Grand River Dam Authority

Rate Formula Template

Index of Worksheets

Year: 2010

	Worksheet	Description
1	Worksheet	Description
2	Calculation	Calculation of Transmission Revenue Requirement
3	Worksheet A	Operations & Maintenance Expenses
4	Worksheet B	Taxes Other Than Income Taxes
5	Worksheet C	Debt Service
6	Worksheet D	Revenue Credits
7	Worksheet E	Net Plant in Service
8	Worksheet F	System Load
9	Worksheet G	Allocation Factors
10	Worksheet H	Base Plan Fixed Charge Rate
11	Worksheet I	Base Plan Rate of Return
12	Worksheet J	Summary of Base Plan Projects' Revenue Requirement
13	Worksheet K1	Base Plan Upgrade Template for Project #1
14	Worksheet K2	Base Plan Upgrade Template for Project #2
15	Worksheet K3	Base Plan Upgrade Template for Project #3
16	Worksheet K4	Base Plan Upgrade Template for Project #4

Grand River Dam Authority
Rate Formula Template
Year Ending December 31, 2010

Line No	Description	Reference		Total
	A. Network Service			
1	GRDA Zonal Revenue Requirement	Revenue Req't Calc, L20		21,196,230
	B. Point-To-Point Service			
2	DIVISOR			
3	Transmission Network Load (kW)	Worksheet F, L14 * 1,000		696,167
4	RATES			
5	Annual Point-to-Point Cost ($/kW-Yr)	L1 / L3	$	30.45
6	Monthly Point-to-Point ($/kW-Month)	L4 / 12 months	$	2.54
7	Weekly Point-to-Point ($/kW-Week)	L4 / 52 weeks	$	0.59
8	Daily On-Peak Point-to-Point ($/kW-Day)	L7 / 5 days	$	0.12
9	Daily Off-Peak Point-to-Point ($/kW-Day)	L7 / 7 days	$	0.08
10	Hourly On-Peak Point-to-Point ($/MWh)	L8 / 16 hours * 1,000	$	7.32
11	Hourly Off-Peak Point-to-Point ($/MWh)	L9 / 24 hours * 1,000	$	3.49
	C. Base Plan Upgrade			
12	Base Plan Revenue Requirement	Worksheet J, L7		3,976,086

Grand River Dam Authority
Calculation of Revenue Requirement
Year Ending December 31, 2010

Line No	Description	Reference	Total Company	Allocation Factor	Allocation %	Total Transmission
1	Transmission O&M	Worksheet A, L13	12,397,855	T-O&M	66.1%	8,194,687
2	Consumer Accounts	Worksheet A, L24	908,891	T-Wages	22.4%	203,410
3	Admin & General Expense	Worksheet A, L37	23,560,122	T-Wages	22.4%	5,272,752
4	Total O&M and A&G Expense	SUM(L1…L3)	36,866,868			13,670,850
5						
6	Taxes Other Than Income	Worksheet B, L3	-			-
7						
8	Transmission Debt Service	Worksheet C, L3	130,925,016	T-Net	10.3%	13,439,269
9	Debt Service Coverage		1.20			1.20
10	Margin Requirement		26,185,003			2,687,854
11						
12	Subtotal Revenue Requirement	L4 + L6 + L8 + L10	193,976,887			29,797,972
13						
14	Revenue Credits	Worksheet D, L1	4,625,656	Direct	100.0%	4,625,656
15						
16	Revenue Requirement	L12 - L14				25,172,316
17						
18	Base Plan Revenue Requirement	Worksheet J, L7				3,976,086
19						
20	Zonal Revenue Requirement	L16 - L18				21,196,230

Grand River Dam Authority
Worksheet A, Operation & Maintenance Expenses
Year Ending December 31, 2010

