

Grand River Dam Authority

June 26, 2017

Continuing Disclosure

For Twelve Months Ending December 31, 2016

Historical Operating Results¹
Debt Service Coverage
(Unaudited)

	2016	2015	2014	2013	2012
Operating Revenues:					
Municipal Power Sales	\$164,287,568	\$156,666,084	\$162,263,174	\$146,804,949	\$136,332,107
Electric Cooperative Power Sales	36,058,789	34,396,282	36,156,719	33,031,264	30,330,804
Industrial Power Sales	89,478,086	72,750,758	64,423,504	50,134,177	46,718,110
Off System Power Sales - Firm	142,177,129	138,227,708	141,896,445	125,960,365	98,925,927
Off System Power Sales - Spot	3,206,456	9,796,229	2,749,850	5,507,682	3,945,527
Other Power Sales	1,245,086	3,001,297	4,595,212	3,782,822	5,148,525
Collection of Power Cost Adjustment	(45,429,003)	29,575,980	50,167,078	52,300,885	77,855,180
Gross Power Sales	\$391,024,111	\$444,414,338	\$462,251,982	\$417,522,144	\$399,256,180
(Over)/Under Recovered Fuel Cost	37,041,989	(42,844,350)	1,694,077	(930,497)	2,193,112
Other Operating Revenues ²	13,866,452	12,485,554	11,213,267	13,835,208	9,573,441
Rate Stabilization Fund	(21,000,000)	-	-	-	-
Total Operating Revenues	\$420,932,552	\$414,055,542	\$475,159,326	\$430,426,855	\$411,022,733
Operating Expenses:					
Fuel-Coal	\$61,521,520	\$79,481,496	\$98,999,035	\$114,493,186	\$102,204,705
Fuel-Gas	58,261,865	64,322,618	72,948,083	56,131,007	49,208,936
Purchased Power	78,339,797	44,525,854	80,171,737	32,091,910	29,831,445
Electric Production (excluding fuel)					
Grand River Energy Center					
GREC 1	10,362,387	10,969,136	10,852,066	11,286,305	9,410,565
GREC 2 ³	11,164,680	13,951,800	15,266,538	13,562,331	15,401,528
Redbud Plant ⁴	8,369,006	5,459,108	10,622,173	6,347,489	5,198,883
Pensacola Hydro	7,028,198	5,043,530	4,215,985	4,280,732	2,617,604
Markham Ferry Hydro	3,923,825	3,228,177	3,228,603	3,655,258	2,937,972
Salina Pumped Storage	2,354,965	2,293,119	1,389,162	1,446,098	1,129,542
GRDA Police ⁵	-	-	2,018,368	2,254,759	1,400,245
Transmission	25,530,658	24,751,487	22,156,462	21,269,859	17,065,903
Transmission of Electric by Others	17,157,631	14,459,003	12,876,319	11,703,903	8,251,227
Administrative & General ⁶	16,048,057	13,201,268	15,530,402	16,361,145	27,120,506
Water Production	484,794	754,286	469,641	310,558	408,863
Total Operating Expenses	\$300,547,383	\$282,440,882	\$350,744,574	\$295,194,540	\$272,187,924
Net Operating Revenues	\$120,385,169	\$131,614,660	\$124,414,752	\$135,232,315	\$138,834,809
Other Income ⁷	12,265,711	8,656,223	20,570,370	6,835,884	12,778,212
Net Revenues Available for Debt Service	\$132,650,880	\$140,270,883	\$144,985,122	\$142,068,199	\$151,613,021
Rate Stabilization Fund	21,000,000	-	-	-	-
Other Available Funds ⁸	-	-	13,703,911	7,539,167	4,000,000
Total Funds Available for Debt Service	\$153,650,880	\$140,270,883	\$158,689,033	\$149,607,366	\$155,613,021
Debt Service	74,915,875	75,501,064	77,599,134	110,116,054	130,747,187
Available for Capital Improvements or Other Authorized Purposes	\$78,735,005	\$64,769,819	\$81,089,899	\$39,491,312	\$24,865,834
Debt Service Coverage (Total Avail. Funds)⁹	2.05	1.86	2.04	1.36	1.19

Continuing Disclosure Requirements (xviii): Historical Operating Results

¹ Excludes interdepartmental sales and expenses. Also excludes depreciation, which is not included in Operating Expenses, as defined in the General Bond Resolution 5107, and does not require a cash outlay.

