview-Comparl Planned	Reliability	
2014 WECC-US AC	200-299	200-299	558	1/2016 Teckla 200-299 kV bus	Osage 200-299 kV bus	60	ВНР	1	100 Teckla-Osage 200-2! Planned	Reliability	
2014 WECC-US AC	200-299	200-299	558	1/2016 Osage 200-299 kV bus	Lange 200-299 kV bus	75	ВНР	1	100 Osage-Lange 200-29 Planned	Reliability	
2014 WECC-US AC	100-120	100-120	217/189	6/2015 South Cheyenne Sub	North Range Sub	13 0	OH CLFP	1	South Cheyenne-No Under Construct	or Reliability	Economics or Congestion
2014 WECC-US AC	200-299	200-299	613	9/2015 Shiprock, NM	La Plata County, CO	40	30151 TSGT	С	100 Shiprock-Kiffen Cany Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299	200-299	613	12/2015 Burlington, CO	Wray, CO	56	30151 TSGT	С	100 Burlington-Wray 20 Planned	Economics c	or Reliability
2014 WECC-US AC	100-120		166	12/2016 Pagosa Springs, CO	To Be Determined	37	30151 TSGT	С	50 Pagosa-Ignacio 100- Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC			166	12/2016 Montrose, CO	Montrose County, CO	8	30151 TSGT	С	50 East Montrose-Sout Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC	200-299		_ 	9/2017 Sidney, NB	Peetz, CO	5	30151 TSGT		100 Sidney-Peetz Logan Planned	Reliability	Variable/Renewable Integration
2014 WECC-US AC	300-399			12/2018 Lamar, CO area	Denver, CO area	400-599	30151 TSGT		50 Lamar - Front Range Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC	200-299			12/2017 Limon, CO	Calhan, CO	55	30151 TSGT		100 Big Sandy - Calhan 2 Planned	Reliability	Other
2011 WEGG 03 AC	200 233	_00 233		11, 101, 1mon, 00	Jaaii, 50	55	30131 1301		200 Dig Sundy Cumun 21 milleu		5

2014 WECC-US AC															
			576	10/2015 Rifle	Parachute		18	15466 PS		l				Reliability	
2014 WECC-US AC			1200	6/2019 Pawnee	Daniels Park		124	15466 PS		[C / L		00 Pawnee - Daniels Pa P		Reliability	Variable /Danassable late and in
2014 WECC-US AC		300-399	(2) 1700	9/2023 Huerfano County, CO	Pueblo, CO		43	30151 TS		•	40 / 60	Calumet Walsonbur C	•	Reliability	Variable/Renewable Integration
2014 WECC-US AC	200-299	200-299	613	9/2015 Huerfano County, CO	Pueblo, CO		7	30151 TS		-	40 / 60	Calumet-Walsenbur C	•	Reliability	Variable/Renewable Integration
2014 WECC-US AC	200-299		(2) 613	9/2023 Alamosa County, CO	Huerfano County, CO		93	30151 TS		C/I	40 / 60	San Luis Valley-Calu C	•	Reliability	Variable/Renewable Integration
2014 WECC-US AC	200-299	200-299		9/2017 Sidney, NB	Peetz, CO	400 500	5	30151 TS				00 Sidney-Peetz Logan P		Reliability	Variable/Renewable Integration
2014 WECC-US AC 2014 WECC-US AC		300-399 100-120	219	12/2023 Lamar, CO area 12/2015 La Junta BHCE 100-120 kV b	·	400-599	1 OH	30151 TS 20101 BH		ı		50 Lamar - Front Rang∈C 50 La Junta Interconne P	•	Reliability Reliability	Economics or Congestion
2014 WECC-US AC	100-120			12/2015 Baculite Mesa 100-120 kV b			1 OH 4 OH	20101 BH		! !		00 Baculite Mesa-Over P		Reliability	
2014 WECC-US AC	100-120		219 219	·	Boone 115 kV		4 OH 11 OH	20101 ВП 20101 ВН		1	10			•	Economics or Congostion
2014 WECC-US AC			219	12/2015 Nyberg 115 kV	Desert Cove 115 kV		11 OH 4 OH	20101 BH		l I		Boone-Nyberg 115 kP West Station-Desert P		Reliability	Economics or Congestion
2014 WECC-US AC		200-299	TBD	12/2015 West Station 115 kV 12/2023 Parachute	Rifle		4 OH 31 OH	15466 PS		1	1/	00 Parachute - Cameo C		Reliability Reliability	Economics or Congestion
2014 WECC-US AC		200-299	576	6/2016 Arvada			10 OH	15466 PS		l I		00 Parachute - Cameo C 00 Cherokee - Ridge 23 P	•	Reliability	
	100-120		TBD	6/2019 Glenwood	Ridge Rifle		26 OH	15466 PS		l I		•		•	
2014 WECC-US AC 2014 WECC-US AC		200-299	ופט	12/2017 Limon, CO	Calhan, CO			30151 TS		I		00 Glenwood - Rifle Up P		Reliability Reliability	Other
2014 WECC-US AC	200-299		554	12/2017 Elifion, CO 12/2014 Teckla 200-299 kV bus	Osage 200-299 kV bus		55 60	30131 13				00 Big Sandy - Calhan 2P 00 Teckla-Osage 200-29P		Reliability	Other
2014 WECC-US AC		200-299	554 554	12/2015 Osage 200-299 kV bus	Lange 200-299 kV bus		75	ВН		! !		00 Teckia-Osage 200-25 P		Reliability	
2014 WECC-US AC			222	12/2013 Osage 200-299 kV bus 12/2014 Happy Jack Sub	North Range Sub		1	CL		' '		00 Osage-Lange 200-23 P 00 Happy Jack-North R: U		•	
2014 WECC-US AC	100-120		222	4/2014 Archer Sub	East Business Park Sub		1.25 OH	CL		! 		00 CPGS Interconnectic U		-	ntegration
2014 WECC-US AC	100-120	100-120	222	12/2014 South Cheyenne Sub	North Range Sub		13 OH	CL		I	10	South Cheyenne-No P		Reliability	Economics or Congestion
2014 WECC-US AC		200-299	613	9/2015 Shiprock, NM	La Plata County, CO		40	30151 TS		' C	1(00 Shiprock-Kiffen Cany P		Reliability	Economics or Congestion
2014 WECC-US AC		200-299	613	12/2015 Burlington, CO	Wray, CO		56	30151 TS		C		00 Burlington-Wray 20 P		Economics o	_
2014 WECC-US AC			166	12/2016 Pagosa Springs, CO	To Be Determined		37	30151 TS		C		50 Pagosa-Ignacio 100-C		Reliability	Economics or Congestion
2014 WECC-US AC			166	12/2016 Pagosa Springs, CO 12/2016 Montrose, CO	Montrose County, CO		8	30151 TS		C		50 East Montrose-Sout C	•	Reliability	Economics or Congestion
2014 WECC-US AC			100	9/2017 Sidney, NB	Peetz, CO		5	30151 TS		C		00 Sidney-Peetz Logan P	•	Reliability	Variable/Renewable Integration
2014 WECC-US AC		300-399		12/2018 Lamar, CO area		400-599	3	30151 TS				50 Lamar - Front Range C		Reliability	Economics or Congestion
2014 WECC-US AC	200-299	200-299		12/2016 Lamar, CO area 12/2017 Limon, CO	Calhan, CO	400-333	55	30151 TS				00 Big Sandy - Calhan 2P	•	Reliability	Other
2014 WECC-US AC	400-599		2595	6/2016 Maricopa Co. AZ	Wintersburg AZ		15 OH	803 AP		ı		CA Delaney - Palo Verd P		Economics o	
2014 WECC-US AC	200-299	200-299	2595	6/2016 Buckeye AZ	Surprise AZ		15 OH	803 AP		' I		00 Sun Valley – Trilby V P		Economics o	•
2014 WECC-US AC	400-599	400-599	1903	6/2015 Wintersburg AZ	Yuma AZ	100-120	OH	803 AF		' I		IIC Hassayampa - North P		Economics o	•
2014 WECC-US AC		200-299	1194	6/2015 Surprise AZ	Goodyear AZ	100-120	12 OH	803 AP		' I	•	00 TS2– Palm Valley 20 P		Reliability	Economics or Congestion
2014 WECC-US AC			1194	6/2015 Surprise AZ	Surprise AZ		12 OH	803 AP		' I		00 TS2— Faim Valley 20F 00 TS2— Trilby Wash 20 P		Reliability	Economics or Congestion
2014 WECC-US AC		400-599	2595	6/2018 Buckeye AZ	Peoria AZ		40 OH	803 AP		' I		CA Sun Valley – Morgar P		Economics o	•
2014 WECC-US AC	400-599	400-599	2595	6/2016 Maricopa Co. AZ	Buckeye AZ		28 OH	803 AP		' I	•	CA Delaney - Sun Valley P		Economics o	•
2014 WECC-US AC		200-299	2595	6/2018 Yuma AZ	Yuma AZ		13 OH	803 AP		' I	-	00 North Gila - Orcharc P		Economics o	•
2014 WECC-US AC			156.6	5/2016 Las Cruces, NM	Las Cruces, NM		32 OH	5701 EP		' I		00 Afton-Airport Jornac P		Other	Load Growth
2014 WECC-US AC	100-120		353		El Paso,Tx		2.5 OH	5701 EP		! 		00 Caliente-Montana 1 P		Reliability	Load Growth
2014 WECC-US AC	100-120		353	5/2010 El Paso, Tx	El Paso,Tx		6 OH	5701 EP		! 		00 Montana-Montwoo P		Reliability	Load Growth
2014 WECC-US AC	100-120		156.6	5/2020 El Paso, Tx	El Paso,Tx		18 OH	5701 EP		I		00 E1-E2 100-120 kV Li P		Reliability	Load Growth
2014 WECC-US AC	100-120		156.6	5/2020 El Paso, Tx	El Paso,Tx		4.3 OH	5701 EP		I		00 E2-Horizon 100-120 P		Reliability	Load Growth
2014 WECC-US AC		100-120	156.6	5/2020 El Paso, Tx	El Paso,Tx		12 OH	5701 EP		I		00 E2-Felipe 100-120 k'P		Reliability	Load Growth
2014 WLCC-03 AC	100-120	100-120	130.0	3/2021 LIT 830, TX	LI I 430, IX		12 011	3/01 [' 	10	•	latifica	Renability	
2014 WECC-US AC	200-200				Imperial Valley Substation		8 OH	Im	nerial Irriga	tion District		Imperial ValleV-Hivic D	lanned	Variable/Ren	ve Reliability
2014 WECC-US AC	200-299		1166	12/2017 Dixieland Substation	Imperial Valley Substation		8 OH		perial Irriga			Imperial Valley-Dixie P		Variable/Ren	•
2014 WECC-US AC	200-299		1166 1166	12/2017 Dixieland Substation 12/2018 Highline Substation	El Centro Switching Station		20 OH	lm	perial Irriga	ntion District		Highline to El Centro P	lanned	Variable/Ren	ne Reliability
2014 WECC-US AC 2014 WECC-US AC	200-299 200-299		1166 1166 1166	12/2017 Dixieland Substation 12/2018 Highline Substation 6/2019 Midway Substation	El Centro Switching Station Bannister Substations		20 OH 24 OH	lm Im	perial Irriga perial Irriga	ntion District ntion District		Highline to El Centrc P Midway-Hoober-Bai P	lanned lanned	Variable/Ren Variable/Ren	n∈Reliability n∈Variable/Renewable Integration
2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC	200-299 200-299 200-299		1166 1166 1166 1166	12/2017 Dixieland Substation 12/2018 Highline Substation 6/2019 Midway Substation 3/2016 IV Substation	El Centro Switching Station Bannister Substations Fern Station, Liebert Station		20 OH 24 OH 1.3 OH	lm Im Im	perial Irriga perial Irriga perial Irriga	ation District ation District ation District		Highline to El Centro P Midway-Hoober-Bai P Imperial Valley Subs U	llanned llanned Jnder Constructior	Variable/Ren Variable/Ren Variable/Ren	n∈Reliability n∈Variable/Renewable Integration n∈Reliability