Line No	Account Number	Description	Total Company	Allocation Factor	Allocation %	Total Transmission
1		Transmission Operation & Maintenance Expenses				
2	560	Operation Supervision and Engineering	$ 300,563	Direct	100.0%	$ 300,562.56
3	561	Load Dispatching	$ 1,916,380	Direct	100.0%	1,916,379.59
4	562	Station Expenses	$ 408,653	Direct	100.0%	408,652.88
5	563	Overhead Line Expenses	$ 378,901	Direct	100.0%	378,901.17
6	565	Transmission of Electricity by Others	$ 4,203,168	Direct	0.0%	-
7	566	Miscellanous Transmission Expenses	$ 491,507	Direct	100.0%	491,506.89
8	568	Maint Supervision & Engineering	$ 333,890	Direct	100.0%	333,890.12
9	570	Maint of Station Equipment	$ 1,136,456	Direct	100.0%	1,136,456.33
10	571	Maint of Overhead Lines	$ 2,636,467	Direct	100.0%	2,636,466.83
11	573	Maint of Misc Transmission Plant	$ 103,138	Direct	100.0%	103,137.90
12	575	Market Facilitiation Monitoring	$ 488,733	Direct	100.0%	488,733.10
13		Total Transmission O&M	$ 12,397,855.06			$ 8,194,687.37
14						
15						
16		Consumer Accounts Expense				
17	902	Meter Reading Expense	$ 176,470	T-Wages	22.4%	$ 39,494.02
18	903	Customer Records & Collection Expense	$ 224,779	T-Wages	22.4%	50,305.48
19	904	A&G Uncollectible Accounts Expense	$ 8,249	T-Wages	22.4%	1,846.11
20	907	A&G Customer Service Supervision	$ -	T-Wages	22.4%	-
21	908	A&G Customer Assistance Expense	$ 134,387	T-Wages	22.4%	30,075.87
22	909	A&G Informational Advertising Expense	$ 326,638	T-Wages	22.4%	73,101.44
23	910	A&G Misc Service & Information Expense	$ 38,368	T-Wages	22.4%	8,586.85
24		Total Consumer Accounts Expense	$ 908,891.31			$ 203,409.77
25						
26		Administrative & General Expenses				
27	920	A&G Salaries Expense	$ 3,241,865	T-Wages	22.4%	725,529.06
28	921	A&G Office Supplies & Expense	$ 730,226	T-Wages	22.4%	163,424.43
29	922	A&G Adm Expense Transferred-Credit	$ (844,979)	T-Wages	22.4%	(189,106.29)
30	923	A&G Outside Services Employed	$ 3,029,868	T-Wages	22.4%	678,084.10
31	924	A&G Property Insurance	$ 1,303,178	T-Wages	22.4%	291,650.97
32	925	A&G Injuries & Damages	$ 1,882,887	T-Wages	22.4%	421,389.81
33	926	A&G Employee Pension & Benefits	$ 12,594,040	T-Wages	22.4%	2,818,544.66
34	928	A&G Regulatory Pension & Benefits	$ 742,437	T-Wages	22.4%	166,157.20
35	930	A&G Miscellaneous General Expense	$ 339,996	T-Wages	22.4%	76,091.03
36	935	A&G Maintenance of General Plant	$ 540,606	T-Wages	22.4%	120,987.47
37		Total A&G Expense	$ 23,560,121.83			$ 5,272,752.42
38						
39		Total O&M and A&G Expenses	$ 36,866,868.20			$ 13,670,849.56

Grand River Dam Authority
Worksheet B, Taxes Other Than Income Taxes
Year Ending December 31, 2010

Line No	Account Number	Description	Total Company	Allocation Factor	Allocation %	Total Transmission
1		Payroll Taxes	-	T-Wages	22.4%	-
2		Property Taxes	-	T-Plant	13.7%	-
3		Total Taxes Other Than Income Taxes	-			-

Grand River Dam Authority
Worksheet C, Debt Service
Year Ending December 31, 2010

Line No	Description	Total Company	Allocation Factor	Allocation %	Total Transmission
1	Principal Payments on Debt	87,427,504	T-Net	10.3%	8,974,310
2	Interest Payments on Debt	43,497,512	T-Net	10.3%	4,464,958
3	Total Debt Service	$ 130,925,016			$ 13,439,269

Grand River Dam Authority
Worksheet D, Revenue Credits
Year Ending December 31, 2010

Line No	Account Number	Description	Total Company	Allocation Factor	Allocation %	Total Transmission
1	456-00	Wheeling Revenues	4,625,656	Direct	100.0%	4,625,656

Grand River Dam Authority
Worksheet E, Calculation of Rate Base
Year Ending December 31, 2010

Line No	Description	Total Company	Allocation Factor	Allocation %	Total Transmission
1	Plant in Service				
2	Production Plant	1,124,397,945	Direct	0.0%	-
3	Transmission	179,874,951	Direct	100.0%	179,874,951
4	Distribution Plant	50,397,948	Direct	0.0%	-
5	General Plant	71,359,945	T-Wages	22.4%	15,970,347
6	Total Plant in Service	1,426,030,789			195,845,298
7					
8	Accumulated Depreciation				
9	Production Plant	556,964,032	Direct	0.0%	-
10	Transmission	114,577,732	Direct	100.0%	114,577,732
11	Distribution Plant	12,785,699	Direct	0.0%	-
12	General Plant	42,366,565	T-Wages	22.4%	9,481,632
13	Total Accum Deprec	726,694,028			124,059,364
14					
15	Net Plant in Service				
16	Production Plant	567,433,913			-
17	Transmission	65,297,219			65,297,219
18	Distribution Plant	37,612,249			-
19	General Plant	28,993,380			6,488,715
20	Net Plant in Service	699,336,761			71,785,934

