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July 3, 2012

Via Federal Express

Jeff DeRouen
Executive Director
Public Service Commission
211 Sower Boulevard, P.O. Box 615
Frankfort, Kentucky 40602-0615

Re: ***Tariff Filing of Big Rivers Electric Corporation
To Implement Demand-Side Management Programs,
Case No. 2012-00142***

Dear Mr. DeRouen:

Enclosed on behalf of Big Rivers Electric Corporation ("Big Rivers") are an original and eight copies of Big Rivers' responses to the Public Service Commission's ("Commission") Second Request for Information.

Sincerely yours,



Tyson Kamuf

TAK/ej
Enclosures

cc: Albert Yockey

RECEIVED

JUL 06 2012

PUBLIC SERVICE
COMMISSION

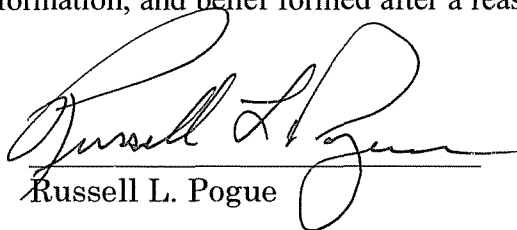
BIG RIVERS ELECTRIC CORPORATION

**TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION TO
IMPLEMENT DEMAND-SIDE MANAGEMENT PROGRAMS**

CASE NO. 2012-00142


VERIFICATION

I, Russell L. Pogue, verify, state, and affirm that I prepared or supervised the preparation of the data responses filed with this Verification, and that those data responses are true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.


Russell L. Pogue

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

3rd SUBSCRIBED AND SWORN TO before me by Russell L. Pogue on this the
day of July, 2012.


Notary Public, Ky. State at Large
My Commission Expires 1-12-13

ORIGINAL



Your Touchstone Energy® Cooperative 

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

TARIFF FILING OF BIG RIVERS ELECTRIC)	Case No.
CORPORATION TO IMPLEMENT DEMAND-)	
SIDE MANAGEMENT PROGRAMS)	

2012-00142

**Response to Commission Staff's
Second Request for Information
Dated June 22, 2012**

FILED: July 6, 2012

ORIGINAL

BIG RIVERS ELECTRIC CORPORATION

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July 6, 2012

1 **Item 1) Provide the results, by Demand-Side Management (“DSM”)**
2 **program, of the number of participants, cost, cost-savings in terms of**
3 **energy and peak-demand, and benefit/cost ratio of the pilot DSM**
4 **programs.**

5

6 **Response)** The following two tables from the Big Rivers Electric Demand Side
7 Management Report, January 27th 2012 detail the number of participants, cost,
8 and cost savings in terms of energy and peak demand for the 2011 pilot programs.

9

Big Rivers Electric Corporation DSM/EE Pilot Programs Incentives and Promotional Costs			
Pilot Program	Result	Incentive	Promotion
Energy Star Refrigerator Replacement	29 units	\$ 2,900.00	\$ 0.00
Energy Star Clothes Washer Replacement	71 units	7,100.00	597.00
Energy Efficiency Outdoor Lighting	N/A	2,241.19	0.00
Energy Star New Home Construction	49 houses	49,000.00	1,411.91
HVAC and Refrigeration Tune-Up	469 units	12,325.00	564.92
Weatherization	5 homes	22,701.49	0.00
Commercial Efficiency Lighting	52.35 kW	3,318.00	689.30
Poultry Facility	25 houses	15,000.00	0.00
Total		\$ 114,585.68	\$ 3,262.63

10

11 The above table shows the spending levels for each pilot program incentive and
12 promotional cost. The table on the next page reflects the benefit/cost testing for
13 each pilot program including cost of promotion. The poultry facility pilot is
14 included in the commercial lighting pilot analysis. The outdoor lighting project
15 was a technical demonstration for Member Cooperatives.

16

17

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1

Big Rivers Electric Corporation DSM/EE Pilot Programs Benefit/Cost Testing Including Cost of Promotion					
Pilot Program	Societal	TRC	Direct Utility	Participant	RIM
Refrigerator Replacement	2.45	2.45	3.19	4.19	0.59
Clothes Washer Replacement	1.54	1.54	1.21	2.07	0.50
Outdoor Lighting	n/a	n/a	n/a	n/a	n/a
New Construction	1.32	1.38	3.06	1.62	0.76
Tune-Up Pilot	2.07	2.07	13.14	3.02	0.69
Weatherization	1.74	1.74	1.71	2.41	0.72
Commercial Lighting	2.45	2.45	6.20	2.81	0.91
Poultry Facility	n/a	n/a	n/a	n/a	n/a

2

3 The table attached to this response models the impact of the pilot programs on
4 demand and energy consumption. In the HVAC tune-up pilot, a number of
5 residential and commercial members reported servicing more units than the
6 maximum allowed for reimbursement under the pilot making the impact higher
7 than the original model.