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2014 WECC-US AC	200-299 200-299 200-299 200-299 200-299 200-299 200-299 400-599 400-599 400-599 400-599 200-299 200-299 100-120 100-120 100-120 100-120 100-120 100-120 200-299 300-399 200-299 300-399 200-299 400-599	200-299 200-299 200-299 400-599 400-599 400-599 400-599 400-599 200-299 200-299 100-120 100-120 100-120 300-399 100-120 100-120 100-120 200-299 300-399 200-299 300-399 200-299	1166 1166 1166 1166 1166 1166 1166 1200 1200	12/2017 Dixieland Substation 12/2018 Highline Substation 6/2019 Midway Substation 3/2016 IV Substation 12/2018 El Centro Switching Station 12/2019 North Gila Switching Station 6/2023 Las Vegas NV 6/2020 Las Vegas NV 1/2016 Boulder City NV 1/2020 Las Vegas NV 6/2015 Las Vegas NV 6/2015 Las Vegas NV 6/2016 Shiprock, NM 12/2016 Shiprock, NM 12/2016 Shiprock, NM 12/2015 Escalante, NM 9/2016 North 6/2018 Buckman 6/2021 BA 6/2015 San Juan 12/2015 near Las Cruces 12/2018 near Caballo, NM 12/2019 Gladstone, NM 12/2021 San Luis Valey Co 9/2015 Four Corners 6/2021 Gilbert AZ 6/2021 Queen Creek AZ 1/2016 Corona, NM	El Centro Switching Station Bannister Substations Fern Station, Liebert Station Fern Switching Station Highline Substation Las Vegas NV Lathrop WellsNV Lathrop WellsNV Las Vegas NV Las Vegas NV Mas Vegas NV Las Vegas NV Montano White Rock STA BA Las Cruces, NM Mimbres Substation Springer, NM near Carson, NM West Mesa Queen Creek AZ Florence AZ Coolidge AZ	N/A	20 OH 24 OH 1.3 OH 18 OH 75 OH 1 OH 1 OH 18 OH 4 OH 8 OH 28 OH 110 OH 75 OH 0 OH 0 OH 5 OH 70 42 2.3 12 12 12 3.4 57 61	Im Im Im Im Im 13407 NE 13407	perial Irrigate perial Irrigat	ation District ation	10 10 10 10 10 10 0% (WAPA 10 10 10 10 10 10 10 10 10 10 10 10 10	Highline to El Centro P Midway-Hoober-Bai P Imperial Valley Subs U El Centro Switching P North Gila to Highlir P 00 Sunrise 400-599 kV P 00 Harry Allen - Northw C 00 Mead - Amaragosa (C 00 Northwest - Amargo C 00 Harry Allen / Eldora (P 00 Pecos - Brooks 200-: P 1 San Juan Basin Ener U 1 Escalante-Gallup 10 U 1 Richmond Switching P 1 Los Alamos Service (C 1 Rio Puerco Phase 2 U 1 Picacho - Las Cruces U 1 Picacho - Las Cruces U 1 NENM Relaiblity Imp P 1 Valley Corridor Tran P 1 Rio Puerco Phase 3 U Ball to Pfister P Pfister to Abel P 1 SUNZIA SOUTHWES P	Planned	Variable/Ren Variable/Ren Variable/Ren Variable/Ren Variable/Ren Economics o Economics o Economics o Economics o Economics o Economics o Conomics o Variable/Ren Variable/Ren Variable/Ren Variable/Ren Variable/Ren Variable/Ren Economics o Reliability	ne Reliability ne Reliability ne Reliability ne Reliability ne Reliability ne Reliability ne Congestion ne Economics or Congestion newable Integration newable Integrati
2014 WECC-US AC	200-299 200-299 200-299 200-299 200-299 200-299 200-299 400-599 400-599 400-599 400-599 200-299 100-120 100-120 100-120 100-120 100-120 100-120 200-299 100-120 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299	200-299 200-299 200-299 400-599 400-599 400-599 400-599 400-599 200-299 200-299 100-120 100-120 100-120 100-120 100-120 100-120 200-299 300-399 200-299 300-399 200-299 400-599 200-299	1166 1166 1166 1166 1166 1166 1166 1200 1200	12/2017 Dixieland Substation 12/2018 Highline Substation 6/2019 Midway Substation 3/2016 IV Substation 12/2018 El Centro Switching Station 12/2019 North Gila Switching Station 6/2023 Las Vegas NV 6/2020 Las Vegas NV 6/2020 Las Vegas NV 1/2016 Boulder City NV 1/2020 Las Vegas NV 6/2015 Las Vegas NV 6/2015 Las Vegas NV 6/2016 Shiprock, NM 12/2016 Shiprock, NM 12/2016 Shiprock, NM 12/2015 Escalante, NM 9/2016 North 6/2018 Buckman 6/2021 BA 6/2015 San Juan 12/2015 near Las Cruces 12/2018 near Caballo, NM 12/2019 Gladstone, NM 12/2019 Gladstone, NM 12/2021 San Luis Valey Co 9/2015 Four Corners 6/2021 Queen Creek AZ 1/2016 Corona, NM 4/2015 Mesa, AZ	El Centro Switching Station Bannister Substations Fern Station, Liebert Station Fern Switching Station Highline Substation Las Vegas NV Lathrop WellsNV Lathrop WellsNV Las Vegas NV Las Vegas NV Las Vegas NV Las Vegas NV Las Cogas NV Las Vegas NV Mar Ignaciao, CO Gallup ,NM Montano White Rock STA BA Las Cruces, NM Mimbres Substation Springer, NM near Carson, NM West Mesa Queen Creek AZ Florence AZ Coolidge AZ Mesa AZ	N/A TBD N/A	20 OH 24 OH 1.3 OH 18 OH 75 OH 1 OH 1 OH 18 OH 4 OH 8 OH 28 OH 110 OH 75 OH 0 OH 0 OH 5 OH 70 42 2.3 12 12 12 3.4 57 61	Im I	perial Irrigate perial Irrigat	ation District ation	10 10 10 10 10 0% (WAPA 10 10 10 10 10 10 10 8RP 100% SRP Participation	Highline to El Centro P Midway-Hoober-Bai P Imperial Valley Subs U El Centro Switching P North Gila to Highlir P 00 Sunrise 400-599 kV P 01 Sunrise 400-599 kV P 02 Sunrise 400-599 kV P 03 Sunrise 400-599 kV P 04 Sunrise 400-599 kV P 05 Sunrise 400-599 kV P 06 Sunrise 400-599 kV P 07 Sunrise 400-599 kV P 08 Sunrise 400-599 kV P 09 Sunrise 40	Planned	Variable/Ren Variable/Ren Variable/Ren Variable/Ren Variable/Ren Economics o Variable/Ren Variable/Ren Variable/Ren Variable/Ren Variable/Ren Economics o Reliability	ne Reliability ne Reliability ne Reliability ne Reliability ne Reliability ne Congestion ne Economics or Congestion newable Integration newable Integratio
2014 WECC-US AC	200-299 200-299 200-299 200-299 200-299 200-299 200-299 400-599 400-599 400-599 400-599 200-299 200-299 100-120 100-120 100-120 100-120 100-120 100-120 200-299 300-399 200-299 300-399 200-299 400-599	200-299 200-299 200-299 400-599 400-599 400-599 400-599 400-599 200-299 200-299 100-120 100-120 100-120 100-120 100-120 100-120 200-299 300-399 200-299 200-299 200-299 200-299 200-299 200-299	1166 1166 1166 1166 1166 1166 1166 1200 1200	12/2017 Dixieland Substation 12/2018 Highline Substation 6/2019 Midway Substation 3/2016 IV Substation 12/2018 El Centro Switching Station 12/2019 North Gila Switching Station 6/2023 Las Vegas NV 6/2020 Las Vegas NV 1/2016 Boulder City NV 1/2020 Las Vegas NV 6/2015 Las Vegas NV 6/2015 Las Vegas NV 6/2016 Shiprock, NM 12/2016 Shiprock, NM 12/2016 Shiprock, NM 12/2015 Escalante, NM 9/2016 North 6/2018 Buckman 6/2021 BA 6/2015 San Juan 12/2015 near Las Cruces 12/2018 near Caballo, NM 12/2019 Gladstone, NM 12/2021 San Luis Valey Co 9/2015 Four Corners 6/2021 Gilbert AZ 6/2021 Queen Creek AZ 1/2016 Corona, NM	El Centro Switching Station Bannister Substations Fern Station, Liebert Station Fern Switching Station Highline Substation Las Vegas NV Lathrop WellsNV Lathrop WellsNV Las Vegas NV Las Vegas NV Mas Vegas NV Las Vegas NV Montano White Rock STA BA Las Cruces, NM Mimbres Substation Springer, NM near Carson, NM West Mesa Queen Creek AZ Florence AZ Coolidge AZ	N/A TBD N/A	20 OH 24 OH 1.3 OH 18 OH 75 OH 1 OH 1 OH 18 OH 4 OH 8 OH 28 OH 110 OH 75 OH 0 OH 0 OH 5 OH 70 42 2.3 12 12 12 3.4 57 61	Im Im Im Im Im 13407 NE 13407	perial Irrigate perial Irrigat	ation District ation	10 10 10 10 10 10 0% (WAPA 10 10 10 10 10 10 10 10 10 10 10 10 10	Highline to El Centro P Midway-Hoober-Bai P Imperial Valley Subs U El Centro Switching P North Gila to Highlir P O Sunrise 400-599 kV P O	Planned	Variable/Ren Variable/Ren Variable/Ren Variable/Ren Variable/Ren Economics o Economics o Economics o Economics o Economics o Economics o Conomics o Variable/Ren Variable/Ren Variable/Ren Variable/Ren Variable/Ren Variable/Ren Economics o Reliability	ne Reliability ne Reliability ne Reliability ne Reliability ne Reliability ne Congestion ne Economics or Congestion newable Integration newable Integratio

2014 WECC-US AC		400-599	TBD	12/2023 Wintersburg, AZ	Maricopa, AZ			16572 S		S	TBD	Hassayampa to Pin	•	Reliability	
2014 WECC-US AC	400-599		TBD	12/2015 Goodyear, AZ				16572 S		S	TBD	Jojoba loop in of H	·	Reliability	
2014 WECC-US AC	300-399	300-399	1195	6/2025 Vail, AZ	Tucson, AZ		11	24211 T	ΈP	1	TBD	Vail - Irvington 300	- Conceptual	Other	Other
2014 WECC-US AC	300-399	300-399	1195	6/2025 Tucson, AZ	Sahuarita, AZ		16	24211 T	ΈP	1	TBD	Irvington - South 3	0 Conceptual	Other	Other
2014 WECC-US AC	300-399	300-399	1195	6/2023 Red Rock, AZ	Marana, AZ		15	24211 T	ΈP	1	TBD	Tortolita - North Lo	c Conceptual	Other	Other
2014 WECC-US AC	400-599	400-599	1732	5/2015 Nine Mile Corner, AZ	Red Rock, AZ		40	24211 T	ΈP	1	TBD	Pinal Central - Tort	o Planned	Reliability	Economics
2014 WECC-US AC	400-599	400-599	TBD	6/2025 Red Rock, AZ	Benson, AZ		80	24211 T	ΈP	i	TBD	Tortolita Saguaro -	\ Conceptual	Other	Other
2014 WECC-US AC	300-399	300-399	1195	6/2025 Vail, AZ	Sahuarita, AZ		14	24211 T	ΈP	I	TBD	Vail - South 300-39	•	Other	Other
2014 WECC-US AC	300-399		1195	6/2025 Springerville, AZ	Greenlee, AZ		110	24211 T		ı	TBD	Springerville - Gree	•	Other	Other
2014 WECC-US AC	300-399		1195	6/2025 Red Rock, AZ	Sahuarita, AZ		68	24211 T		i	TBD	Tortolita - South 30	•	Other	Other
2014 WECC-US AC		300-399 o		6/2025 Phoenix, AZ	Sahuarita, AZ		68	24211 T		·	TBD	Westwing - South #	•	Other	Other
				·						C/I	40 / 60	•	•		
2014 WECC-US AC	200-299		(2) 613	9/2017 Alamosa County, CO	Huerfano County, CO		93	30151 T		-	-	San Luis Valley-Cal		Reliability	Variable/Renewable Integration
2014 WECC-US AC		200-299	319	5/2015 ED4	ED2		9.2		Western Are			100 ED4-ED2	Under Construction	•	Economics or Congestion
2014 WECC-US AC	151-199		279	5/2017 Parker	Headgate Rock		12.9		Western Are			100 Parker-Headgate R	•	Reliability	Economics or Congestion
2014 WECC-US AC	100-120		151	6/2017 ED2	Saguaro		35.6		Western Are			100 ED2-Saguaro #2	•	Reliability	Other
2014 WECC-US AC	100-120		88.6	6/2021 Coolidge	Oracle		44.7		Western Are			100 Coolidge-Oracle		Reliability	Economics or Congestion
2014 WECC-US AC	200-299		319	6/2018 Pinal Central	ED5		18.4		Western Are			100 Pinal Central-ED5	•	Reliability	Economics or Congestion
2014 WECC-US AC	200-299	200-299	355	6/2020 Rogers	Coolidge		39.9	V	Western Are	eā F		100 Rogers-Coolidge	Conceptual	Economics or	Reliability
2014 WECC-US AC	200-299	200-299	377	6/2022 Lone Butte	Sundance		45.7	V	Western Are	a F		100 Lone Butte-Sundar	nc Conceptual	Economics or	Reliability
2014 WECC-US AC	151-199	200-299	167	6/2021 Dome Tap	Gila		7.5	V	Western Are	a F		100 Dome Tap-Gila	Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC	151-199	200-299	167	6/2023 Gila	Welton Mohawk		13	V	Western Are	a F		100 Gila-Welton Moha	w Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC	151-199	200-299	167	6/2025 Blythe	Gold Mine Tap		42	V	Western Are	a F		100 Blythe-Gold Mine 1	Γa Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC	151-199	200-299	167	6/2023 Gold Mine Tap	Knob		22	V	Western Are	eā F		100 Gold Mine Tap-Kno	ol Conceptual	Reliability	Economics or Congestion
2014 WECC-US AC	400-599	400-599	1000	6/2016 Maricopa Co. AZ	Wintersburg AZ		15 OH	803 A	APS	1		; CA Delaney - Palo Verd		Economics or	•
2014 WECC-US AC		200-299	1200	6/2016 Buckeye AZ	Surprise AZ		15 OH	803 A		1		100 Sun Valley – Trilby		Economics or	•
2014 WECC-US AC	400-599		1200	6/2015 Wintersburg AZ	Yuma AZ	100-120	ОН	803 A		i		100 Palo Verde - North		Economics or	•
2014 WECC-US AC		200-299	1200	6/2015 Surprise AZ	Goodyear AZ	100-120	12 OH	803 A				100 TS2- Palm Valley 2			Economics or Congestion