Grand River Dam Authority
Worksheet F, Network Load
Year Ending December 31, 2010

Line No	Description	Date & Time	Demand (MW)
1	January	01/08/10 8:00	729.0
2	February	02/09/11 8:00	666.0
3	March	03/03/10 8:00	607.0
4	April	04/15/10 17:00	553.0
5	May	05/28/10 17:00	711.0
6	June	06/23/10 17:00	813.0
7	July	07/15/10 16:00	813.0
8	August	08/11/10 17:00	884.0
9	September	09/10/10 16:00	766.0
10	October	10/08/10 17:00	576.0
11	November	11/30/10 11:00	582.0
12	December	12/13/10 8:00	654.0
13	Total (MW-Mo)	SUM (L1..L12)	8,354.0
14	Average (MW-Mo)	AVERAGE (L1..L12)	696.2

Grand River Dam Authority
Worksheet G, Allocation Factors
Year Ending December 31, 2010

Line No	Description	Reference		Total
1	Production Wages		$	21,094,081
2	Transmission Wages		$	6,208,986
3	Distribution Wages		$	440,406
4	Total Wages, excluding A&G		$	27,743,474
5	**T-Wages Allocation**			**22.4%**
6				
7	Total Transmission O&M	Worksheet A		12,397,855
8	Allocated to Transmission			8,194,687
9	**T-O&M Allocation**			**66.1%**
10				
11	Total Plant in Service	Worksheet E		1,426,030,789
12	Transmission Plant in Service			195,845,298
13	**T-Plant Allocation**			**13.7%**
14				
15	Total Net Plant in Service	Worksheet E		699,336,761
16	Transmission Net Plant			71,785,934
17	**T-Net Allocation**			**10.3%**

Grand River Dam Authority
Worksheet H, Base Plan Upgrades Fixed Charge Rate
Year Ending December 31, 2010

Line No	Description	Reference	Total
1	GRDA Transmission Revenue Requirement	Rev Req't Calculation, L16	25,172,316
2	Net Plant in Service - Transmission	Worksheet E, L20	71,785,934
3	BPU Fixed Charge Rate w/o Depreciation (w/o incentives)	L1 / L2	35.07%
4			
5	Incentive (basis points)		50
6	Increased in Rate of Return	Worksheet H, L20	0.15%
7			
8	BPU FCR w/o Depreciation (w/ incentives)	L3 + L6	35.21%

Grand River Dam Authority
Worksheet I, Incentive Rate of Return
Year Ending December 31, 2010

Line No	Description	Reference	Total
1	Total Debt Service	Worksheet C, L3	130,925,016
2	Minimum DSC	Rev Req't Calculation, L9	1.20
3	Total Margin	L1 * (L2 - 1)	26,185,003
4	Net Plant in Service	Worksheet E, L20	699,336,761
5	Weighted Cost of Equity	L3 / L4	3.74%
6			
7	Interest on Long-Term Debt	Worksheet C, L2	43,497,512
8	Total Long-Term Debt		997,997,959
9	Weighted Cost of Debt	L7 / L8	4.36%
10			
11	Imputed Rate of Return, no incentives	L5 + L9	8.10%
12			
13	Net Assets		416,758,421
14	Total Capitalization	L8 + L13	1,414,756,380
15	Imputed Return on Equity	L5 / (L13 / L14)	12.71%
16	50 Basis Point Adder		13.21%
17			
18	Rate of Return with 50 BP incentive	L16 * L13 / L14 + L9	8.25%
19			
20	Increase with Incentive	L18 - L11	0.15%

Grand River Dam Authority
Worksheet J, Summary of Base Plan Projects
Year Ending December 31, 2010

Line No	Description	Reference	w/ Incentives?	Revenue Req't
1	XFR-Stilwll City 161/69 kV, Cost Estimate of $2.2 million NTC 19991, PID 51, UID 10069 (W.O. RF005-00170)	Worksheet K1	No	692,932
2	Line - 412 Sub - Kansas Tap 161 kV, Cost Estimate $2,971,180 NTC 20001, PID 121, UID 10151 (W.O. RF07-00247)	Worksheet K2	No	1,241,370
3	Line - Kerr - 412 Sub 161 kV Rebuild, Cost Estimate $950,000 NTC 20001, PID 300, UID 10387 (W.O. RF007-00248)	Worksheet K3	No	283,987
4	XFR - Claremore 161/69 kV autos 1 & 2, Cost Estimate $5,050,127 NTC 20028, PID 233, UID 10298 (W.O. RF007-00263)	Worksheet K5	No	1,757,798
5				
6				
7	Total	SUM (L1…L6)		$ 3,976,086