² Beginning in 2016, Sales of Water are excluded from Other Operating Revenue

³ For 2012 through 2015, reflects the Authority's 62% ownership of GREC 2. Effective January 1, 2016, reflects GRDA's 100% ownership.

⁴ Reflects the Authority's 36% undivided ownership of Redbud combined-cycle natural gas fired plant near Luther, Oklahoma.

⁵ In 2015, GRDA began allocating GRDA Police to other operating expenses for each business unit.

⁶ In 2013, GRDA began allocating employee benefits and non-productive pay such as annual, holiday and sick leave along with direct pay as a labor burden in order to better prepare for the SPP Integrated Market, which went live March 1, 2014.

⁷ Consists primarily of interest income. 2014 includes Contribution in Aid of Construction of \$12.7 million. Excludes change in fair value on instruments, interest income restricted for special purposes and capitalized construction interest.

⁸ Other Available Funds consisted of excess funds from the Debt Service Reserve Fund that were used for Debt Service Payments.

⁹ Total Funds Available for Debt Service divided by Debt Service.

Selected Cash and Investment Fund Balances
(Unaudited)

	2016	2015	2014	2013	2012
<u>Unrestricted</u>					
Revenue Fund and General Reserve Fund	\$175,088,943	\$173,842,198	\$158,052,673	\$85,793,846	\$65,680,834
<u>Board Designated</u>					
In the General Reserve Fund:					
Supplemental Reserve for Environmental Costs	22,500,000	22,500,000	22,500,000	22,500,000	22,500,000
Supplemental Reserve for Unforeseen Risks	16,349,000	15,766,000	11,133,000	14,000,000	15,000,000
<u>Other Special Purposes</u>					
Pensacola Fish & Wildlife Mitigation Fund ¹	2,350,982	2,451,663	1,044,351	915,224	735,886
The Nature Conservancy Fund ²	27,000	27,000	27,000	27,000	14,089
Certificate of Deposit for SPP Line of Credit ³	-	-	4,250,000	1,000,000	-
<u>Restricted</u>					
Debt Service Reserve Account ⁴	86,628,908	89,208,703	88,451,195	133,476,142	141,810,137
Construction Account	78,733,893	328,410,668	518,754,428	202,530,697	232,617,067
Debt Service Account	18,524,343	18,238,867	17,705,259	33,526,718	56,886,806
Rate Stabilization Fund	21,000,000	-	-	-	-
Total Cash and Investments	\$421,203,069	\$650,445,099	\$821,917,906	\$493,769,627	\$535,244,819

Continuing Disclosure Requirements (xix): Selected Cash and Investment Fund Balances

¹ Required by Pensacola Dam operating license.

² Required by Pensacola Dam operating license to be funded up to a balance of \$27,000 on January 1 of each year to provide assistance to the Nature Conservancy for certain endangered species.

³ Required by Southwest Power Pool (SPP) to participate in the Integrated Market. Changed to an unsecured Line of Credit in 2015.

⁴ Deposits and interest receivable to this account, not legally restricted, has been reclassified as unrestricted and included in the General Reserve Fund.

**Cash Reserves (In Millions), Days Cash on Hand,
And Fixed Charge Coverage**
(Unaudited)

	2016	2015	2014	2013	2012
General Operating Unrestricted	\$175.1	\$173.8	\$158.1	\$85.8	\$65.7
Board Designated	38.8	38.3	33.6	36.5	37.5
Rate Stabilization Fund	21.0	-	-	-	-
Other Special Purpose	2.4	2.5	5.3	1.9	0.7
Total	\$237.3	\$214.6	\$197.0	\$124.2	\$103.9
Days Cash on Hand (General and Board Designated)	285	274	199	151	138
Fixed Charge Coverage	1.97	1.81	1.99	1.35	1.19

Continuing Disclosure Requirements (xx): Cash Reserves (In Millions), Days Cash on Hand, and Fixed Charge Coverage

Grand River Energy Center (GREC)
Capacity Factors
(Unaudited)