2014 WECC-US AC	200-299		1200	6/2015 Surprise AZ	Surprise AZ		12 OH	803 A		1		100 TS2— Trilby Wash 2		Reliability	Economics or Congestion
				•	•					1		•		•	•
2014 WECC-US AC		400-599	1200	6/2018 Buckeye AZ	Peoria AZ		40 OH	803 A				; CA Sun Valley – Morga		Economics or	•
2014 WECC-US AC		400-599	TBD	6/2016 Maricopa Co. AZ	Buckeye AZ		28 OH	803 A				; CA Delaney - Sun Valle	•	Economics or	•
2014 WECC-US AC	200-299		TBD	6/2018 Yuma AZ	Yuma AZ		11 OH	803 A		ı		100 North Gila - TS8 20		Economics or	•
2014 WECC-US AC	100-120		156.6	5/2016 Las Cruces, NM	Las Cruces, NM		32 OH	5701 E		ı		100 Afton-Airport-Leas	· ·	Other	Load Growth
2014 WECC-US AC	100-120	100-120	353	5/2014 El Paso, Tx	El Paso,Tx		2.5 OH	5701 E	PE	1		100 Caliente-Montana	1 Planned	Reliability	Load Growth
2014 WECC-US AC	100-120	100-120	353	5/2016 El Paso, Tx	El Paso,Tx		2.5 OH	5701 E	PE	1		100 Caliente-Montana	1 Planned	Reliability	Load Growth
2014 WECC-US AC	100-120	100-120	353	5/2017 El Paso, Tx	El Paso,Tx		6 OH	5701 E	PE	1		100 Montana-Montwo	o Planned	Reliability	Load Growth
2014 WECC-US AC	100-120	100-120	156.6	5/2021 El Paso, Tx	El Paso,Tx		10.8 OH	5701 E	PE	1		100 Montana-Picante 1	(Planned	Reliability	Load Growth
2014 WECC-US AC	100-120	100-120	156.6	5/2019 El Paso, Tx	El Paso,Tx		9.8 OH	5701 E	PE	1		100 Montana-Pelicano		Reliability	Load Growth
2014 WECC-US AC	100-120		156.6	5/2020 El Paso, Tx	El Paso,Tx		18 OH	5701 E		1		100 E1-E2 100-120 kV L		Reliability	Load Growth
2014 WECC-US AC	100-120		156.6	5/2020 El Paso, Tx	El Paso,Tx		4.3 OH	5701 E		i		100 E2-Horizon 100-120		Reliability	Load Growth
2014 WECC-US AC	100-120		156.6	5/2021 El Paso, Tx	El Paso,Tx		12 OH	5701 E		i		100 E2-Felipe 100-120		•	Load Growth
					•					' '		•		•	
2014 WECC-US AC		200-299	1200	6/2023 Las Vegas NV	Las Vegas NV		1 OH	13407 N				100 Sunrise 400-599 kV		Economics or	
2014 WECC-US AC	200-299		1200	6/2023 Las Vegas NV	Las Vegas NV		1 OH	13407 N				100 Sunrise 400-599 kV		Economics or	•
2014 WECC-US AC		200-299	810	6/2023 Las Vegas NV	Las Vegas NV		18 OH	13407 N		ı		100 Sunrise 400-599 kV		Economics or	
2014 WECC-US AC	200-299		810	6/2023 Las Vegas NV	Las Vegas NV		18 OH	13407 N		ı		100 Sunrise 400-599 kV		Economics or	Congestion
2014 WECC-US AC	200-299	200-299	810	6/2023 Las Vegas NV	Las Vegas NV		4 OH	13407 N	NEVP	I		100 Sunrise 400-599 kV	/ Planned	Economics or	Congestion
2014 WECC-US AC	400-599	400-599	3000	6/2023 Las Vegas NV	Las Vegas NV		8 OH	13407 N	NEVP	1		100 Sunrise 400-599 kV	/ Planned	Economics or	Congestion
2014 WECC-US AC	400-599	400-599	3000	6/2023 Las Vegas NV	Las Vegas NV		8 OH	13407 N	NEVP	1		100 Sunrise 400-599 kV	/ Planned	Economics or	Congestion
2014 WECC-US AC	400-599	400-599	3000	6/2020 Las Vegas NV	Las Vegas NV		28 OH	13407 N	NEVP	1		100 Harry Allen - North	v Conceptual	Variable/Ren	€ Economics or Congestion
2014 WECC-US AC	400-599	400-599	3000	1/2016 Boulder City NV	Lathrop WellsNV		110 OH	13407 N	NEVP	1	0% (WAP	A O\ Mead - Amaragosa	^₄ Conceptual	Variable/Ren	ewable Integration
2014 WECC-US AC	400-599	400-599	3000	1/2020 Las Vegas NV	Lathrop WellsNV		75 OH	13407 N	NEVP	1	•	100 Northwest - Amarg	c Conceptual	Variable/Ren	ewable Integration
2014 WECC-US AC		400-599	TBD	6/2015 Las Vegas NV	Las Vegas NV		0 ОН	13407 N		1		100 Harry Allen / Eldora	•	· · · · · · · · · · · · · · · · · · ·	ewable Integration
2014 WECC-US AC		400-599	TBD	6/2020 Las Vegas NV	Las Vegas NV		0 OH	13407 N		1		100 Harry Allen / Eldora			ewable Integration
2014 WECC-US AC	200-299		810	6/2018 Las Vegas NV	Las Vegas NV		5 OH	13407 N		i		100 Pecos - Brooks 200		Economics or	•
2014 WECC-US AC	400-599		3000	6/2014 Ely NV	Boulder City NV	200-299	OH	17166 N		i i		OW! Robinson - Eldorad			Economics or Congestion
2014 WECC-US AC		400-599	3000	6/2014 Twin Falls ID	Ely NV	200 233	280 OH	17166 N		<u>.</u>	•	OWI Robinson - Midpoi			Economics or Congestion
2014 WECC-US AC	100-120		120 200	6/2014 Bordertown, NV	Verdi, CA		12 OH	17166 N		' '	•	100 Cal Sub - Borderto	•	-	<u> </u>
				,						1					•
2014 WECC-US AC		200-299	600	12/2016 Shiprock, NM	near Ignaciao, CO		70 43		SGT	C		1 San Juan Basin Ene		•	Economics or Congestion
2014 WECC-US AC	100-120		80	12/2015 Escalante, NM	Gallup ,NM		42		SGT	C .		1 Escalante-Gallup 1		•	Economics or Congestion
2014 WECC-US AC	100-120		200	12/2015 North	Montano		2.3		PNM	1		1 Sandia-North Line		•	Other
2014 WECC-US AC	100-120	100-120	285	6/2018 Buckman	White Rock		12	030106 L	os Alamos (CM		1 Los Alamos Service	Conceptual	Economics or	Other
2014 WECC-US AC	100-120	100-120	285	6/2021 BA	STA		12	030106 L	os Alamos (CM		1 Los Alamos Service	Conceptual	Economics or	Other
2014 WECC-US AC	300-399	300-399	1195	12/2015 San Juan	BA	N/A		030105 P	PNM	1		1 Rio Puerco Phase 2	Planned	Reliability	
2014 WECC-US AC	100-120	100-120	153	12/2015 near Las Cruces	Las Cruces, NM		3.4	030102 T	SGT	С		1 Picacho - Las Cruce	s Under Constructior	Reliability	Reliability
2014 WECC-US AC	100-120	100-120	168	12/2018 near Caballo, NM	Mimbres Substation		57	030102 T	SGT	С		1 Caballo-Mimbres 1	1 Under Constructior	Reliability	Reliability
2014 WECC-US AC	100-120	100-120	240	12/2019 Gladstone, NM	Springer, NM		61	030102 T	SGT	С		1 NENM Relaiblity In	ון Planned	Reliability	Reliability
2014 WECC-US AC	200-299		630	12/2021 San Luis Valey Co	near Carson, NM	TBD			SGT	С		1 Valley Corridor Tra	•	Reliability	Reliability
2014 WECC-US AC	300-399		1195	12/2015 Four Corners	West Mesa	N/A			PNM	1		1 Rio Puerco Phase 3		Reliability	•
2014 WECC-US AC	100-120		200	12/2015 Rio Puerco	Progress	N/A			PNM	1		1 Rio Puerco Progres		Reliability	
2014 WECC-US AC	100-120		450	4/2014 San Juan	Ojo	N/A			PNM	1		1 Jicarilla 345 kV Sta		•	
2014 WECC-US AC	200-299		1405	5/2014 Maricopa AZ	Mesa AZ	14/74	-87	16572 S		, S	various	Southeast Valley P		Reliability	
										S		•		•	
2014 WECC-US AC		400-599	1670	5/2014 Maricopa AZ	Mesa AZ		87	16572 S		S C	various	Southeast Valley P		Reliability	Fossil Finad Internation
2014 WECC-US AC	200-299		875	6/2021 Gilbert AZ	Queen Creek AZ		8	16572 S		5	100% SR			Reliability	Fossil-Fired Integration
2014 WECC-US AC	200-299		875	6/2021 Queen Creek AZ	Florence AZ		12	16572 S		S	100% SR			Reliability	Fossil-Fired Integration
2014 WECC-US AC	200-299		875	5/2014 Casa Grande, AZ	Coolidge AZ		21	16572 S		S	100% SR			Reliability	Fossil-Fired Integration
2014 WECC-US AC	400-599	400-599	3000	1/2016 Corona, NM	Coolidge AZ	400-599			SWPG SunZi	a Other	Participa	tion SUNZIA SOUTHWES			€ Variable/Renewable Integration
2014 WECC-US AC	200-299	200-299	TBD	Chandler, AZ	Chandler, AZ		8	16572 S	SRP	S	100% SR	P Schrader to RS28	Planned	Reliability	
2014 WECC-US AC	200-299	200-299	875	4/2016 Mesa, AZ	Gilbert, AZ			16572 S	SRP	S		Rogers to Santan	Conceptual	Reliability	

2014 WECC-US AC	200-299	875	4/2014 Gilbert, AZ	Chandler, AZ		16572 SRP	S		Santan to Schrader Planned	Reliability	
2014 WECC-US AC	200-299	875	4/2014 Mesa, AZ	Coolidge AZ		16572 SRP	S		Browning to Pinal C Under Construction	•	Fossil-Fired Integration
2014 WECC-US AC	200-299	1600	4/2018 Pinal County, AZ	Ray, AZ		16572 SRP	S		_	Reliability	. ossii i irea iritegration
2014 WECC-US AC	100-120	340	2/2018 Ray, AZ	Ray, AZ		16572 SRP	S			Reliability	
2014 WECC-US AC	300-399 300-39		6/2023 Vail, AZ	Tucson, AZ	11	24211 TEP		TBD	·	•	Other
2014 WECC-US AC	300-399 300-39		6/2023 Tucson, AZ	Sahuarita, AZ	16	24211 TEP		TBD	-		Other
2014 WECC-US AC	300-399 300-39		6/2023 Red Rock, AZ	Marana, AZ	15	24211 TEP		TBD			Other
2014 WECC-US AC	400-599 400-599	9 1732	5/2016 Nine Mile Corner, AZ	Red Rock, AZ	40	24211 TEP	I	TBD	Pinal Central - Torto Planned	Reliability	Economics
2014 WECC-US AC	400-599 400-599	9 TBD	6/2023 Red Rock, AZ	Benson, AZ	80	24211 TEP	i	TBD	Tortolita - Winchest Conceptual	Other	Other
2014 WECC-US AC	300-399 300-399	9 1195	6/2023 Vail, AZ	Sahuarita, AZ	14	24211 TEP	1	TBD	Vail - South 300-395 Conceptual	Other	Other
2014 WECC-US AC	300-399 300-39	9 1195	6/2023 Springerville, AZ	Greenlee, AZ	110	24211 TEP	l .	TBD	Springerville - Greer Conceptual	Other	Other
2014 WECC-US AC	300-399 300-399	9 1195	6/2023 Red Rock, AZ	Sahuarita, AZ	68	24211 TEP	1	TBD	Tortolita - South 30(Conceptual	Other	Other
2014 WECC-US AC	300-399 o 300-39	9 or 40 TBD	6/2023 Phoenix, AZ	Sahuarita, AZ	68	24211 TEP	1	TBD	Westwing - South #: Conceptual	Other	Other
2014 WECC-US AC	200-299 300-39	9 (2) 613	9/2017 Alamosa County, CO	Huerfano County, CO	93	30151 TSGT	C/I	40 / 60	San Luis Valley-Calu Planned	Reliability	Variable/Renewable Integration
2014 WECC-US AC	100-120 200-29		12/2015 ED4	ED2	9.2	Western Ar	ea F	1	.00 ED4-ED2 Planned	Reliability	Economics or Congestion
2014 WECC-US AC	100-120 200-29		1/2024 Coolidge	Valley Farms	5.2	Western Ar	rea F	1		•	Economics or Congestion
2014 WECC-US AC	151-199 200-29		1/2016 Parker	Headgate Rock	14	Western Ar				•	Other
2014 WECC-US AC	151-199 200-29		1/2020 Headgate Rock	Bouse	18	Western Ar				•	Other
2014 WECC-US AC	100-120 100-12		1/2018 Oracle	Tucson	15.8	Western Ar			•	•	Economics or Congestion
2014 WECC-US AC	151-199 200-29		1/2024 Parker	Blythe	54.7	Western Ar			•	•	Economics or Congestion
2014 WECC-US AC	100-120 200-29		1/2020 Tucson	Nogales	20.4	Western Ar			•	•	Economics or Congestion
2014 WECC-US AC	100-120 200-29		12/2019 Saguaro	Tucson	35.4	Western Ar			·	•	Economics or Congestion
2014 WECC-US AC	151-199 200-299		1/2023 Gila	Knob	20	Western Ar			•	•	Economics or Congestion
2014 WECC-US AC	100-120 200-29		1/2022 Nogales	Apache	59.2	Western Ar				•	Economics or Congestion
2014 WECC-US AC	100-120 200-299		1/2023 Saguaro	Oracle	19	Western Ar				•	Economics or Congestion
2014 WECC-US AC	151-199 200-299		1/2018 Blythe	Headgate Rock	19	Western Ar		1	,	,	Other
2014 WECC-US AC	200-299	1500	4/2015 Coachella Valley Substation		20 OH	•	igation District		Path 42 (IID Portion Under Construction	· ·	•
2014 WECC-US AC 2014 WECC-US AC	525 525	525 4936 @ -!	5/2021 Castle Rock, WA	Troutdale, OR	70 OH 38 OH	1738 BPA 1738 BPA	r		.00 Castle Rock-Troutda Planned .00 Central Ferry-Lower Under Construction	-	Economics or Congestion