Grand River Dam Authority
Worksheet K1 -- GRDA Base Plan Upgrade #1
Year Ending December 31, 2010

Line No	Description	XFR-Stilwll City 161/69 kV, Cost Estimate of $2.2 million NTC 19991, PID 51, UID 10069 (W.O. RF005-00170)		
1	Investment	$ 2,008,641	Current Year	2010
2	Service Year (yyyy)	2007	Incentive ROE increase (basis points)	50
3	Service Month (1-12)	6	FCR w/o incentives, less depreciation	35.07%
4	Useful Life	40	FCR w/ incentives, less depreciation	35.21%
5	CIAC (Yes or No)	No	Annual Depreciation Expense	$ 50,216

	Investment Year	Year #	Beginning Balance	Depreciation Expense	Ending Balance	BPU Rev Req w/o Incentives	BPU Rev Req w/ incentives
6	2007	1	$ 2,008,641	$ 25,108	$ 1,983,533	$ 372,879	$ 374,340
7	2008	2	$ 1,983,533	$ 50,216	$ 1,933,317	$ 728,149	$ 730,997
8	2009	3	$ 1,933,317	$ 50,216	$ 1,883,101	$ 710,541	$ 713,314
9	2010	4	$ 1,883,101	$ 50,216	$ 1,832,885	$ 692,932	$ 695,632
10	2011	5	$ 1,832,885	$ 50,216	$ 1,782,669	$ 675,323	$ 677,949
11	2012	6	$ 1,782,669	$ 50,216	$ 1,732,453	$ 657,715	$ 660,266
12	2013	7	$ 1,732,453	$ 50,216	$ 1,682,237	$ 640,106	$ 642,584
13	2014	8	$ 1,682,237	$ 50,216	$ 1,632,021	$ 622,497	$ 624,901
14	2015	9	$ 1,632,021	$ 50,216	$ 1,581,805	$ 604,889	$ 607,218
15	2016	10	$ 1,581,805	$ 50,216	$ 1,531,589	$ 587,280	$ 589,536
16	2017	11	$ 1,531,589	$ 50,216	$ 1,481,373	$ 569,671	$ 571,853
17	2018	12	$ 1,481,373	$ 50,216	$ 1,431,157	$ 552,063	$ 554,171
18	2019	13	$ 1,431,157	$ 50,216	$ 1,380,941	$ 534,454	$ 536,488
19	2020	14	$ 1,380,941	$ 50,216	$ 1,330,725	$ 516,845	$ 518,805
20	2021	15	$ 1,330,725	$ 50,216	$ 1,280,509	$ 499,237	$ 501,123
21	2022	16	$ 1,280,509	$ 50,216	$ 1,230,293	$ 481,628	$ 483,440
22	2023	17	$ 1,230,293	$ 50,216	$ 1,180,077	$ 464,019	$ 465,758
23	2024	18	$ 1,180,077	$ 50,216	$ 1,129,861	$ 446,411	$ 448,075
24	2025	19	$ 1,129,861	$ 50,216	$ 1,079,645	$ 428,802	$ 430,392
25	2026	20	$ 1,079,645	$ 50,216	$ 1,029,429	$ 411,193	$ 412,710
26	2027	21	$ 1,029,429	$ 50,216	$ 979,212	$ 393,585	$ 395,027
27	2028	22	$ 979,212	$ 50,216	$ 928,996	$ 375,976	$ 377,344
28	2029	23	$ 928,996	$ 50,216	$ 878,780	$ 358,367	$ 359,662
29	2030	24	$ 878,780	$ 50,216	$ 828,564	$ 340,759	$ 341,979
30	2031	25	$ 828,564	$ 50,216	$ 778,348	$ 323,150	$ 324,297
31	2032	26	$ 778,348	$ 50,216	$ 728,132	$ 305,542	$ 306,614
32	2033	27	$ 728,132	$ 50,216	$ 677,916	$ 287,933	$ 288,931
33	2034	28	$ 677,916	$ 50,216	$ 627,700	$ 270,324	$ 271,249
34	2035	29	$ 627,700	$ 50,216	$ 577,484	$ 252,716	$ 253,566
35	2036	30	$ 577,484	$ 50,216	$ 527,268	$ 235,107	$ 235,884
36	2037	31	$ 527,268	$ 50,216	$ 477,052	$ 217,498	$ 218,201
37	2038	32	$ 477,052	$ 50,216	$ 426,836	$ 199,890	$ 200,518
38	2039	33	$ 426,836	$ 50,216	$ 376,620	$ 182,281	$ 182,836
39	2040	34	$ 376,620	$ 50,216	$ 326,404	$ 164,672	$ 165,153
40	2041	35	$ 326,404	$ 50,216	$ 276,188	$ 147,064	$ 147,470
41	2042	36	$ 276,188	$ 50,216	$ 225,972	$ 129,455	$ 129,788
42	2043	37	$ 225,972	$ 50,216	$ 175,756	$ 111,846	$ 112,105
43	2044	38	$ 175,756	$ 50,216	$ 125,540	$ 94,238	$ 94,423
44	2045	39	$ 125,540	$ 50,216	$ 75,324	$ 76,629	$ 76,740
45	2046	40	$ 75,324	$ 50,216	$ 25,108	$ 59,020	$ 59,057
46	2047	41	$ 25,108	$ 25,108	$ -	$ 25,108	$ 25,108
47	2048	42	$ -	$ -	$ -	$ -	$ -
48	2049	43	$ -	$ -	$ -	$ -	$ -
49	2050	44	$ -	$ -	$ -	$ -	$ -
50	2051	45	$ -	$ -	$ -	$ -	$ -
				$ 2,008,641			