Year	GREC 1	GREC 2
2012	61.0%	56.0%
2013	56.0%	75.0%
2014	47.0%	56.0%
2015	47.0%	39.0%
2016	39.0%	14.0%

Continuing Disclosure Requirements (ii): GREC Capacity Factors

Equivalent Availability Percentages
Coal-Fired Plants
(Unaudited)

Year	GREC 1	GREC 2	NERC ¹
2012	88.2%	66.1% ²	82.2%
2013	76.5%	84.5%	83.3%
2014	79.0%	78.6%	81.4%
2015	88.8%	64.4% ²	82.3%
2016	77.4%	27.4% ³	NA ⁴

Continuing Disclosure Requirements (iii): Equivalent Availability Percentages-Coal Fired Plants

¹ Percentages from NERC Website for Coal Primary Units with 400-599MW Nameplate.

² Reflects scheduled major maintenance overhauls.

³ Reflects outage beginning July 1 through December 31, 2016, due to impairment of unit caused by fire.

⁴ Not Available.

GREC Delivered Cost of Energy
(dollars per million BTU)
(Unaudited)

Year	Coal
2012	\$2.26
2013	2.27
2014	2.28
2015	2.12
2016	2.20

*Continuing Disclosure Requirements (iv): GREC
Delivered Cost of Energy*

Equivalent Availability Percentages
Redbud Generating Facility
(Unaudited)

Year	Redbud 1 ¹	Redbud 2 ¹	Redbud 3 ¹	Redbud 4 ¹	NERC ²
2012	91.6%	90.9%	94.7%	73.2%	85.7%
2013	96.5%	69.9%	75.5%	97.0%	85.5%
2014	67.3%	94.1%	91.3%	74.2%	83.3%
2015	81.5%	86.8%	89.3%	91.6%	84.6%
2016	86.9%	86.8%	84.2%	87.7%	NA ³

Continuing Disclosure Requirements (v): Equivalent Availability Percentages-Redbud Generating Facility

¹ Percentages provided by Oklahoma Gas and Electric Company (Redbud Operator/Majority Owner).

² Percentages from NERC Website for Combined Cycle Units All Sizes.

³ Not Available.

Operating Revenues
For Twelve Months Ending December 31, 2016
(Unaudited)

	SALES (1000 KWH)	BASE REVENUES (BEFORE PCA)	TOTAL REVENUES (AFTER PCA)
Municipal Power Sales	3,192,044	\$164,287,568	\$147,221,378
Industrial and Commercial Power Sales	1,769,842	89,478,086	80,187,882
Electric Cooperative Power Sales	621,128	36,058,789	32,830,013
Sub-Total Load Following Contract Power Sales	5,583,014	\$289,824,443	\$260,239,273
Off System Power Sales - Firm	2,978,366	142,177,129	126,333,296
(Over)/Under Recovered Fuel Cost	-	-	37,041,989
Other Power Sales ¹	10,125	1,245,086	1,245,086
Total Contract Power Sales	8,571,505	\$433,246,658	\$424,859,644
Off System Power Sales - Spot	191,999	3,206,456	3,206,456
Total Power Sales	8,763,504	\$436,453,114	\$428,066,100
Other Operating Revenues ²	-	13,866,452	13,866,452
Rate Stabilization Fund	-	(21,000,000)	(21,000,000)
Total Operating Revenues³	8,763,504	\$429,319,566	\$420,932,552

Continuing Disclosure Requirements (vi): Operating Revenues

¹ Includes sales to Oklahoma Municipal Power Authority (OMPA). OMPA's portion includes fuel cost, fixed and variable operating expenses, administrative and general expenses and capital improvements.

² Sales of Water are excluded from Other Operating Revenues.

³ Does not reflect Interdepartmental Power Sales.