2014 WECC-US AC	115	525 4936 @ -! 115 TBD	12/2015 Clyde, WA 11/2016 Caribu County, ID	Central Ferry, WA Caribu County, ID	22 OH	1738 BPA 1738 BPA	F		•	•	Reliability
2014 WECC-US AC	525	525 4936 @ -!	11/2015 Caribu County, ID 11/2015 The Dalles, OR	Goldendale, WA	28 OH	1738 BPA	F		.00 Big Eddy-Knight 500 Under Construction	•	,
2014 WECC-US AC	100-120 100-12		6/2015 Rocky Reach	Chelan	29 OH	3413 CHPD	M	_	1 Rocky Reach-Chelan Under Construction	-	Other
2014 WECC-US AC	200-240 200-24		2/2015 Rocky Reach	Columbia	21.4 OH	3413 CHPD	M		1 Rocky Reach-Colum Under Construction	•	Other
2014 WECC-US AC	200-240 200-240 200-290		3/2014 Douglas Switchyard	Rapids Switchyard	13 OH	5326 DOPD	M	1	•	•	Economics or Congestion
2014 WECC-US AC	200-299 200-299		6/2016 Rapids Switchyard	Columbia Substation	9 OH	5326 DOPD	M			•	Economics or Congestion
2014 WECC-US AC	100-120 100-12		12/2016 Watson Draw Tap Switch		13.68 OH	5286 OKPD	M		•	•	Economics
2014 WECC-US AC	100-120 100-12		12/2016 Gold Creek Substation		14.48 OH	5286 OKPD	M		·	•	Economics
2014 WECC-US AC	100-120 100-12		12/2019 Tonasket Switchyard	•	16.05 OH	5286 OKPD	M		·	•	Economics
2014 WECC-US AC	100-120 100-12		5/2017 Rocky Ford	Larson	7 OH	GCPD	M		•	•	Reliability
2014 WECC-US AC	200-299	230 565	6/2018 Walters Ferry, ID	SW of Kuna, ID	13	9191 IPC	T	1	•	•	Other
2014 WECC-US AC	400-599	500 3000	6/2020 Walters Ferry, ID	Boardman, OR	300	9191 IPC	T			Other	Other
2014 WECC-US AC	300-399 300-399	9 1386	6/2024 American Falls, ID	Pocatello, ID	32	9191 IPC	1	1	.00 Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC	300-399 400-599	9 2079	6/2024 Shoshone, ID	Pocatello, ID	-84	9191 IPC	1	1	.00 Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC	300-399 300-39	9 1386	6/2024 Shoshone, ID	Pocatello, ID	-32	9191 IPC	1	1	.00 Gateway West Tran: Conceptual	Other	Other
2014 WECC-US AC	400-599	500 3000	6/2024 Hollister, ID	Walters Ferry, ID	161	9191 IPC	1	unknown	at t Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC	400-599 400-599	9 3000	6/2024 Downey, ID	American Falls, ID	55	9191 IPC	I	unknown	at t Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC	400-599 400-599	9 3000	6/2024 Shoshone, ID	American Falls, ID	84	9191 IPC	1	1	.00 Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC	400-599	500 3000	6/2024 Hollister, ID	Shoshone, ID	34	9191 IPC	I	unknown	at t Gateway West Tran Conceptual	Other	Other
2014 WECC-US AC	400-599	500 3000	6/2024 Shoshone, ID	Walters Ferry, ID	126	9191 IPC	I		•		Other
2014 WECC-US AC	121-150	138 287	6/2018 King, ID	Wood River, ID	59	9191 IPC	1		•	•	Other
2014 WECC-US AC	121-150	138 90	6/2018 King, ID	Wood River, ID	-59	9191 IPC	1			•	Other
2014 WECC-US AC	121-150	138 200	6/2020 Wood River, ID	Ketchum, ID	10	9191 IPC	1			•	Other
2014 WECC-US AC	200-299	230 559	6/2018 SW of Kuna, ID	NE of Kuna, ID	16	9191 IPC	I				Other
2014 WECC-US AC	400-599 400-599		1/2018 Broadwater or Colstrip	Garrison- BPA Existing Line Existing		13902 NWMT	1				Economics or Congestion
2014 WECC-US AC	300-399 300-399		6/2015 Sigurd, UT	Central,UT	165	14354 PACE	1		S	•	Economics or Congestion
2014 WECC-US AC 2014 WECC-US AC	400-599 400-599 300-399 300-399		Carbon County, WY	Mona, UT	400	14354 PACE	1				Variable/Renewable Integration
2014 WECC-US AC 2014 WECC-US AC	200-299 200-29		South Jordan, UT Windstar,WY	SLC,UT Carbon County, WY	28 76	14354 PACE 14354 PACE			•	Economics or Economics or	•
2014 WECC-US AC	400-599 400-599		Carbon County, WY	Rock Springs, WY	154	14354 PACE 14354 PACE	i			Economics or	-
2014 WECC-US AC	400-599 400-599		Rock Springs, WY	Downey, ID	203	14354 PACE 14354 PACE	i		•	Economics or	•
2014 WECC-US AC	300-399 300-39			St. George, Utah⊞urricane, l	170	14354 PACE	1			Economics or	•
2014 WECC-US AC	200-299 200-299		Aeolus, WY	Dave Johnston substation, W	70	14354 PACE	·		.00 DJ- Aeolus 200-299 Planned	Economics or	•
2014 WECC-US AC	121-150 121-150		11/2017 Evanston, WY	Park City, UT	70	14354 PACE	i		.00 Southwest Wyomin; Under Construction		Economics or Congestion
2014 WECC-US AC	121-150 121-15		11/2017 Heber, UT	Midway, UT	10	14354 PACE	i		•	Reliability	zeemennes er eengestien
2014 WECC-US AC	200-299 200-29		11/2017 Wallula	• •	29.04 OH	14354 PACW	I		•	Economics or	Reliability
2014 WECC-US AC	200-299 200-29		1/2018 Vantage	•	66.27 OH	14354 PACW	I		•		Economics or Congestion
2014 WECC-US AC	200-299 200-29		5/2019 Grants Pass New Substation	· ·	17.5 OH	14354 PACW	1			Reliability	3 44 5
2014 WECC-US AC	200-299 200-29		6/2018 Blue Lake	Gresham	6.1 OH	15248 PGN	1	PGE 100 %		•	Economics or Congestion
2014 WECC-US AC	200-299 200-29		6/2018 Blue Lake	Troudale	1.5 OH	15248 PGN	1	PGE 100 %		•	Economics or Congestion
2014 WECC-US AC	200-299 200-29		6/2018 Blue Lake	Troudale	1.5 OH	15248 PGN	I	PGE 100 %		•	Economics or Congestion
2014 WECC-US AC	200-299 200-299	9 574	6/2018 Horizon	St. Mary's/Trojan	4.4 OH	15248 PGN	I	PGE 100 %	6 Horizon - St. Marys/ Planned	•	Economics or Congestion
2014 WECC-US AC	100-120 100-12	0 168	6/2018 Harrison	Marquam	1.6 OH	15248 PGN	1	PGE 100 %	6 Harrison - Marquam Planned	Reliability	Economics or Congestion
2014 WECC-US AC	100-120 100-12	0 219	6/2019 Orenco	Sunset	2.7 OH	15248 PGN	I	PGE 100 %	Orenco - Sunset 100 Planned	Reliability	Economics or Congestion
2014 WECC-US AC	200-299 200-29		10/2016 Sumner WA	Puyallup WA	8 1	.5400-599 PSE	I	1	•	Reliability	
2014 WECC-US AC	100-120 100-12		11/2016 Kirkland WA	Sammamish WA		.5400-599 PSE	I			Reliability	
2014 WECC-US AC	100-120 100-12		11/2022 Federal Way WA	Puyallup WA		.5400-599 PSE	1			Reliability	
2014 WECC-US AC	100-120 100-12	0 314	11/2022 Berrydale WA	Enumclaw WA	18 1	.5400-599 PSE	I	1	.00 South King County Planned	Reliability	

2014 M/FCC LIC AC										
2014 WECC-US AC	100-120		314	11/2020 Puyallup WA	Lacey WA	15	15400-599 PSE	I	100 Pierce and Thurston Planned	Reliability
2014 WECC-US AC	100-120		TBD	11/2018 Lacey WA	Yelm WA	15	15400-599 PSE	I	100 Thurston County Planned	Reliability
2014 WECC-US AC	100-120		TBD	11/2022 Ferndale WA	Custer WA	8	15400-599 PSE	I	100 Whatcom County Planned	Reliability
2014 WECC-US AC	100-120		314	11/2024 Sumner WA	Auburn WA	2.5	15400-599 PSE	I	100 South King County Planned	Reliability
2014 WECC-US AC	100-120	100-120	314	11/2022 Sumner WA	Auburn WA	2.3	15400-599 PSE	I	100 South King County Planned	Reliability
2014 WECC-US AC	100-120	100-120	314	11/2023 Berrydale WA	Snoqualmie WA	10	15400-599 PSE	I	100 King County Planned	Reliability
2014 WECC-US AC	100-120	100-120	314	11/2022 Sumas WA	Everson WA	10	15400-599 PSE	1	100 Whatcom County Planned	Reliability
2014 WECC-US AC	100-120	100-120	314	11/2025 Renton WA	Bellevue WA	7	15400-599 PSE	1	100 King County Planned	Reliability
2014 WECC-US AC	100-120	200-299	TBD	11/2018 Manchester WA	Poulsbo WA	15	15400-599 PSE	1	100 Kitsap County Planned	Reliability
2014 WECC-US AC	200-299	200-299	TBD	11/2018 Sammamish WA	Renton WA	16	15400-599 PSE	ı	100 King County Planned	Reliability
2014 WECC-US AC	100-120		TBD	11/2023 Kenmore WA	Kirkland WA	4	15400-599 PSE	ı	100 King County Planned	Reliability
2014 WECC-US AC	200-299		1042	10/2014 Lacey WA	Lacey WA	10	15400-599 PSE	ı	100 Thurston County Planned	Reliability
2014 WECC-US AC	400-599		4936 @ -!	5/2021 Castle Rock, WA	Troutdale, OR	70 OH	1738 BPA	F	100 Castle Rock-Troutda Planned	Variable/Rene Economics or Congestion
2014 WECC-US AC	400-599		4936 @ -!	12/2015 Clyde, WA	Central Ferry, WA	38 OH	1738 BPA	F	100 Lower Monumental Planned	Variable/Rene Economics or Congestion
2014 WECC-US AC	121-150		138 TBD	11/2016 Caribu County, ID	Caribu County, ID	22 OH	1738 BPA	E	100 Hooper Springs-Low Planned	Reliability Reliability
2014 WECC-US AC	400-599		4936 @ -!	11/2015 Canda County, 15 11/2015 The Dalles, OR	Goldendale, WA	28 OH	1738 BPA	, 	100 Big Eddy-Knight 500 Planned	Variable/Rene Economics or Congestion
2014 WECC-US AC	100-120		TBD	12/2021 Rocky Reach	Chelan #1	29 OH	3413 CHPD	M	1 Rocky Reach-Chelan Conceptual	Reliability Other
2014 WECC-US AC		200-299		•		13 OH	5326 DOPD	M	100 Douglas-Rapids 200 Planned	Reliability Economics or Congestion
			555	3/2014 Douglas Switchyard	Rapids Switchyard					
2014 WECC-US AC	200-299		555	6/2016 Rapids Switchyard	Columbia Substation	9 OH	5326 DOPD	M	100 Rapids-Columbia 20 Planned	Reliability Economics or Congestion
2014 WECC-US AC		100-120	100	12/2016 Watson Draw Tap Switch	Gold Creek Substation	13.68 OH	5286 OKPD	M	100 So. Pateros-Twisp 1 Planned	Reliability Economics
2014 WECC-US AC	100-120		100	12/2016 Gold Creek Substation	Twisp Switchyard	14.48 OH	5286 OKPD	M	100 No. Pateros-Twisp 1 Planned	Reliability Economics
2014 WECC-US AC	100-120		100	12/2019 Tonasket Switchyard	Aeneas Substation	16.05 OH	5286 OKPD	M	100 Tonasket/Aeneas 1C Conceptual	Reliability Economics
2014 WECC-US AC	100-120		239	5/2017 Rocky Ford	Larson	7 OH	GCPD	М	1 Rocky Ford - Dover - Planned	Reliability Reliability
2014 WECC-US AC		200-299	565	6/2018 Walters Ferry, ID	Bowmont, ID	13	9191 IPC	ı	100 Hemingway-Boardn Conceptual	Other Other
2014 WECC-US AC	400-599	400-599	3000	6/2020 Walters Ferry, ID	Boardman, OR	300	9191 IPC	I	unknown at t Hemingway-Boardn Conceptual	Other Other
2014 WECC-US AC	300-399	300-399	1386	6/2024 American Falls, ID	Pocatello, ID	32	9191 IPC	I	100 Gateway West Tran: Conceptual	Other Other
2014 WECC-US AC	300-399	400-599	2079	6/2024 Shoshone, ID	Pocatello, ID	-84	9191 IPC	I	100 Gateway West Tran: Conceptual	Other Other
2014 WECC-US AC	300-399	300-399	1386	6/2024 Shoshone, ID	Pocatello, ID	-32	9191 IPC	1	100 Gateway West Tran: Conceptual	Other Other
2014 WECC-US AC	400-599	400-599	3000	6/2019 Hollister, ID	Walters Ferry, ID	161	9191 IPC	1	unknown at t Gateway West Tran: Conceptual	Other Other
2014 WECC-US AC	400-599	400-599	3000	6/2019 Downey, ID	American Falls, ID	55	9191 IPC	ı	unknown at t Gateway West Tran Conceptual	Other Other
2014 WECC-US AC	400-599		3000	6/2019 Shoshone, ID	American Falls, ID	84	9191 IPC	ı	100 Gateway West Tran Conceptual	Other Other