Grand River Dam Authority
Worksheet K2 -- GRDA Base Plan Upgrade #2
Year Ending December 31, 2010

Line No	Description	Line - 412 Sub - Kansas Tap 161 kV, Cost Estimate $2,971,180 NTC 20001, PID 121, UID 10151 (W.O. RF07-00247)		
1	Investment	$ 3,523,807	Current Year	2010
2	Service Year (yyyy)	2008	Incentive ROE increase (basis points)	50
3	Service Month (1-12)	4	FCR w/o incentives, less depreciation	35.07%
4	Useful Life	40	FCR w/ incentives, less depreciation	35.21%
5	CIAC (Yes or No)	No	Annual Depreciation Expense	$ 88,095

	Investment Year	Year #	Beginning Balance	Depreciation Expense	Ending Balance	BPU Rev Req w/o Incentives	BPU Rev Req w/ incentives
6	2008	1	$ 3,523,807	$ 58,730	$ 3,465,077	$ 868,768	$ 465,450
7	2009	2	$ 3,465,077	$ 88,095	$ 3,376,982	$ 1,272,261	$ 1,277,235
8	2010	3	$ 3,376,982	$ 88,095	$ 3,288,887	$ 1,241,370	$ 1,246,214
9	2011	4	$ 3,288,887	$ 88,095	$ 3,200,791	$ 1,210,478	$ 1,215,193
10	2012	5	$ 3,200,791	$ 88,095	$ 3,112,696	$ 1,179,587	$ 1,184,172
11	2013	6	$ 3,112,696	$ 88,095	$ 3,024,601	$ 1,148,696	$ 1,153,151
12	2014	7	$ 3,024,601	$ 88,095	$ 2,936,506	$ 1,117,805	$ 1,122,130
13	2015	8	$ 2,936,506	$ 88,095	$ 2,848,411	$ 1,086,913	$ 1,091,109
14	2016	9	$ 2,848,411	$ 88,095	$ 2,760,315	$ 1,056,022	$ 1,060,088
15	2017	10	$ 2,760,315	$ 88,095	$ 2,672,220	$ 1,025,131	$ 1,029,067
16	2018	11	$ 2,672,220	$ 88,095	$ 2,584,125	$ 994,239	$ 998,046
17	2019	12	$ 2,584,125	$ 88,095	$ 2,496,030	$ 963,348	$ 967,025
18	2020	13	$ 2,496,030	$ 88,095	$ 2,407,935	$ 932,457	$ 936,004
19	2021	14	$ 2,407,935	$ 88,095	$ 2,319,840	$ 901,566	$ 904,983
20	2022	15	$ 2,319,840	$ 88,095	$ 2,231,744	$ 870,674	$ 873,961
21	2023	16	$ 2,231,744	$ 88,095	$ 2,143,649	$ 839,783	$ 842,940
22	2024	17	$ 2,143,649	$ 88,095	$ 2,055,554	$ 808,892	$ 811,919
23	2025	18	$ 2,055,554	$ 88,095	$ 1,967,459	$ 778,000	$ 780,898
24	2026	19	$ 1,967,459	$ 88,095	$ 1,879,364	$ 747,109	$ 749,877
25	2027	20	$ 1,879,364	$ 88,095	$ 1,791,269	$ 716,218	$ 718,856
26	2028	21	$ 1,791,269	$ 88,095	$ 1,703,173	$ 685,327	$ 687,835
27	2029	22	$ 1,703,173	$ 88,095	$ 1,615,078	$ 654,435	$ 656,814
28	2030	23	$ 1,615,078	$ 88,095	$ 1,526,983	$ 623,544	$ 625,793
29	2031	24	$ 1,526,983	$ 88,095	$ 1,438,888	$ 592,653	$ 594,772
30	2032	25	$ 1,438,888	$ 88,095	$ 1,350,793	$ 561,762	$ 563,751
31	2033	26	$ 1,350,793	$ 88,095	$ 1,262,698	$ 530,870	$ 532,730
32	2034	27	$ 1,262,698	$ 88,095	$ 1,174,602	$ 499,979	$ 501,709
33	2035	28	$ 1,174,602	$ 88,095	$ 1,086,507	$ 469,088	$ 470,688
34	2036	29	$ 1,086,507	$ 88,095	$ 998,412	$ 438,196	$ 439,667
35	2037	30	$ 998,412	$ 88,095	$ 910,317	$ 407,305	$ 408,646
36	2038	31	$ 910,317	$ 88,095	$ 822,222	$ 376,414	$ 377,625
37	2039	32	$ 822,222	$ 88,095	$ 734,126	$ 345,523	$ 346,604
38	2040	33	$ 734,126	$ 88,095	$ 646,031	$ 314,631	$ 315,583
39	2041	34	$ 646,031	$ 88,095	$ 557,936	$ 283,740	$ 284,562
40	2042	35	$ 557,936	$ 88,095	$ 469,841	$ 252,849	$ 253,541
41	2043	36	$ 469,841	$ 88,095	$ 381,746	$ 221,957	$ 222,520
42	2044	37	$ 381,746	$ 88,095	$ 293,651	$ 191,066	$ 191,499
43	2045	38	$ 293,651	$ 88,095	$ 205,555	$ 160,175	$ 160,478
44	2046	39	$ 205,555	$ 88,095	$ 117,460	$ 129,284	$ 129,457
45	2047	40	$ 117,460	$ 88,095	$ 29,365	$ 98,392	$ 98,436
46	2048	41	$ 29,365	$ 29,365	$ (0)	$ 29,365	$ 29,365
47	2049	42	$ (0)	$ -	$ (0)	$ (0)	$ (0)
48	2050	43	$ (0)	$ -	$ (0)	$ (0)	$ (0)
49	2051	44	$ (0)	$ -	$ (0)	$ (0)	$ (0)
50	2052	45	$ (0)	$ -	$ (0)	$ (0)	$ (0)
				$ 3,523,807			