8

9

10 Witness) Russell L. Pogue

11

Big Rivers Electric Corporation
Case No. 2012-00412
Impact of DSM/EE Pilot Programs on Demand and Energy Consumption

	Per Unit Annual kWh Savings	Per Unit Winter kW Savings	Per Unit Summer kW Savings	Unit Quantity	Total Annual kWh Savings	Total Winter kW Savings	Total Summer kW Savings	Total Spend 2011
Residential Programs								
Residential Efficient Appliances								
Clothes Washer Rebate	224	0.007	0.026	71	15,904	0.5	1.8	\$7,100.00
Energy Star Refrigerator + Recycling	1,084	0.076	0.089	29	31,436	2.2	2.6	\$2,900.00
Weatherization Program								
Site-Built Home	6,980	4,950	0.890	4	27,920	19.8	3.6	\$19,667.74
Manufactured Home	4,680	2,200	0.300	1	4,680	2.2	0.3	\$3,033.75
New Construction								
Gas Heat	2,435	0.260	0.580	45	109,575	11.7	26.1	\$45,000.00
Air Source Heat Pump	4,922	2.700	0.580	0	0	0.0	0.0	\$0.00
Dual Fuel Heat Pump (w/ Gas)	8,370	9.766	0.580	0	0	0.0	0.0	\$0.00
Geothermal Heat Pump	8,580	7.150	0.799	4	34,318	28.6	3.2	\$4,000.00
Tune-Up								
HVAC Tune-Up	636	0.000	0.304	343	218,148	0.0	104.2	\$8,575.00
	Annual kWh Savings Per \$	Winter kW Savings Per \$	Summer kW Savings Per \$	Total kW Reduced	Total Annual kWh Savings	Total Winter kW Savings	Total Summer kW Savings	Total Spend 2011
Commercial/Industrial Programs								
C&I Lighting								
Lighting Projects (Includes Poultry House Pilot)	12	0.0029	0.0027	52.4	214,007	52.4	48.9	\$18,318.00
	Annual kWh Savings Per Unit	Winter kW Savings Per Unit	Summer kW Savings Per Unit	Unit Qty.	Total Annual kWh Savings	Total Winter kW Savings	Total Summer kW Savings	Total Spend 2011
Tune-Up								
HVAC Tune-Up	5,268	0.000	1.200	126	663,768	0.0	151.2	\$3,750.00
<i>* Assumed 6 tons/unit</i>								
Total DSM Program Savings:					1,319,756	117.4	341.9	\$112,344.49

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July 6, 2012

1 **Item 2)** *Explain whether Big Rivers evaluated any other programs*
2 *that are not included in the tariffs. If so, identify the programs and*
3 *provide the analysis performed, such as the California test or other*
4 *cost/benefit analysis, and an explanation of why the programs were not*
5 *included.*

6

7 **Response)** As part of its 2010 Integrated Resource Plan, Big Rivers engaged
8 GDS Associates to evaluate a wide range of energy efficiency measures and
9 recommend cost effective programs to meet a potential \$1 million budget. The
10 DSM/EE Working Committee, composed of representatives from Big Rivers and
11 its Member Cooperatives, attempted to provide a wide range of programs and
12 services to the retail members. GDS provided analysis on more than 200
13 residential and commercial measures. See Appendix B of the 2010 IRP. The
14 attached table shows the 25 measures that were not incorporated into a program
15 and implemented as part of the Big Rivers DSM tariffs.

16

17 The measures in the table, attached to this response, with a Total
18 Resource Cost ("TRC") less than one were not deemed cost effective and not
19 implemented. The following measures with a TRC above one were not
20 implemented because the incremental cost was very low and a program was
21 unnecessary to motivate retail customers to choose the energy efficient option:

22

- 23 1. Energy Star® Dehumidifier,
- 24 2. Home Electronics,
- 25 3. Televisions,
4. Energy Star® Desktop Computer,

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- 1 5. Energy Star® Computer Monitor,
- 2 6. Energy Star® Laptop Computer,
- 3 7. High Efficiency Electric Water Heater,
- 4 8. Energy Star® Dishwasher (Electric Water Heating),
- 5 9. Energy Star® Dishwasher (Non-Electric WH), and
- 6 10. Energy Star® Room A/C.
- 7

8 The remaining measures in the attached table are discussed below:

- 9
- 10 1. The DSM/EE Working Group chose to continue the Compact
11 Fluorescent Light (“CFL”) program instead of the Light
12 Emitting Diode (“LED”) lighting because of the high incremental
13 cost of LED lamps. It is expected the LED will become more cost
14 competitive in the near future.
- 15 2. The Heat Pump Water Heater was not selected for program
16 implementation because the DSM/EE Working Group felt the
17 technology had not been in the field long enough to develop a
18 high level of confidence.
- 19 3. The DSM/EE Working Group elected not to undertake the pre-
20 paid initiative at this juncture.
- 21 4. The Member Cooperatives do provide no-cost CFL’s and
22 weatherization to members and the Home Efficiency Kit would
23 be redundant.
- 24

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1 Additional technologies and measures, including those above, will continue to be
2 evaluated as the current programs are implemented.