2014 WECC-US AC	400-599		3000	6/2019 Hollister, ID	Shoshone, ID	34	9191 IPC	ı	unknown at t Gateway West Tran Conceptual	Other Other
2014 WECC-US AC	400-599		3000	6/2021 Shoshone, ID	Walters Ferry, ID	126	9191 IPC	i	100 Gateway West Tran Conceptual	Other Other
2014 WECC-US AC	121-150		138 287	6/2014 Bowmont, ID	Nampa. ID	0	9191 IPC	i	100 Bowmont-Happy Va Planned	Other Other
2014 WECC-US AC	121-150		138 287	6/2018 King, ID	Wood River, ID	59	9191 IPC	1	100 Bowmont-Happy Varianned 100 King-Wood River Re Planned	Reliability Other
					,			<u>'</u>	5	•
2014 WECC-US AC	121-150		138 90	6/2018 King, ID	Wood River, ID	-59	9191 IPC		100 King-Wood River Re Planned	Reliability Other
2014 WECC-US AC	121-150		138 200	6/2020 Wood River, ID	Ketchum, ID	10	9191 IPC		100 Wood River-Ketchur Planned	Reliability Other
2014 WECC-US AC	400-599		From 220	1/2018 Broadwater or Colstrip	Garrison- BPA Existing Line E		13902 NWMT		30 400-599 kV Upgrade Planned	Variable/Rene Economics or Congestion
2014 WECC-US AC		200-299	From 337	7/2014 Mill Creek, MT		Existing Circuit	13902 NWMT	l	100 Path 18 46 MW Upg Planned	Economics or None
2014 WECC-US AC	300-399		1163	6/2015 Sigurd, UT	Central,UT	165	14354 PACE	ı	100 Sigurd-Red Butte 30 Planned	Reliability Economics or Congestion
2014 WECC-US AC	400-599	400-599	3681.5	Carbon County, WY	Mona, UT		14254 5465		100 Aeolus-Clover 400-5 Planned	Economics or Variable/Renewable Integration
2011 11200 00 710				carbon county, vvi	1410114, 01	400	14354 PACE	•	100 Aedius-Clovel 400-3 Flatilleu	Leonomies of Variable, Nemewable integration
2014 WECC-US AC	300-399		1332	South Jordan, UT	SLC,UT	400 28	14354 PACE 14354 PACE	i	100 Aeolds-Clover 400-3 Flanned	Economics or Reliability
	300-399			• •				i I		
2014 WECC-US AC	300-399	300-399 200-299	1332	South Jordan, UT	SLC,UT	28	14354 PACE		100 Oquirrh-Terminal 3(Planned	Economics or Reliability
2014 WECC-US AC 2014 WECC-US AC	300-399 200-299	300-399 200-299 400-599	1332 888	South Jordan, UT Windstar,WY	SLC,UT Carbon County, WY	28 76	14354 PACE 14354 PACE		100 Oquirrh-Terminal 3(Planned 100 Windstar-Aeolus 20 Planned	Economics or Reliability Economics or Congestion
2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC	300-399 200-299 400-599	300-399 200-299 400-599 400-599	1332 888 3681.5	South Jordan, UT Windstar,WY Carbon County, WY	SLC,UT Carbon County, WY Rock Springs, WY	28 76 154	14354 PACE 14354 PACE 14354 PACE	 	100 Oquirrh-Terminal 3C Planned 100 Windstar-Aeolus 20 Planned 100 Aeolus-Anticline/Bri Planned	Economics or Reliability Economics or Congestion Economics or Congestion
2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC	300-399 200-299 400-599 400-599 300-399	300-399 200-299 400-599 400-599	1332 888 3681.5 3681.5	South Jordan, UT Windstar,WY Carbon County, WY Rock Springs, WY	SLC,UT Carbon County, WY Rock Springs, WY Downey, ID	28 76 154 203	14354 PACE 14354 PACE 14354 PACE 14354 PACE	 	100 Oquirrh-Terminal 3C Planned 100 Windstar-Aeolus 20 Planned 100 Aeolus-Anticline/Bri Planned 100 Anticline/Bridger-Pc Planned	Economics or Reliability Economics or Congestion Economics or Congestion Economics or Congestion
2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC	300-399 200-299 400-599 400-599 300-399 200-299	300-399 200-299 400-599 400-599 300-399	1332 888 3681.5 3681.5 1163	South Jordan, UT Windstar,WY Carbon County, WY Rock Springs, WY Sigurd, UT	SLC,UT Carbon County, WY Rock Springs, WY Downey, ID Hurricane, Utah	28 76 154 203 170	14354 PACE 14354 PACE 14354 PACE 14354 PACE 14354 PACE		100 Oquirrh-Terminal 3C Planned 100 Windstar-Aeolus 20 Planned 100 Aeolus-Anticline/Bri Planned 100 Anticline/Bridger-Pc Planned 100 Sigurd-Three Peaks- Planned	Economics or Reliability Economics or Congestion Economics or Congestion Economics or Congestion Economics or Reliability
2014 WECC-US AC	300-399 200-299 400-599 400-599 300-399 200-299	300-399 200-299 400-599 400-599 300-399 200-299	1332 888 3681.5 3681.5 1163 888 400-599	South Jordan, UT Windstar,WY Carbon County, WY Rock Springs, WY Sigurd, UT Aeolus, WY 12/2017 Wallula	SLC,UT Carbon County, WY Rock Springs, WY Downey, ID Hurricane, Utah Dave Johnston substation,W McNary	28 76 154 203 170 70 29.04 OH	14354 PACE 14354 PACE 14354 PACE 14354 PACE 14354 PACE 14354 PACE 14354 PACW		100 Oquirrh-Terminal 3C Planned 100 Windstar-Aeolus 20 Planned 100 Aeolus-Anticline/Bri Planned 100 Anticline/Bridger-Pc Planned 100 Sigurd-Three Peaks- Planned 100 DJ- Aeolus 200-299 Planned 100 Wallula to McNary 2 Planned	Economics or Reliability Economics or Congestion Economics or Congestion Economics or Congestion Economics or Reliability Economics or Congestion Economics or Reliability
2014 WECC-US AC	300-399 200-299 400-599 400-599 300-399 200-299 200-299	300-399 200-299 400-599 400-599 300-399 200-299 200-299	1332 888 3681.5 3681.5 1163 888 400-599	South Jordan, UT Windstar,WY Carbon County, WY Rock Springs, WY Sigurd, UT Aeolus, WY 12/2017 Wallula 12/2016 Vantage	SLC,UT Carbon County, WY Rock Springs, WY Downey, ID Hurricane, Utah Dave Johnston substation,W McNary Pomona Heights	28 76 154 203 170 70 29.04 OH 66.27 OH	14354 PACE 14354 PACE 14354 PACE 14354 PACE 14354 PACE 14354 PACE 14354 PACW		100 Oquirrh-Terminal 3C Planned 100 Windstar-Aeolus 20 Planned 100 Aeolus-Anticline/Bri Planned 100 Anticline/Bridger-Pc Planned 100 Sigurd-Three Peaks- Planned 100 DJ- Aeolus 200-299 Planned 100 Wallula to McNary 2 Planned 100 Vantage to Pomona Planned	Economics or Reliability Economics or Congestion Economics or Congestion Economics or Congestion Economics or Reliability Economics or Congestion Economics or Reliability Reliability Economics or Congestion
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2014 WECC-US AC	300-399 200-299 400-599 300-399 200-299 200-299 200-299 200-299	300-399 200-299 400-599 300-399 200-299 200-299 200-299 200-299	1332 888 3681.5 3681.5 1163 888 400-599 400-599 900	South Jordan, UT Windstar,WY Carbon County, WY Rock Springs, WY Sigurd, UT Aeolus, WY 12/2017 Wallula 12/2016 Vantage 12/2019 Table Mtn 6/2018 Blue Lake	SLC,UT Carbon County, WY Rock Springs, WY Downey, ID Hurricane, Utah Dave Johnston substation,W McNary Pomona Heights Grants Pass Gresham	28 76 154 203 170 70 29.04 OH 66.27 OH 17.5 OH 6.1 OH	14354 PACE 14354 PACE 14354 PACE 14354 PACE 14354 PACE 14354 PACW 14354 PACW 14354 PACW 14354 PACW		100 Oquirrh-Terminal 3C Planned 100 Windstar-Aeolus 20 Planned 100 Aeolus-Anticline/Bri Planned 100 Anticline/Bridger-Pc Planned 100 Sigurd-Three Peaks- Planned 100 DJ- Aeolus 200-299 Planned 100 Wallula to McNary 2 Planned 100 Vantage to Pomona Planned 100 Table Mtn to Grants Planned PGE 100 % Blue Lake - Gresham Planned	Economics or Reliability Economics or Congestion Economics or Congestion Economics or Congestion Economics or Reliability Economics or Congestion Economics or Reliability Reliability Reliability Reliability Reliability Reliability Reliability Economics or Congestion
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2014 WECC-US AC	300-399 200-299 400-599 300-399 200-299 200-299 200-299 200-299 200-299 200-299 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 200-299 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120	300-399 200-299 400-599 300-399 200-299 200-299 200-299 200-299 200-299 100-120 100-120 100-120 100-120 100-120 100-120 100-120 100-120 200-299 200-299 100-120 400-120 400-599 200-299 400-599	1332 888 3681.5 3681.5 1163 888 400-599 400-599 400-599 900 797 900 900 733 314 314 314 314 314 314 314 3	South Jordan, UT Windstar,WY Carbon County, WY Rock Springs, WY Sigurd, UT Aeolus, WY 12/2017 Wallula 12/2016 Vantage 12/2019 Table Mtn 6/2018 Blue Lake 6/2018 Blue Lake 6/2018 Horizon 10/2016 Sumner WA 11/2016 Kirkland WA 11/2022 Federal Way WA 11/2022 Berrydale WA 11/2022 Berrydale WA 11/2024 Sumner WA 11/2025 Ferndale WA 11/2024 Sumner WA 11/2025 Sumner WA 11/2026 Sumner WA 11/2027 Sumner WA 11/2028 Serrydale WA 11/2029 Sumner WA 11/2020 Sumner WA 11/2021 Sumner WA 11/2023 Kenmore WA 11/2025 Renton WA 11/2018 Manchester WA 11/2018 Kenmore WA 11/2018 Cevanston, WY 11/2016 Evanston, WY 11/2016 Evanston, WY 11/2016 Maricopa Co. AZ 11/2016 Buckeye AZ 11/2015 Wintersburg AZ	SLC,UT Carbon County, WY Rock Springs, WY Downey, ID Hurricane, Utah Dave Johnston substation, W McNary Pomona Heights Grants Pass Gresham Troudale Troudale St. Mary's/Trojan Puyallup WA Sammamish WA Puyallup WA Enumclaw WA Lacey WA Yelm WA Custer WA Auburn WA Auburn WA Snoqualmie WA Everson WA Bellevue WA Poulsbo WA Renton WA Kirkland WA Lacey WA Pump Station No. 9 Park City, UT Wintersburg AZ Surprise AZ Yuma AZ	28 76 154 203 170 70 29.04 OH 66.27 OH 17.5 OH 6.1 OH 1.5 OH 4.4 OH 8 5.2 6.3 18 15 15 15 8 2.5 2.3 10 10 10 7 15 16 4 10 48 70 15 OH 15 OH 15 OH	14354 PACE 14354 PACW 14354 PACW 14354 PACW 14354 PACW 15248 PGN 15248 PGN 15248 PGN 15248 PGN 15400-599 PSE		100 Oquirrh-Terminal 3(Planned 100 Windstar-Aeolus 20 Planned 100 Aeolus-Anticline/Bri Planned 100 Anticline/Bridger-Pc Planned 100 Sigurd-Three Peaks- Planned 100 DJ- Aeolus 200-299 Planned 100 Wallula to McNary 2 Planned 100 Vantage to Pomona Planned 100 Table Mtn to Grants Planned PGE 100 % Blue Lake - Gresham Planned PGE 100 % Blue Lake - Troutdal Planned PGE 100 % Blue Lake - Troutdal Planned PGE 100 % Horizon - St. Mary's, Planned 100 Pierce County Planned 100 North King County Planned 100 South King County Planned 100 Pierce and Thurston Planned 100 Thurston County Planned 100 Whatcom County Planned 100 South King County Planned 100 South King County Planned 100 South King County Planned 100 King County Planned	Economics or Reliability Economics or Congestion Economics or Congestion Economics or Congestion Economics or Reliability Economics or Reliability Reliability Reliability Economics or Congestion Reliability Reliability Economics or Congestion Reliability Reliability Economics or Congestion Reliability