Grand River Dam Authority
Worksheet K1 -- GRDA Base Plan Upgrade #1
Year Ending December 31, 2009

Line No	Description	Line - Kerr - 412 Sub 161 kV Rebuild, Cost Estimate $950,000 NTC 20001, PID 300, UID 10387 (W.O. RF007-00248)		
1	Investment	$ 869,782	Current Year	2010
2	Service Year (yyyy)	2007	Incentive ROE increase (basis points)	50
3	Service Month (1-12)	6	FCR w/o incentives, less depreciation	33.04%
4	Useful Life	40	FCR w/ incentives, less depreciation	33.19%
5	CIAC (Yes or No)	No	Annual Depreciation Expense	$ 21,745

	Investment Year	Year #	Beginning Balance	Depreciation Expense	Ending Balance	BPU Rev Req w/o Incentives	BPU Rev Req w/ incentives
6	2007	1	$ 869,782	$ 10,872	$ 858,910	$ 152,771	$ 153,404
7	2008	2	$ 858,910	$ 21,745	$ 837,165	$ 298,357	$ 299,592
8	2009	3	$ 837,165	$ 21,745	$ 815,421	$ 291,172	$ 292,375
9	2010	4	$ 815,421	$ 21,745	$ 793,676	$ 283,987	$ 285,159
10	2011	5	$ 793,676	$ 21,745	$ 771,932	$ 276,802	$ 277,942
11	2012	6	$ 771,932	$ 21,745	$ 750,187	$ 269,618	$ 270,725
12	2013	7	$ 750,187	$ 21,745	$ 728,442	$ 262,433	$ 263,508
13	2014	8	$ 728,442	$ 21,745	$ 706,698	$ 255,248	$ 256,291
14	2015	9	$ 706,698	$ 21,745	$ 684,953	$ 248,063	$ 249,074
15	2016	10	$ 684,953	$ 21,745	$ 663,209	$ 240,879	$ 241,858
16	2017	11	$ 663,209	$ 21,745	$ 641,464	$ 233,694	$ 234,641
17	2018	12	$ 641,464	$ 21,745	$ 619,720	$ 226,509	$ 227,424
18	2019	13	$ 619,720	$ 21,745	$ 597,975	$ 219,325	$ 220,207
19	2020	14	$ 597,975	$ 21,745	$ 576,231	$ 212,140	$ 212,990
20	2021	15	$ 576,231	$ 21,745	$ 554,486	$ 204,955	$ 205,773
21	2022	16	$ 554,486	$ 21,745	$ 532,741	$ 197,770	$ 198,557
22	2023	17	$ 532,741	$ 21,745	$ 510,997	$ 190,586	$ 191,340
23	2024	18	$ 510,997	$ 21,745	$ 489,252	$ 183,401	$ 184,123
24	2025	19	$ 489,252	$ 21,745	$ 467,508	$ 176,216	$ 176,906
25	2026	20	$ 467,508	$ 21,745	$ 445,763	$ 169,031	$ 169,689