Municipal Revenues
For Twelve Months Ending December 31, 2016
(Unaudited)

CUSTOMER	CUSTOMER SINCE	CONTRACT EXPIRES	% REVENUES	AUTHORITY REVENUES ⁴
City of Coffeyville, Kansas	1999	2042	8%	\$32,930,129
Stillwater Utilities Authority	1987	2042	6	24,441,098
Claremore Public Works Authority	1946	2042	3	14,714,256
City of Siloam Springs, Arkansas	1989	2042	3	12,643,146
Tahlequah Public Works Authority	1947	2042	2	10,098,770
Miami Public Utilities Board	1947	2042	2	9,274,949
Sallisaw Municipal Authority	1952	2042	2	6,122,985
Byng Public Works Authority	1990	2017	1	5,894,918
Cushing Municipal Authority	1953	2042	1	5,886,478
City of Pryor Creek Municipal Utility Board	1951	2042	1	5,242,943
Wagoner Public Works Authority	1947	2042	1	4,182,589
Stilwell Area Development Authority	1950	2042	1	3,925,051
Collinsville Municipal Authority	2003	2042	1	2,600,573
Skiatook Public Works Authority	1977	2042	1	2,287,392
Mannford Public Works Authority	2003	2042	1	2,012,708
Stroud Utilities Authority	1986	2042	-	1,673,000
Lindsay Public Works Authority	2000	2025	-	1,407,014
Pawnee Public Works Authority	1953	2042	-	1,149,813
Chickasaw Tribal Utilities Authority	1992	2017	-	733,566
Total Municipal Power Sales			34%	\$147,221,378

Continuing Disclosure Requirements (vii): Municipal Revenues

⁴ Represents revenues after power cost adjustment (PCA).

Industrial and Commercial Revenues
For Twelve Months Ending December 31, 2016
(Unaudited)

CUSTOMER	PRODUCT	CUSTOMER SINCE	CONTRACT EXPIRES	% REVENUES	AUTHORITY REVENUES ¹
Google	Internet Search Engine	2007	2020	9%	\$39,138,472
Pryor Chemical Company	Chemical Products	2004	2017	3	10,578,477
Solae, LLC	Food Supplements	1975	2017	1	5,938,958
Air Products Manufacturing Corporation	Industrial Gases	1976	2020	1	4,689,561
Orchids Paper Products Company	Paper Products	1975	2017	1	3,743,077
National Gypsum Company	Building Products	1950	2019	1	2,945,200
American Castings, LLC	Iron Castings	2003	2017	1	2,883,428
Berry Plastics-Central Region	Plastic Bags	1990	2018	1	2,376,209
Walmart	Distribution Center	2005	2016	-	1,052,386
Cabot Norit Americas Inc	Chemical Products	1996	2017	-	770,616
All Other Industrial (24)				1	5,635,217
All Other Commercial (49)				-	436,281
Total Industrial and Commercial Power Sales				19%	\$80,187,882

Continuing Disclosure Requirements (viii): Industrial and Commercial Revenues

¹ Represents revenues after power cost adjustment (PCA).

Electric Cooperative Revenues
For Twelve Months Ending December 31, 2016
(Unaudited)

CUSTOMER	CUSTOMER SINCE	CONTRACT EXPIRES	% REVENUES	AUTHORITY REVENUES ²
Northeastern Electric Cooperative, Inc.	1946	2017	8%	\$32,830,013
Total Electric Cooperative Power Sales				8%

Continuing Disclosure Requirements (ix): Electric Cooperative Revenues

Contract expired May 31, 2017, and was not renewed.

² Represents revenues after power cost adjustment (PCA).

Off System Revenues - Firm
For Twelve Months Ending December 31, 2016
(Unaudited)

CUSTOMER	CUSTOMER SINCE	CONTRACT EXPIRES	% REVENUES	AUTHORITY REVENUES ³
Western Farmers Electric Cooperative (WFEC) ⁴	2010	2025	13%	\$56,168,253
Kansas Municipal Energy Agency	2000	2026	6	23,965,328
Paragould, Arkansas, Light and Water Commission	1992	2038	5	22,343,175
Oklahoma Municipal Power Agency ⁵	2007	2040	3	12,597,232
City of Poplar Bluff, Missouri	1992	2039	3	11,259,308
Total Off System Power Sales - Firm				30%

Continuing Disclosure Requirements (x): Off System Revenues-Firm

³ Represents revenues after power cost adjustment (PCA).

⁴ The Authority and WFEC entered an interchange agreement for emergency and replacement energy exchanges in 1983.

Off-System Firm Sales began in 2010.

⁵ Sales began in 1985 with a unit contingent output agreement from GREC 2. Off-System Firm Sales began in 2007.