2014 WECC-US AC				6/9010 5 1 1 1 7											5 H 1 H.
	400-599		2595	6/2018 Buckeye AZ	Peoria AZ		40 OH	803 A		1	-	A Sun Valley – Morga		Economics or	•
2014 WECC-US AC			2595	6/2016 Maricopa Co. AZ	Buckeye AZ		28 OH	803 A			•	A Delaney - Sun Valle	•	Economics or	•
2014 WECC-US AC			2595	6/2018 Yuma AZ	Yuma AZ		13 OH	803 A		ı) North Gila - Orchai		Economics or	
2014 WECC-US AC		100-120	156.6	5/2016 Las Cruces, NM	Las Cruces, NM		32 OH	5701 E		I) Afton-Airport Jorna		Other	Load Growth
2014 WECC-US AC	100-120	100-120	353	5/2016 El Paso, Tx	El Paso,Tx		2.5 OH	5701 E	PE	1	100	Caliente-Montana	1 Planned	Reliability	Load Growth
2014 WECC-US AC	100-120	100-120	353	5/2017 El Paso, Tx	El Paso,Tx		6 OH	5701 E	PE	1	100) Montana-Montwo	o Planned	Reliability	Load Growth
2014 WECC-US AC	100-120	100-120	156.6	5/2020 El Paso, Tx	El Paso,Tx		18 OH	5701 E	PE	1	100) E1-E2 100-120 kV l	i Planned	Reliability	Load Growth
2014 WECC-US AC	100-120	100-120	156.6	5/2020 El Paso, Tx	El Paso,Tx		4.3 OH	5701 E	PE	1	100	E2-Horizon 100-12	0 Planned	Reliability	Load Growth
2014 WECC-US AC	100-120	100-120	156.6	5/2021 El Paso, Tx	El Paso,Tx		12 OH	5701 E	PE	1	100	E2-Felipe 100-120	k' Planned	Reliability	Load Growth
2014 WECC-US AC	200-299		1166	12/2017 Dixieland Substation	Imperial Valley Substation		8 OH	Ir	mperial Irri	igation District		Imperial Valley-Dix	ie Planned	variable/Rene	Reliability
2014 WECC-US AC	200-299		1166	12/2018 Highline Substation	El Centro Switching Station		20 OH		-	igation District		Highline to El Cent		/ariable/Rene	•
2014 WECC-US AC	200-299		1166	6/2019 Midway Substation	Bannister Substations		24 OH		•	igation District		Midway-Hoober-Ba			: Variable/Renewable Integration
2014 WECC-US AC	200-299		1166	3/2016 IV Substation	Fern Station, Liebert Station	1	1.3 OH		•	igation District		•	os Under Constructior '		•
2014 WECC-US AC	200-299		1166	12/2018 El Centro Switching Station		'	1.5 OH		•	igation District		El Centro Switching		variable/Ren∈	•
				•	•				•	•		`	-	•	•
2014 WECC-US AC	200-299	200 200	1166	12/2019 North Gila Switching Statio	•		75 OH		•	igation District	400	North Gila to Highl		/ariable/Rene	•
2014 WECC-US AC		200-299	1200	6/2023 Las Vegas NV	Las Vegas NV		1 OH	13407 N) Sunrise 400-599 k\		Economics or	•
2014 WECC-US AC			1200	6/2023 Las Vegas NV	Las Vegas NV		1 OH	13407 N		ı) Sunrise 400-599 k\		Economics or	_
2014 WECC-US AC			810	6/2023 Las Vegas NV	Las Vegas NV		18 OH	13407 N		ı) Sunrise 400-599 k\		Economics or	
2014 WECC-US AC	200-299	200-299	810	6/2023 Las Vegas NV	Las Vegas NV		18 OH	13407 N	IEVP	I	100) Sunrise 400-599 k\	/ Planned	Economics or	Congestion
2014 WECC-US AC	200-299	200-299	810	6/2023 Las Vegas NV	Las Vegas NV		4 OH	13407 N	IEVP	1	100) Sunrise 400-599 k\	/ Planned	Economics or	Congestion
2014 WECC-US AC	400-599	400-599	3000	6/2023 Las Vegas NV	Las Vegas NV		8 OH	13407 N	IEVP	1	100) Sunrise 400-599 k\	/ Planned	Economics or	Congestion
2014 WECC-US AC	400-599	400-599	3000	6/2023 Las Vegas NV	Las Vegas NV		8 OH	13407 N	IEVP	1	100) Sunrise 400-599 k\	/ Planned	Economics or	Congestion
2014 WECC-US AC	400-599	400-599	3000	6/2020 Las Vegas NV	Las Vegas NV		28 OH	13407 N	IEVP	1	100	Harry Allen - North	v Conceptual	/ariable/Rene	Economics or Congestion
2014 WECC-US AC	400-599	400-599	3000	1/2016 Boulder City NV	Lathrop WellsNV		110 OH	13407 N	IEVP	1	0% (WAPA O	N Mead - Amaragosa	4 Conceptual	/ariable/Rene	ewable Integration
2014 WECC-US AC	400-599		3000	1/2020 Las Vegas NV	Lathrop WellsNV		75 OH	13407 N		1	•	Northwest - Amarg	•		ewable Integration
2014 WECC-US AC	400-599		TBD	6/2015 Las Vegas NV	Las Vegas NV		0 OH	13407 N		i) Harry Allen / Eldor	•		ewable Integration
2014 WECC-US AC			TBD	6/2020 Las Vegas NV	Las Vegas NV		0 OH	13407 N				Harry Allen / Eldor		-	ewable Integration
2014 WECC-US AC	200-299		810	6/2018 Las Vegas NV	-		5 OH	13407 N				Pecos - Brooks 200		Economics or	_
					Las Vegas NV										
2014 WECC-US AC			600	12/2016 Shiprock, NM	near Ignaciao, CO		70		SGT	C			er Under Construction	•	Economics or Congestion
2014 WECC-US AC			80	12/2015 Escalante, NM	Gallup ,NM		42		SGT	С		•	O Under Construction	•	Economics or Congestion
2014 WECC-US AC		100-120	200	9/2016 North	Montano		2.3		NM	I		L Richmond Switchir	•	•	Other
2014 WECC-US AC	100-120	100-120	285	6/2018 Buckman	White Rock		12	030106 L	os Alamos	CM	1	L Los Alamos Service	: Conceptual	Economics or	Other
2014 WECC-US AC	100-120	100-120	285	6/2021 BA	STA		12	030106 L	os Alamos	CM	1	L Los Alamos Service	: Conceptual	Economics or	Other
2014 WECC-US AC	300-399	300-399	1195	6/2015 San Juan	ВА	N/A		030105 P	NM	1	1	L Rio Puerco Phase 2	Under Construction	Reliability	
2014 WECC-US AC	100-120	100-120	153	12/2015 near Las Cruces	Las Cruces, NM		3.4	030102 T	SGT	С	1	L Picacho - Las Cruce	es Under Construction	Reliability	Reliability
2014 WECC-US AC	100-120	100-120	168	12/2018 near Caballo, NM	Mimbres Substation		57		SGT	С			1 Under Construction	•	Reliability
2014 WECC-US AC			240	12/2019 Gladstone, NM	Springer, NM		61		SGT	C		L NENM Relaiblity In		Reliability	Reliability
2014 WECC-US AC		200-299	630	12/2021 San Luis Valey Co	near Carson, NM	TBD	01		SGT	C		L Valley Corridor Tra	•	Reliability	Reliability
2014 WECC-US AC		300-399	1195	9/2015 Four Corners	West Mesa	N/A			NM	ı			Under Construction	•	Kenability
				•		N/A	0			ı				•	Fossil Fired Integration
2014 WECC-US AC		200-299	875	6/2021 Gilbert AZ	Queen Creek AZ		8	16572 S		5		Ball to Pfister		•	Fossil-Fired Integration
2014 WECC-US AC		200-299	875	6/2021 Queen Creek AZ	Florence AZ		12	16572 S		5	100% SRP	Pfister to Abel		Reliability	Fossil-Fired Integration
2014 WECC-US AC	400-599		3000	1/2016 Corona, NM	Coolidge AZ	400-599			WPG SunZ	ia Other	•	SUNZIA SOUTHWE		-	Variable/Renewable Integration
2014 WECC-US AC	200-299	200-299	875	4/2015 Mesa, AZ	Mesa AZ			16572 S	RP	S	100% SRP	Rogers to Brownin	g Planned	Reliability	
2014 WECC-US AC	200-299	200-302	TBD	4/2019 Pinal County, AZ	Ray, AZ			16572 S	RP	S	100% SRP	Silver King to RS29	Conceptual	Reliability	
2014 WECC-US AC								10372 3				RS29 to RS30	Conceptual	•	
	100-120	100-121	TBD	2/2019 Ray, AZ	Ray, AZ			16572 S	RP	S	100% SRP	11025 10 11050	Conceptual	Reliability	
2014 WECC-US AC		100-121 400-599	TBD TBD	2/2019 Ray, AZ 12/2023 Wintersburg, AZ	Ray, AZ Maricopa, AZ						100% SRP TBD	Hassayampa to Pin	•	•	
2014 WECC-US AC 2014 WECC-US AC	400-599			12/2023 Wintersburg, AZ	• •			16572 S	RP	S		Hassayampa to Pin	a Conceptual	Reliability	
2014 WECC-US AC	400-599 400-599	400-599 400-599	TBD TBD	12/2023 Wintersburg, AZ 12/2015 Goodyear, AZ	Maricopa, AZ		11	16572 S 16572 S 16572 S	RP RP	S S	TBD TBD	Hassayampa to Pin Jojoba loop in of H	a Conceptual a Conceptual	Reliability Reliability Reliability	Other
2014 WECC-US AC 2014 WECC-US AC	400-599 400-599 300-399	400-599 400-599 300-399	TBD TBD 1195	12/2023 Wintersburg, AZ 12/2015 Goodyear, AZ 6/2025 Vail, AZ	Maricopa, AZ Tucson, AZ		11 16	16572 S 16572 S 16572 S 24211 T	RP RP EP	S S I	TBD TBD TBD	Hassayampa to Pin Jojoba loop in of H Vail - Irvington 300	a Conceptual a Conceptual - Conceptual	Reliability Reliability Reliability Other	Other Other
2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC	400-599 400-599 300-399 300-399	400-599 400-599 300-399 300-399	TBD TBD 1195 1195	12/2023 Wintersburg, AZ 12/2015 Goodyear, AZ 6/2025 Vail, AZ 6/2025 Tucson, AZ	Maricopa, AZ Tucson, AZ Sahuarita, AZ		16	16572 S 16572 S 16572 S 24211 T 24211 T	RP RP EP EP	S S I	TBD TBD TBD TBD	Hassayampa to Pin Jojoba loop in of H Vail - Irvington 300 Irvington - South 3	a Conceptual a Conceptual - Conceptual 0 Conceptual	Reliability Reliability Reliability Other Other	Other
2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC 2014 WECC-US AC	400-599 400-599 300-399 300-399 300-399	400-599 400-599 300-399 300-399 300-399	TBD TBD 1195 1195 1195	12/2023 Wintersburg, AZ 12/2015 Goodyear, AZ 6/2025 Vail, AZ 6/2025 Tucson, AZ 6/2023 Red Rock, AZ	Maricopa, AZ Tucson, AZ Sahuarita, AZ Marana, AZ		16 15	16572 S 16572 S 16572 S 24211 T 24211 T	RP RP EP EP	S S I I	TBD TBD TBD TBD TBD	Hassayampa to Pin Jojoba loop in of H Vail - Irvington 300 Irvington - South 3 Tortolita - North Lo	a Conceptual a Conceptual b- Conceptual Conceptual conceptual	Reliability Reliability Reliability Other Other Other	Other Other
2014 WECC-US AC	400-599 400-599 300-399 300-399 400-599	400-599 400-599 300-399 300-399 300-399 400-599	TBD TBD 1195 1195 1195 1732	12/2023 Wintersburg, AZ 12/2015 Goodyear, AZ 6/2025 Vail, AZ 6/2025 Tucson, AZ 6/2023 Red Rock, AZ 5/2015 Nine Mile Corner, AZ	Maricopa, AZ Tucson, AZ Sahuarita, AZ Marana, AZ Red Rock, AZ		16 15 40	16572 S 16572 S 16572 S 24211 T 24211 T 24211 T	RP RP EP EP EP	S S I I I	TBD TBD TBD TBD TBD TBD TBD	Hassayampa to Pin Jojoba loop in of H Vail - Irvington 300 Irvington - South 3 Tortolita - North Lo Pinal Central - Tort	a Conceptual a Conceptual - Conceptual 0 Conceptual oc Conceptual on Planned	Reliability Reliability Reliability Other Other Other Reliability	Other Other Economics
2014 WECC-US AC	400-599 400-599 300-399 300-399 400-599	400-599 400-599 300-399 300-399 400-599	TBD TBD 1195 1195 1195 1732 TBD	12/2023 Wintersburg, AZ 12/2015 Goodyear, AZ 6/2025 Vail, AZ 6/2025 Tucson, AZ 6/2023 Red Rock, AZ 5/2015 Nine Mile Corner, AZ 6/2025 Red Rock, AZ	Maricopa, AZ Tucson, AZ Sahuarita, AZ Marana, AZ Red Rock, AZ Benson, AZ		16 15 40 80	16572 S 16572 S 16572 S 24211 T 24211 T 24211 T 24211 T	RP RP EP EP EP EP	S S I I I I	TBD TBD TBD TBD TBD TBD TBD TBD	Hassayampa to Pin Jojoba loop in of H Vail - Irvington 300 Irvington - South 3 Tortolita - North Lo Pinal Central - Tort Tortolita Saguaro -	a Conceptual a Conceptual b- Conceptual c Conceptual c Conceptual c Planned \ Conceptual	Reliability Reliability Reliability Other Other Other Reliability Reliability	Other Other Economics Other
2014 WECC-US AC	400-599 400-599 300-399 300-399 400-599 400-599 300-399	400-599 400-599 300-399 300-399 400-599 400-599 300-399	TBD TBD 1195 1195 1195 1732 TBD 1195	12/2023 Wintersburg, AZ 12/2015 Goodyear, AZ 6/2025 Vail, AZ 6/2025 Tucson, AZ 6/2023 Red Rock, AZ 5/2015 Nine Mile Corner, AZ 6/2025 Red Rock, AZ 6/2025 Vail, AZ	Maricopa, AZ Tucson, AZ Sahuarita, AZ Marana, AZ Red Rock, AZ Benson, AZ Sahuarita, AZ		16 15 40 80 14	16572 S 16572 S 16572 S 24211 T 24211 T 24211 T 24211 T 24211 T	RP RP EP EP EP EP	S S I I I I	TBD	Hassayampa to Pin Jojoba loop in of H Vail - Irvington 300 Irvington - South 3 Tortolita - North Lo Pinal Central - Tort Tortolita Saguaro - Vail - South 300-39	a Conceptual a Conceptual - Conceptual O Conceptual o Conceptual O Planned \ Conceptual	Reliability Reliability Reliability Other Other Reliability Other Reliability Other	Other Other Economics Other Other