26	2027	21	$ 445,763	$ 21,745	$ 424,019	$ 161,847	$ 162,473
27	2028	22	$ 424,019	$ 21,745	$ 402,274	$ 154,662	$ 155,256
28	2029	23	$ 402,274	$ 21,745	$ 380,530	$ 147,477	$ 148,039
29	2030	24	$ 380,530	$ 21,745	$ 358,785	$ 140,293	$ 140,822
30	2031	25	$ 358,785	$ 21,745	$ 337,041	$ 133,108	$ 133,605
31	2032	26	$ 337,041	$ 21,745	$ 315,296	$ 125,923	$ 126,388
32	2033	27	$ 315,296	$ 21,745	$ 293,551	$ 118,738	$ 119,172
33	2034	28	$ 293,551	$ 21,745	$ 271,807	$ 111,554	$ 111,955
34	2035	29	$ 271,807	$ 21,745	$ 250,062	$ 104,369	$ 104,738
35	2036	30	$ 250,062	$ 21,745	$ 228,318	$ 97,184	$ 97,521
36	2037	31	$ 228,318	$ 21,745	$ 206,573	$ 89,999	$ 90,304
37	2038	32	$ 206,573	$ 21,745	$ 184,829	$ 82,815	$ 83,088
38	2039	33	$ 184,829	$ 21,745	$ 163,084	$ 75,630	$ 75,871
39	2040	34	$ 163,084	$ 21,745	$ 141,340	$ 68,445	$ 68,654
40	2041	35	$ 141,340	$ 21,745	$ 119,595	$ 61,261	$ 61,437
41	2042	36	$ 119,595	$ 21,745	$ 97,850	$ 54,076	$ 54,220
42	2043	37	$ 97,850	$ 21,745	$ 76,106	$ 46,891	$ 47,003
43	2044	38	$ 76,106	$ 21,745	$ 54,361	$ 39,706	$ 39,787
44	2045	39	$ 54,361	$ 21,745	$ 32,617	$ 32,522	$ 32,570
45	2046	40	$ 32,617	$ 21,745	$ 10,872	$ 25,337	$ 25,353
46	2047	41	$ 10,872	$ 10,872	$ 0	$ 10,872	$ 10,872
47	2048	42	$ 0	$ -	$ 0	$ 0	$ 0
48	2049	43	$ 0	$ -	$ 0	$ 0	$ 0
49	2050	44	$ 0	$ -	$ 0	$ 0	$ 0
50	2051	45	$ 0	$ -	$ 0	$ 0	$ 0
				$ 869,782			

Grand River Dam Authority
Worksheet K1 -- GRDA Base Plan Upgrade #1
Year Ending December 31, 2009

Line No	Description	XFR - Claremore 161/69 kV autos 1 & 2, Cost Estimate $5,050,127 NTC 20028, PID 233, UID 10298 (W.O. RF007-00263)		
1	Investment	$ 5,063,441	Current Year	2010
2	Service Year (yyyy)	2009	Incentive ROE increase (basis points)	50
3	Service Month (1-12)	12	FCR w/o incentives, less depreciation	33.04%
4	Useful Life	40	FCR w/ incentives, less depreciation	33.19%
5	CIAC (Yes or No)	No	Annual Depreciation Expense	$ 126,586