Other Revenues: Unit Output Agreement
For Twelve Months Ending December 31, 2016
(Unaudited)

CUSTOMER	CUSTOMER SINCE	CONTRACT EXPIRES	% REVENUES	AUTHORITY REVENUES
Oklahoma Municipal Power Agency ¹	1985	2036	0%	\$1,245,086
Total Other Power Sales			0%	\$1,245,086

Continuing Disclosure Requirements (xi): Other Revenues-Unit Output Agreement

¹ These sales include its share of Authority fuel costs, fixed and variable operating expenses, administrative and general expenses and capital improvements.

Off System Revenues:Spot
For Twelve Months Ending December 31, 2016
(Unaudited)

CUSTOMER	REVENUES				
	2016	2015	2014	2013	2012
Southwest Power Pool	\$3,206,456	\$9,796,229	\$2,417,239	\$3,762,625	\$3,406,876
Associated Electric Cooperative Inc.	-	-	6,550	512,085	378,967
Western Farmers Electric Cooperative	-	-	-	47,410	14,040
All Others	-	-	326,061	1,185,562	145,644
Total Off System Power Sales - Spot	\$3,206,456	\$9,796,229	\$2,749,850	\$5,507,682	\$3,945,527

Continuing Disclosure Requirements (xii): Off System Revenues-Spot

Other Operating Revenues
For Twelve Months Ending December 31, 2016
(Unaudited)

SOURCE	REVENUES				
	2016	2015	2014	2013	2012
Base Plan Funded Transmission Revenues	\$11,204,681	\$8,749,560	\$7,694,908	\$9,240,060	\$6,175,039
Other Transmission and Ancillary Services	682,531	2,395,693	1,462,103	2,117,043	1,733,246
Renewable Energy Certificates	786,707	593,516	697,344	678,840	24,844
Other Operating Revenues²	1,192,533	746,785	1,358,912	1,799,265	1,640,312
Total Other Operating Revenues	\$13,866,452	\$12,485,554	\$11,213,267	\$13,835,208	\$9,573,441

Continuing Disclosure Requirement (xiii): Other Operating Revenues

² Sales of Water are excluded from Other Operating Revenue.

Average Annual Contract Sales Price (Cents/kWh)
(Unaudited)

	2016	2015	2014	2013	2012
Average Annual Base Rate	5.05	4.88	4.89	4.57	4.22
Average Annual PCA	(0.53)	0.36	0.61	0.68	1.06
Average Annual Total	4.52	5.24	5.50	5.25	5.28

Continuing Disclosure Requirements (xiv): Average Annual Contract Sales Price

Historical Energy Resources (MWH)
(Unaudited)

Year	Run-of-River	Pumped-Storage	Combined-	Coal-Fired	Long-Term	Other	Municipals'	Total Resources
	Hydro Generation	Hydro Generation	Cycle Gas Generation	Thermal Generation	Wind Purchase	Purchased Power	SPA Allocation ¹	
2012	284,048	150,566	2,362,192	4,222,926	18,329	964,528	25,707	8,028,296
2013	711,789	104,040	1,968,570	4,526,724	169,710	858,973	29,991	8,369,797
2014	325,372	129,333	2,137,660	3,595,061	174,336	2,478,267	23,914	8,863,943
2015	873,816	67,972	2,837,754	3,120,808	329,699	1,624,113	39,885	8,894,047
2016	726,954	89,060	2,625,974	2,306,516	981,175	2,318,847	36,543	9,085,069

Continuing Disclosure Requirements (xv): Historical Energy Resources

¹ GRDA is the scheduling agent for Skiatook's and Coffeyville's allocation of SPA (Southwestern Power Administration) hydro power.