2014 WECC-US AC	400-599 400-599 300-399 300-399 400-599 400-599 300-399	400-599 400-599 300-399 300-399 400-599 400-599 300-399	TBD TBD 1195 1195 1195 1732 TBD 1195 1195	12/2023 Wintersburg, AZ 12/2015 Goodyear, AZ 6/2025 Vail, AZ 6/2025 Tucson, AZ 6/2023 Red Rock, AZ 5/2015 Nine Mile Corner, AZ 6/2025 Red Rock, AZ 6/2025 Vail, AZ 6/2025 Springerville, AZ	Maricopa, AZ Tucson, AZ Sahuarita, AZ Marana, AZ Red Rock, AZ Benson, AZ Sahuarita, AZ Greenlee, AZ		16 15 40 80 14 110	16572 S 16572 S 16572 S 24211 T 24211 T 24211 T 24211 T 24211 T 24211 T	RP RP EP EP EP EP EP	S S I I I I I	TBD	Hassayampa to Pin Jojoba loop in of H Vail - Irvington 300 Irvington - South 3 Tortolita - North Lo Pinal Central - Tort Tortolita Saguaro - Vail - South 300-39 Springerville - Gree	a Conceptual a Conceptual b- Conceptual c Conceptual o Planned \ Conceptual c Conceptual o Planned	Reliability Reliability Reliability Other Other Other Reliability Other Reliability Other	Other Other Economics Other Other Other
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2014 WECC-US AC	400-599 400-599 300-399 300-399 400-599 300-399 300-399 300-399 200-299 100-120 100-120 200-299 200-299 200-299 151-199 151-199 151-199 151-199 400-599 200-299 400-599 200-299 200-299 200-299 200-299	400-599 400-599 300-399 300-399 400-599 300-399 300-399 300-399 0 300-399 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299	TBD TBD 1195 1195 1195 1732 TBD 1195 1195 1195 40 TBD (2) 613 319 279 151 88.6 319 355 377 167 167 167 167 167 167 1000 1200 1200 1200	12/2023 Wintersburg, AZ 12/2015 Goodyear, AZ 6/2025 Vail, AZ 6/2025 Tucson, AZ 6/2023 Red Rock, AZ 5/2015 Nine Mile Corner, AZ 6/2025 Red Rock, AZ 6/2025 Vail, AZ 6/2025 Springerville, AZ 6/2025 Red Rock, AZ 6/2025 Phoenix, AZ 9/2017 Alamosa County, CO 5/2015 ED4 5/2017 Parker 6/2017 ED2 6/2021 Coolidge 6/2018 Pinal Central 6/2020 Rogers 6/2022 Lone Butte 6/2021 Dome Tap 6/2023 Gila 6/2025 Blythe 6/2023 Gold Mine Tap 6/2016 Maricopa Co. AZ 6/2015 Wintersburg AZ 6/2015 Surprise AZ	Tucson, AZ Sahuarita, AZ Marana, AZ Red Rock, AZ Benson, AZ Sahuarita, AZ Greenlee, AZ Sahuarita, AZ Sahuarita, AZ Huerfano County, CO ED2 Headgate Rock Saguaro Oracle ED5 Coolidge Sundance Gila Welton Mohawk Gold Mine Tap Knob Wintersburg AZ Surprise AZ Yuma AZ Goodyear AZ		16 15 40 80 14 110 68 68 93 9.2 12.9 35.6 44.7 18.4 39.9 45.7 7.5 13 42 22 15 OH 15 OH OH 12 OH	16572 S 16572 S 16572 S 24211 T	RP RP RP EP EP EP EP EP SGT Vestern Ar EP EP EP EP SGT Vestern Ar EP	S S I I I I I I C/I ea F	TBD	Hassayampa to Pin Jojoba loop in of H Vail - Irvington 300 Irvington - South 3 Tortolita - North Lo Pinal Central - Tort Tortolita Saguaro - Vail - South 300-39 Springerville - Gree Tortolita - South 30 Westwing - South 30 Westwing - South 30 Westwing - South 30 ED4-ED2 Parker-Headgate R ED2-Saguaro #2 Coolidge-Oracle Pinal Central-ED5 Rogers-Coolidge Lone Butte-Sundar Dome Tap-Gila Gila-Welton Moha Gila-Welton Moha Blythe-Gold Mine Tap-Kno Challey - Palo Vero Sun Valley - Trilby Palo Verde - North TS2- Palm Valley 2	a Conceptual a Conceptual	Reliability Reliability Reliability Other Reliability	Other Other Economics Other Variable/Renewable Integration Economics or Congestion Economics or Congestion Other Economics or Congestion Economics or Congestion Reliability Reliability Economics or Congestion
2014 WECC-US AC	400-599 400-599 300-399 300-399 400-599 300-399 300-399 300-399 200-299 100-120 100-120 100-120 200-299 200-299 200-299 151-199 151-199 151-199 151-199 400-599 200-299 400-599 200-299 400-599 200-299	400-599 400-599 300-399 300-399 400-599 300-399 300-399 300-399 0 300-399 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-599 200-599 200-599	TBD TBD 1195 1195 1195 1732 TBD 1195 1195 1195 40 TBD (2) 613 319 279 151 88.6 319 355 377 167 167 167 167 167 167 167 1000 1200 1200 1200 1200 1200 1200	12/2023 Wintersburg, AZ 12/2015 Goodyear, AZ 6/2025 Vail, AZ 6/2025 Tucson, AZ 6/2023 Red Rock, AZ 5/2015 Nine Mile Corner, AZ 6/2025 Red Rock, AZ 6/2025 Springerville, AZ 6/2025 Red Rock, AZ 6/2025 Red Rock, AZ 6/2025 Phoenix, AZ 9/2017 Alamosa County, CO 5/2015 ED4 5/2017 Parker 6/2017 ED2 6/2021 Coolidge 6/2018 Pinal Central 6/2020 Rogers 6/2022 Lone Butte 6/2021 Dome Tap 6/2023 Gila 6/2025 Blythe 6/2023 Gold Mine Tap 6/2016 Maricopa Co. AZ 6/2016 Buckeye AZ 6/2015 Surprise AZ 6/2015 Surprise AZ 6/2018 Buckeye AZ	Tucson, AZ Sahuarita, AZ Marana, AZ Red Rock, AZ Benson, AZ Sahuarita, AZ Greenlee, AZ Sahuarita, AZ Sahuarita, AZ Huerfano County, CO ED2 Headgate Rock Saguaro Oracle ED5 Coolidge Sundance Gila Welton Mohawk Gold Mine Tap Knob Wintersburg AZ Surprise AZ Yuma AZ Goodyear AZ Surprise AZ Peoria AZ		16 15 40 80 14 110 68 68 93 9.2 12.9 35.6 44.7 18.4 39.9 45.7 7.5 13 42 22 15 OH 15 OH OH 12 OH 12 OH 40 OH	16572 S 16572 S 16572 S 24211 T	RP RP RP EP EP EP EP EP EP SGT Vestern An Ve	S S I I I I I I C/I ea F	TBD	Hassayampa to Pin Jojoba loop in of H Vail - Irvington 300 Irvington - South 3 Tortolita - North Lo Pinal Central - Tort Tortolita Saguaro - Vail - South 300-39 Springerville - Gree Tortolita - South 30 Westwing - South 30 Westwing - South 30 Westwing - South 30 Westwing - South 30 ED4-ED2 Parker-Headgate R DE02-Saguaro #2 Coolidge-Oracle Pinal Central-ED5 Rogers-Coolidge Lone Butte-Sundar Dome Tap-Gila Gila-Welton Moha Blythe-Gold Mine Tap-Kno Change Coolidge - Trilby Change Coolidge - Trilby Change Coolidge - Trilby Change Coolidge - North Change Coo	a Conceptual a Conceptual	Reliability Reliability Reliability Other Reliability	Other Other Economics Other Variable/Renewable Integration Economics or Congestion Economics or Congestion Other Economics or Congestion Economics or Congestion Reliability Reliability Economics or Congestion Reliability Reliability Economics or Congestion
2014 WECC-US AC	400-599 400-599 300-399 300-399 400-599 300-399 300-399 300-399 200-299 100-120 100-120 200-299 200-299 200-299 200-299 151-199 151-199 151-199 400-599 200-299 400-599 400-599 400-599 400-599	400-599 400-599 300-399 300-399 400-599 300-399 300-399 300-399 0 300-399 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 400-599 200-299 400-599 400-599 400-599	TBD TBD 1195 1195 1195 1195 1195 1195 1195 40 TBD (2) 613 319 279 151 88.6 319 355 377 167 167 167 167 167 167 1000 1200 1200 1200 1200 1200 1200 TBD	12/2023 Wintersburg, AZ 12/2015 Goodyear, AZ 6/2025 Vail, AZ 6/2025 Tucson, AZ 6/2023 Red Rock, AZ 5/2015 Nine Mile Corner, AZ 6/2025 Red Rock, AZ 6/2025 Vail, AZ 6/2025 Springerville, AZ 6/2025 Red Rock, AZ 6/2025 Phoenix, AZ 9/2017 Alamosa County, CO 5/2015 ED4 5/2017 Parker 6/2017 ED2 6/2021 Coolidge 6/2018 Pinal Central 6/2020 Rogers 6/2022 Lone Butte 6/2021 Dome Tap 6/2023 Gila 6/2023 Gila 6/2025 Blythe 6/2023 Gold Mine Tap 6/2016 Maricopa Co. AZ 6/2016 Surprise AZ 6/2015 Surprise AZ 6/2018 Buckeye AZ	Tucson, AZ Sahuarita, AZ Marana, AZ Red Rock, AZ Benson, AZ Sahuarita, AZ Greenlee, AZ Sahuarita, AZ Sahuarita, AZ Huerfano County, CO ED2 Headgate Rock Saguaro Oracle ED5 Coolidge Sundance Gila Welton Mohawk Gold Mine Tap Knob Wintersburg AZ Surprise AZ Yuma AZ Goodyear AZ Surprise AZ Peoria AZ Buckeye AZ		16 15 40 80 14 110 68 68 93 9.2 12.9 35.6 44.7 18.4 39.9 45.7 7.5 13 42 22 15 OH 15 OH 12 OH 12 OH 40 OH 28 OH	16572 S 16572 S 16572 S 24211 T	RP RP RP EP EP EP EP EP SGT Vestern An Veste	S S I I I I I I C/I ea F	TBD	Hassayampa to Pin Jojoba loop in of H Vail - Irvington 300 Irvington - South 3 Tortolita - North Lo Pinal Central - Tort Tortolita Saguaro - Vail - South 300-39 Springerville - Gree Tortolita - South 30 Westwing - South 30 Westwing - South 30 Westwing - South 30 ED4-ED2 Parker-Headgate R ED2-Saguaro #2 Coolidge-Oracle Pinal Central-ED5 Rogers-Coolidge Dome Tap-Gila Gila-Welton Moha Gila-Welton Moha Gila-Welton Moha Chap-Gold Mine Tap-Kno Chap-Gold Mine Ta	a Conceptual a Conceptual c Conceptual c Conceptual c Conceptual c Planned C Conceptual c Concep	Reliability Reliability Reliability Other Reliability Reconomics or Reliability Reliability Reliability Reliability Reliability Reliability	Other Other Economics Other Variable/Renewable Integration Economics or Congestion Economics or Congestion Other Economics or Congestion Economics or Congestion Reliability Reliability Economics or Congestion Reliability Reliability Reliability Economics or Congestion Economics or Congestion Economics or Congestion Reliability Reliability Reliability
2014 WECC-US AC	400-599 400-599 300-399 300-399 400-599 300-399 300-399 300-399 100-120 151-199 100-120 200-299 200-299 201-299 151-199 151-199 151-199 151-199 400-599 200-299 400-599 200-299 400-599 200-299 400-599 200-299 400-599 200-299	400-599 400-599 300-399 300-399 400-599 300-399 300-399 300-399 0 300-399 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-299 200-599 200-599 200-599	TBD TBD 1195 1195 1195 1732 TBD 1195 1195 1195 40 TBD (2) 613 319 279 151 88.6 319 355 377 167 167 167 167 167 167 167 1000 1200 1200 1200 1200 1200 1200	12/2023 Wintersburg, AZ 12/2015 Goodyear, AZ 6/2025 Vail, AZ 6/2025 Tucson, AZ 6/2023 Red Rock, AZ 5/2015 Nine Mile Corner, AZ 6/2025 Red Rock, AZ 6/2025 Springerville, AZ 6/2025 Red Rock, AZ 6/2025 Red Rock, AZ 6/2025 Phoenix, AZ 9/2017 Alamosa County, CO 5/2015 ED4 5/2017 Parker 6/2017 ED2 6/2021 Coolidge 6/2018 Pinal Central 6/2020 Rogers 6/2022 Lone Butte 6/2021 Dome Tap 6/2023 Gila 6/2025 Blythe 6/2023 Gold Mine Tap 6/2016 Maricopa Co. AZ 6/2016 Buckeye AZ 6/2015 Surprise AZ 6/2015 Surprise AZ 6/2018 Buckeye AZ	Tucson, AZ Sahuarita, AZ Marana, AZ Red Rock, AZ Benson, AZ Sahuarita, AZ Greenlee, AZ Sahuarita, AZ Sahuarita, AZ Huerfano County, CO ED2 Headgate Rock Saguaro Oracle ED5 Coolidge Sundance Gila Welton Mohawk Gold Mine Tap Knob Wintersburg AZ Surprise AZ Yuma AZ Goodyear AZ Surprise AZ Peoria AZ		16 15 40 80 14 110 68 68 93 9.2 12.9 35.6 44.7 18.4 39.9 45.7 7.5 13 42 22 15 OH 15 OH OH 12 OH 12 OH 40 OH	16572 S 16572 S 16572 S 24211 T	RP RP RP EP EP EP EP EP EP SGT Vestern Ar EP EP EP SGT Vestern Ar EP	S S I I I I I I C/I ea F	TBD	Hassayampa to Pin Jojoba loop in of H Vail - Irvington 300 Irvington - South 3 Tortolita - North Lo Pinal Central - Tort Tortolita Saguaro - Vail - South 300-39 Springerville - Gree Tortolita - South 30 Westwing - South 30 Westwing - South 30 Westwing - South 30 Westwing - South 30 ED4-ED2 Parker-Headgate R DE02-Saguaro #2 Coolidge-Oracle Pinal Central-ED5 Rogers-Coolidge Lone Butte-Sundar Dome Tap-Gila Gila-Welton Moha Blythe-Gold Mine Tap-Kno Change Coolidge - Trilby Change Coolidge - Trilby Change Coolidge - Trilby Change Coolidge - North Change Coo	a Conceptual a Conceptual	Reliability Reliability Reliability Other Reliability	Other Other Economics Other Variable/Renewable Integration Economics or Congestion Economics or Congestion Other Economics or Congestion Economics or Congestion Reliability Reliability Economics or Congestion Reliability Reliability Reliability Economics or Congestion Economics or Congestion Economics or Congestion Reliability Reliability Reliability