	Investment Year	Year #	Beginning Balance	Depreciation Expense	Ending Balance	BPU Rev Req w/o Incentives	BPU Rev Req w/ incentives
6	2009	1	$ 5,063,441	$ -	$ 5,063,441	$ -	$ 1,680,511
7	2010	2	$ 5,063,441	$ 126,586	$ 4,936,855	$ 1,757,798	$ 1,765,084
8	2011	3	$ 4,936,855	$ 126,586	$ 4,810,269	$ 1,715,972	$ 1,723,071
9	2012	4	$ 4,810,269	$ 126,586	$ 4,683,683	$ 1,674,146	$ 1,681,058
10	2013	5	$ 4,683,683	$ 126,586	$ 4,557,097	$ 1,632,320	$ 1,639,046
11	2014	6	$ 4,557,097	$ 126,586	$ 4,430,511	$ 1,590,494	$ 1,597,033
12	2015	7	$ 4,430,511	$ 126,586	$ 4,303,925	$ 1,548,668	$ 1,555,020
13	2016	8	$ 4,303,925	$ 126,586	$ 4,177,339	$ 1,506,842	$ 1,513,007
14	2017	9	$ 4,177,339	$ 126,586	$ 4,050,753	$ 1,465,016	$ 1,470,995
15	2018	10	$ 4,050,753	$ 126,586	$ 3,924,167	$ 1,423,190	$ 1,428,982
16	2019	11	$ 3,924,167	$ 126,586	$ 3,797,581	$ 1,381,364	$ 1,386,969
17	2020	12	$ 3,797,581	$ 126,586	$ 3,670,995	$ 1,339,538	$ 1,344,956
18	2021	13	$ 3,670,995	$ 126,586	$ 3,544,409	$ 1,297,712	$ 1,302,944
19	2022	14	$ 3,544,409	$ 126,586	$ 3,417,823	$ 1,255,886	$ 1,260,931
20	2023	15	$ 3,417,823	$ 126,586	$ 3,291,237	$ 1,214,060	$ 1,218,918
21	2024	16	$ 3,291,237	$ 126,586	$ 3,164,651	$ 1,172,234	$ 1,176,905
22	2025	17	$ 3,164,651	$ 126,586	$ 3,038,065	$ 1,130,409	$ 1,134,892
23	2026	18	$ 3,038,065	$ 126,586	$ 2,911,479	$ 1,088,583	$ 1,092,880
24	2027	19	$ 2,911,479	$ 126,586	$ 2,784,893	$ 1,046,757	$ 1,050,867
25	2028	20	$ 2,784,893	$ 126,586	$ 2,658,307	$ 1,004,931	$ 1,008,854
26	2029	21	$ 2,658,307	$ 126,586	$ 2,531,721	$ 963,105	$ 966,841
27	2030	22	$ 2,531,721	$ 126,586	$ 2,405,134	$ 921,279	$ 924,829
28	2031	23	$ 2,405,134	$ 126,586	$ 2,278,548	$ 879,453	$ 882,816
29	2032	24	$ 2,278,548	$ 126,586	$ 2,151,962	$ 837,627	$ 840,803
30	2033	25	$ 2,151,962	$ 126,586	$ 2,025,376	$ 795,801	$ 798,790
31	2034	26	$ 2,025,376	$ 126,586	$ 1,898,790	$ 753,975	$ 756,778
32	2035	27	$ 1,898,790	$ 126,586	$ 1,772,204	$ 712,149	$ 714,765
33	2036	28	$ 1,772,204	$ 126,586	$ 1,645,618	$ 670,323	$ 672,752
34	2037	29	$ 1,645,618	$ 126,586	$ 1,519,032	$ 628,497	$ 630,739
35	2038	30	$ 1,519,032	$ 126,586	$ 1,392,446	$ 586,671	$ 588,726
36	2039	31	$ 1,392,446	$ 126,586	$ 1,265,860	$ 544,845	$ 546,714
37	2040	32	$ 1,265,860	$ 126,586	$ 1,139,274	$ 503,019	$ 504,701
38	2041	33	$ 1,139,274	$ 126,586	$ 1,012,688	$ 461,194	$ 462,688
39	2042	34	$ 1,012,688	$ 126,586	$ 886,102	$ 419,368	$ 420,675
40	2043	35	$ 886,102	$ 126,586	$ 759,516	$ 377,542	$ 378,663
41	2044	36	$ 759,516	$ 126,586	$ 632,930	$ 335,716	$ 336,650
42	2045	37	$ 632,930	$ 126,586	$ 506,344	$ 293,890	$ 294,637
43	2046	38	$ 506,344	$ 126,586	$ 379,758	$ 252,064	$ 252,624
44	2047	39	$ 379,758	$ 126,586	$ 253,172	$ 210,238	$ 210,612
45	2048	40	$ 253,172	$ 126,586	$ 126,586	$ 168,412	$ 168,599
46	2049	41	$ 126,586	$ 126,586	$ -	$ 126,586	$ 126,586
47	2050	42	$ -	$ -	$ -	$ -	$ -
48	2051	43	$ -	$ -	$ -	$ -	$ -
49	2052	44	$ -	$ -	$ -	$ -	$ -
50	2053	45	$ -	$ -	$ -	$ -	$ -
				$ 5,063,441			