GRDA Historic Dispatch (GWh)
(Unaudited)

	2016	2015	2014	2013	2012
GREC 1	1,672.822	2,014.725	2,005.519	2,418.630	2,637.936
GREC 2	633.694	1,106.083	1,589.542	2,108.094	1,584.990
Redbud	2,625.974	2,837.754	2,137.660	1,968.570	2,362.192
Pensacola	475.255	526.139	214.107	458.051	188.430
Markham Ferry	251.699	347.677	111.265	253.738	95.618
Salina	89.060	67.972	129.333	104.040	150.566
Wind Purchases	981.175	329.699	174.336	169.710	18.329
Other Purchases	2,355.390	1,663.998	2,502.181	888.964	990.235
Total	9,085.069	8,894.047	8,863.943	8,369.797	8,028.296

Continuing Disclosure Requirements (i): GRDA Historic Dispatch (GWh)

Historical Demand Requirements and Resources (MW) (Unaudited)

Year	Contract Demand Requirements			Rated Capability of Resources							
	Contract Peak Demand	Required Capacity Margin ¹	Contract Demand plus Required Margin	Run-of-River Hydro Generation ²	Pumped-Storage Hydro Generation ³	Combined-Cycle Gas Generation ⁴	Coal-Fired Thermal Generation ⁵	Purchased Power ⁶	Wind Capacity ⁷	Municipals' SPA Allocation ⁸	Total Resources
2012	1,449	197	1,646	213	260	416	812	78	1	13	1,793
2013	1,387	189	1,576	254	260	416	812	111	1	13	1,867
2014	1,420	193	1,613	254	260	439	812	111	1	13	1,890
2015	1,406	191	1,597	254	260	439	812	111	12	13	1,901
2016	1,531	208	1,739	254	258	439	1,010	142	17	13	2,133

Continuing Disclosure Requirements (xvi): Historical Demand Requirements and Resources (MW)

¹ Minimum Required Capacity Margin is 13.6% of contract peak demand or 12% of system capacity per SPP Criteria 2.1.9.

² The total of Pensacola and Markham Ferry capability.

³ The Salina Pumped Storage capacity of 258 MW is limited to 25% daily plant factor operation and therefore suitable for peaking operations only. On June 1, 2016, the nameplate rating for Units #5 and #6 were revised from 44 MW to 43 MW.

⁴ Includes the Authority's 36% ownership interest in the 1,230 MW Redbud combined-cycle natural gas fired plant near Luther, Oklahoma purchased October 1, 2008.

Actual capacity (442.8, 36 % of 1230) is dependent on weather temperature and is reported as 457 Winter (Jan-May and Oct-Dec) and 439 Summer (Jun-Sep) on FERC 714.

⁵ Includes the Authority's 100% interest in GREC 1. Includes GRDA's 62% interest in GREC 2 2007 through 2015. Effective January 1, 2016, reflects GRDA's 100% ownership.

⁶ Includes 56 MW capacity contract with City of Coffeyville, KS, 21 MW capacity contract with Cushing Municipal Authority, and 64 MW capacity contract with Stillwater Utilities Authority.

⁷ Includes 4.905 MW capacity of the 99 MW nameplate rating from Breckinridge, 4.945 MW of capacity of the 98.9 MW nameplate rating from Kay, and 7 MW capacity of the 48 MW nameplate rating of Canadian Hills.

⁸ GRDA is the scheduling agent for Skiatook's and Coffeyville's allocation of SPA (Southwestern Power Administration) hydro power.

Historical Sales by Customer Group (MWH) (Unaudited)

Year	Cooperative	Municipal	Industrial	Off System			Contract Power Sales	Off System Spot	Total Power Sales			Total Requirements
				Firm	Other ⁹	Other ¹⁰			Pumping	Other ¹⁰		
2012	602,781	3,184,093	1,056,978	2,552,525	36,401	7,432,778	170,759	7,603,537	267,276	157,483	8,028,296	
2013	630,015	3,193,662	1,022,471	2,943,886	49,597	7,839,631	180,004	8,019,635	198,553	151,609	8,369,797	
2014	640,025	3,266,293	1,287,651	3,074,595	96,537	8,365,101	79,648	8,444,749	235,935	183,259	8,863,943	
2015	620,160	3,156,468	1,467,245	2,985,668	12,497	8,242,038	343,271	8,585,309	142,563	166,175	8,894,047	
2016	621,128	3,192,044	1,769,842	2,978,366	10,125	8,571,505	191,999	8,763,504	178,286	143,279	9,085,069	

Continuing Disclosure Requirements (xvii): Historical Sales by Customer Group (MWh)

⁹ GREC 2 Output Power Sales to Oklahoma Municipal Power Authority.

¹⁰ GRDA internal use and system losses.