2014 WECC-US AC	100-120 100		5/2014 El Paso, Tx	El Paso,Tx	2.5 OH	5701 EPE I		100 Caliente-Montana 1 Planned	Reliability Load Growth
2014 WECC-US AC	100-120 100)-120 353	5/2016 El Paso, Tx	El Paso,Tx	2.5 OH	5701 EPE I		100 Caliente-Montana 1 Planned	Reliability Load Growth
2014 WECC-US AC	100-120 100)-120 353	5/2017 El Paso, Tx	El Paso,Tx	6 OH	5701 EPE I		100 Montana-Montwoo Planned	Reliability Load Growth
2014 WECC-US AC	100-120 100)-120 156.6	5/2021 El Paso, Tx	El Paso,Tx	10.8 OH	5701 EPE I		100 Montana-Picante 1(Planned	Reliability Load Growth
2014 WECC-US AC	100-120 100)-120 156.6	5/2019 El Paso, Tx	El Paso,Tx	9.8 OH	5701 EPE I		100 Montana-Pelicano 1 Planned	Reliability Load Growth
2014 WECC-US AC	100-120 100)-120 156.6	5/2020 El Paso, Tx	El Paso,Tx	18 OH	5701 EPE I		100 E1-E2 100-120 kV Li Planned	Reliability Load Growth
2014 WECC-US AC	100-120 100)-120 156.6	5/2020 El Paso, Tx	El Paso,Tx	4.3 OH	5701 EPE I		100 E2-Horizon 100-120 Planned	Reliability Load Growth
2014 WECC-US AC)-120 156.6	5/2021 El Paso, Tx	El Paso,Tx	12 OH	5701 EPE I		100 E2-Felipe 100-120 k' Planned	Reliability Load Growth
2014 WECC-US AC	200-299 200		6/2023 Las Vegas NV	Las Vegas NV	1 OH	13407 NEVP I		100 Sunrise 400-599 kV Planned	Economics or Congestion
2014 WECC-US AC)-299 1200	6/2023 Las Vegas NV	Las Vegas NV	1 OH	13407 NEVP I		100 Sunrise 400-599 kV Planned	Economics or Congestion
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2014 WECC-US AC	200-299 200		6/2023 Las Vegas NV	Las Vegas NV	18 OH	13407 NEVP I		100 Sunrise 400-599 kV Planned	Economics or Congestion
2014 WECC-US AC)-299 810	6/2023 Las Vegas NV	Las Vegas NV	18 OH	13407 NEVP I		100 Sunrise 400-599 kV Planned	Economics or Congestion
2014 WECC-US AC	200-299 200		6/2023 Las Vegas NV	Las Vegas NV	4 OH	13407 NEVP I		100 Sunrise 400-599 kV Planned	Economics or Congestion
2014 WECC-US AC	400-599 400)-599 3000	6/2023 Las Vegas NV	Las Vegas NV	8 OH	13407 NEVP I		100 Sunrise 400-599 kV Planned	Economics or Congestion
2014 WECC-US AC	400-599 400)-599 3000	6/2023 Las Vegas NV	Las Vegas NV	8 OH	13407 NEVP I		100 Sunrise 400-599 kV Planned	Economics or Congestion
2014 WECC-US AC	400-599 400)-599 3000	6/2020 Las Vegas NV	Las Vegas NV	28 OH	13407 NEVP I		100 Harry Allen - Northy Conceptual	Variable/Ren∈Economics or Congestion
2014 WECC-US AC	400-599 400)-599 3000	1/2016 Boulder City NV	Lathrop WellsNV	110 OH	13407 NEVP I	0% (\	NAPA O\ Mead - Amaragosa ₄ Conceptual	Variable/Renewable Integration
2014 WECC-US AC	400-599 400)-599 3000	1/2020 Las Vegas NV	Lathrop WellsNV	75 OH	13407 NEVP I		100 Northwest - Amargc Conceptual	Variable/Renewable Integration
2014 WECC-US AC)-599 TBD	6/2015 Las Vegas NV	Las Vegas NV	0 OH	13407 NEVP I		100 Harry Allen / Eldora Planned	Variable/Renewable Integration
2014 WECC-US AC)-599 TBD	6/2020 Las Vegas NV	Las Vegas NV	0 OH	13407 NEVP I		100 Harry Allen / Eldora Planned	Variable/Renewable Integration
			•	-				•	
2014 WECC-US AC)-299 810	6/2018 Las Vegas NV	Las Vegas NV	5 OH	13407 NEVP I		100 Pecos - Brooks 200-7 Planned	Economics or Congestion
2014 WECC-US AC)-599 3000	6/2014 Ely NV	Boulder City NV	200-299 OH	17166 NEVP I	•	GBT OW! Robinson - Eldoradc Planned	Variable/Ren∈Economics or Congestion
2014 WECC-US AC	400-599 400)-599 3000	6/2014 Twin Falls ID	Ely NV	280 OH	17166 NEVP I	0% (0	GBT OWI Robinson - Midpoin Conceptual	Variable/Rene Economics or Congestion
2014 WECC-US AC	100-120	120 200	6/2014 Bordertown, NV	Verdi, CA	12 OH	17166 NEVP I		100 Cal Sub - Bordertow Under Constructi	or Economics or Reliabllity
2014 WECC-US AC	200-299 200)-299 600	12/2016 Shiprock, NM	near Ignaciao, CO	70	030102 TSGT C		1 San Juan Basin Ener Under Constructi	or Reliability Economics or Congestion
2014 WECC-US AC	100-120 100)-120 80	12/2015 Escalante, NM	Gallup ,NM	42	030102 TSGT C		1 Escalante-Gallup 10 Under Constructi	or Reliability Economics or Congestion
2014 WECC-US AC	100-120 100		12/2015 North	Montano	2.3	030105 PNM I		1 Sandia-North Line Planned	Reliability Other
2014 WECC-US AC)-120 285	6/2018 Buckman	White Rock	12	030106 Los Alamos C M		1 Los Alamos Service / Conceptual	Economics or Other
2014 WECC-US AC	100-120 100		6/2021 BA	STA	12	030106 Los Alamos C M		1 Los Alamos Service / Conceptual	Economics or Other
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2014 WECC-US AC	300-399 300		12/2015 San Juan	BA	N/A	030105 PNM I		1 Rio Puerco Phase 2 Planned	Reliability
2014 WECC-US AC	100-120 100		12/2015 near Las Cruces	Las Cruces, NM	3.4	030102 TSGT C		1 Picacho - Las Cruces Under Constructi	•
2014 WECC-US AC	100-120 100)-120 168	12/2018 near Caballo, NM	Mimbres Substation	57	030102 TSGT C		1 Caballo-Mimbres 11 Under Constructi	or Reliability Reliability
2014 WECC-US AC	100-120 100)-120 240	12/2019 Gladstone, NM	Springer, NM	61	030102 TSGT C		1 NENM Relaiblity ImpPlanned	Reliability Reliability
2014 WECC-US AC	200-299 200)-299 630	12/2021 San Luis Valey Co	near Carson, NM	TBD	030102 TSGT C		1 Valley Corridor Tran Planned	Reliability Reliability
2014 WECC-US AC	300-399 300)-399 1195	12/2015 Four Corners	West Mesa	N/A	030105 PNM I		1 Rio Puerco Phase 3 Planned	Reliability
2014 WECC-US AC	100-120 100		12/2015 Rio Puerco	Progress	, N/A	030105 PNM I		1 Rio Puerco Progress Planned	Reliability
2014 WECC-US AC	100-120 100		4/2014 San Juan	Ojo	N/A	030105 PNM I		1 Jicarilla 345 kV Stati Under Constructi	•
			•	•	•		varia		•
2014 WECC-US AC	200-299 400		5/2014 Maricopa AZ	Mesa AZ	-87	16572 SRP S	vario	•	Reliability
2014 WECC-US AC	400-599 400		5/2014 Maricopa AZ	Mesa AZ	87	16572 SRP S	vario	•	Reliability
2014 WECC-US AC	200-299 200		6/2021 Gilbert AZ	Queen Creek AZ	8	16572 SRP S	100%		Reliability Fossil-Fired Integration
2014 WECC-US AC	200-299 200)-299 875	6/2021 Queen Creek AZ	Florence AZ	12	16572 SRP S	100%	SSRP Pfister to Abel Planned	Reliability Fossil-Fired Integration
2014 WECC-US AC	200-299 200)-299 875	5/2014 Casa Grande, AZ	Coolidge AZ	21	16572 SRP S	100%	SSRP Desert Basin-Pinal C Planned	Reliability Fossil-Fired Integration
2014 WECC-US AC	400-599 400)-599 3000	1/2016 Corona, NM	Coolidge AZ	400-599	SWPG SunZia Ot	her Parti	cipation SUNZIA SOUTHWES' Planned	Variable/Ren∈ Variable/Renewable Integration
2014 WECC-US AC	200-299 200)-299 TBD	Chandler, AZ	Chandler, AZ	8	16572 SRP S	100%	SRP Schrader to RS28 Planned	Reliability
2014 WECC-US AC	200-299 200)-299 875	4/2016 Mesa, AZ	Gilbert, AZ		16572 SRP S		Rogers to Santan Conceptual	Reliability
2014 WECC-US AC	200-299	875	4/2014 Gilbert, AZ	Chandler, AZ		16572 SRP S		Santan to Schrader Planned	Reliability
2014 WECC-US AC	200-299	875	4/2014 Mesa, AZ	Coolidge AZ		16572 SRP S		Browning to Pinal C Under Constructi	•
				•				_	
2014 WECC-US AC	200-299	1600	4/2018 Pinal County, AZ	Ray, AZ		16572 SRP S		Silver King to RS29 Conceptual	Reliability
2014 WECC-US AC	100-120	340	2/2018 Ray, AZ	Ray, AZ		16572 SRP S		RS29 to RS30 Conceptual	Reliability
2014 WECC-US AC	300-399 300		6/2023 Vail, AZ	Tucson, AZ	11	24211 TEP I	TBD	Vail - Irvington 300- Conceptual	Other Other
2014 WECC-US AC	300-399 300		6/2023 Tucson, AZ	Sahuarita, AZ	16	24211 TEP I	TBD	Irvington - South 30 Conceptual	Other Other
2014 WECC-US AC	300-399 300)-399 1195	6/2023 Red Rock, AZ	Marana, AZ	15	24211 TEP I	TBD	Tortolita - North Loc Conceptual	Other Other
2014 WECC-US AC	400-599 400)-599 1732	5/2016 Nine Mile Corner, AZ	Red Rock, AZ	40	24211 TEP I	TBD	Pinal Central - Torto Planned	Reliability Economics
2014 WECC-US AC	400-599 400)-599 TBD	6/2023 Red Rock, AZ	Benson, AZ	80	24211 TEP i	TBD	Tortolita - Winchest Conceptual	Other Other
2014 WECC-US AC	300-399 300		6/2023 Vail, AZ	Sahuarita, AZ	14	24211 TEP I	TBD	Vail - South 300-395 Conceptual	Other Other
2014 WECC-US AC	300-399 300		6/2023 Springerville, AZ	Greenlee, AZ	110	24211 TEP I	TBD	Springerville - Greer Conceptual	Other Other
2014 WECC-US AC	300-399 300		6/2023 Red Rock, AZ	•		24211 TEP I	TBD	Tortolita - South 30(Conceptual	Other Other
			·	Sahuarita, AZ	68			•	
2014 WECC-US AC		0-399 or 40 TBD	6/2023 Phoenix, AZ	Sahuarita, AZ	68	24211 TEP	TBD	Westwing - South #: Conceptual	Other Other
2014 WECC-US AC	200-299 300	• •	9/2017 Alamosa County, CO	Huerfano County, CO	93	30151 TSGT C /	/ 1 40 / (•	Reliability Variable/Renewable Integration
2014 WECC-US AC	100-120 200		12/2015 ED4	ED2	9.2	Western Area F		100 ED4-ED2 Planned	Reliability Economics or Congestion
2014 WECC-US AC	100-120 200)-299	1/2024 Coolidge	Valley Farms	5.2	Western Area F		100 Coolidge-Valley Farr Conceptual	Reliability Economics or Congestion
2014 WECC-US AC	151-199 200)-299	1/2016 Parker	Headgate Rock	14	Western Area F		100 Parker-Headgate Ro Conceptual	Reliability Other
2014 WECC-US AC	151-199 200		1/2020 Headgate Rock	Bouse	18	Western Area F		100 Headgate Rock-Bou Conceptual	Reliability Other
2014 WECC-US AC	100-120 100		1/2018 Oracle	Tucson	15.8	Western Area F		100 Oracle - Tucson Conceptual	Reliability Economics or Congestion
2014 WECC-US AC	151-199 200		1/2016 Oracle 1/2024 Parker	Blythe	54.7	Western Area F		100 Glacie - Packer Conceptual	Reliability Economics or Congestion
			•	•				<i>,</i>	
2014 WECC-US AC	100-120 200		1/2020 Tucson	Nogales	20.4	Western Area F		100 Tucson-Nogales Conceptual	Reliability Economics or Congestion
2014 WECC-US AC	100-120 200		12/2019 Saguaro	Tucson	35.4	Western Area F		100 Saguaro-Tucson Conceptual	Reliability Economics or Congestion
2014 WECC-US AC	151-199 200		1/2023 Gila	Knob	20	Western Area F		100 Gila -Knob Conceptual	Reliability Economics or Congestion
2014 WECC-US AC	100-120 200)-299	1/2022 Nogales	Apache	59.2	Western Area F		100 Nogales-Apache Conceptual	Reliability Economics or Congestion
								100 C	
2014 WECC-US AC	100-120 200)-299	1/2023 Saguaro	Oracle	19	Western Area F		100 Saguaro-Oracle Conceptual	Reliability Economics or Congestion
2014 WECC-US AC 2014 WECC-US AC			1/2023 Saguaro 1/2018 Blythe	Oracle Headgate Rock	19 19	Western Area F Western Area F		100 Saguaro-Oracie Conceptual 100 Blythe - Headgate R Conceptual	Reliability Economics or Congestion Reliability Other
	100-120 200			Headgate Rock			on District		Reliability Other