3

4

5 **Witness)** Russell L. Pogue

6

Big Rivers Electric Corporation
Case No. 2012-00412
Measures not Incorporated into a DSM/EE Program

Measure Name	Elec. Savings (kWh)	Summer kW Savings	Winter kW Savings	Useful Life	Increm. Measure Cost	TRC Test	Utility Test	Part. Test	RIM Test	Implemented	Cost Effective
Electric Appliances											
Energy Star® Compliant Chest Freezer	42.00	0.004	0.003	11.00	\$33.00	0.64	1.82	1.20	0.53	N	N
Energy Star® Compliant Upright Freezer (Manual Def.)	47.00	0.004	0.003	11.00	\$33.00	0.70	2.01	1.31	0.54	N	N
Energy Star® Dehumidifier	213.00	0.131	0.131	12.00	\$1.00	207.42	592.64	153.69	1.35	N	Y
Consumer Electronics											
Home Electronics	265.00	0.030	0.030	7.00	\$30.00	2.98	8.50	4.40	0.68	N	Y
Televisions	49.00	0.017	0.017	6.00	\$1.00	18.82	53.77	19.97	0.94	N	Y
Energy Star® Desktop Computer	42.00	0.005	0.005	4.00	\$1.00	7.80	22.28	11.98	0.65	N	Y
Energy Star® Computer Monitor	21.00	0.002	0.002	5.00	\$1.00	4.98	14.22	7.49	0.66	N	Y
Energy Star® Laptop Computer	13.00	0.001	0.001	4.00	\$1.00	2.41	6.90	3.95	0.61	N	Y
Lighting											
LED (vs. Incandescent)	40.52	0.004	0.009	20.00	\$29.75	1.41	3.62	1.92	0.71	N	Y
LED (vs. CFL)	9.86	0.001	0.002	20.00	\$28.15	0.44	0.93	0.83	0.45	N	N
Electric Water Heating											
Efficient Water Heater	193.94	0.005	0.007	13.00	\$50.00	2.31	6.60	3.32	0.69	N	Y
Heat Pump Water Heater	2,067.90	0.187	0.281	10.00	\$850.00	1.28	3.67	1.86	0.69	N	Y
Solar Water Heating	1,975.92	0.288	0.000	14.00	\$4,850.00	0.57	0.77	0.98	0.40	N	N
Energy Star® Dishwasher (Electric Water Heating)	74.00	0.003	0.001	10.00	\$12.00	3.97	7.23	5.62	0.61	N	Y
Energy Star® Dishwasher (Non-Electric WH)	33.00	0.003	0.001	10.00	\$12.00	4.26	3.38	5.13	0.57	N	Y
Space Heating and Space Cooling Shell Measures- Single Family Homes											
Energy Star® Windows	411.00	0.219	1.095	20.00	\$3,610.88	0.53	1.50	0.74	0.71	N	N
Insulation -Ceiling (R-19 to R-38)	126.08	0.073	0.438	20.00	\$882.30	0.80	2.29	0.92	0.87	N	N
Radiant Barriers	623.58	0.292	0.000	15.00	\$641.00	0.74	2.10	1.18	0.62	N	N
Space Heating and Space Cooling Equipment - Single Family/Mobile Homes											
Energy Star® Windows	830.62	0.365	0.000	20.00	\$4,218.48	0.71	0.53	1.08	0.33	N	N
Energy Star® Room A/C	111.58	0.069	0.000	9.00	\$50.00	1.15	3.30	1.62	0.71	N	Y
Second Energy Star® Room A/C	89.27	0.055	0.000	9.00	\$50.00	0.92	2.64	1.37	0.68	N	N
High Efficiency Central AC	381.49	0.146	0.000	14.00	\$555.71	0.47	1.33	0.91	0.51	N	N
High Efficiency Central AC/Early Retire	1,889.31	0.365	0.000	14.00	\$3,413.00	0.31	0.90	0.81	0.39	N	N
Other											
Pre-Pay Metering	2,315.52	0.193	0.193	3.00	\$99.00	3.09	8.82	5.30	0.58	N	Y
Multi-Family Homes Efficiency Kit	357.30	0.030	0.057	9.00	\$60.00	2.63	7.52	3.74	0.70	N	Y