ORIGINAL

Big Rivers
ELECTRIC CORPORATION

Your Touchstone Energy® Cooperative

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014	)	Case No. 2014-00230
AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2012 THROUGH OCTOBER 31, 2014	)	Case No. 2014-00455

Responses to the Kentucky Industrial Utility Customers, Inc.'s Request for Information dated March 6, 2015

FILED: March 20, 2015

ORIGINAL

BIG RIVERS ELECTRIC CORPORATION

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014
CASE NO. 2014-00230

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2012 THROUGH OCTOBER 31, 2014
CASE NO. 2014-00455

Response to the Kentucky Industrial Utility Customers, Inc.'s Request for Information dated March 6, 2015

March 20, 2015

Item 1) ***For each month during the period under review in this proceeding, please provide the dollar amount of fuel costs that would have been included in the calculation of the fuel adjustment clause if Big Rivers had assigned its lowest fuel cost generation to native load customers each hour and compare that amount to the dollar amount that was included in the calculation. Please provide the information in the same format as the Attachment to Big Rivers' Response to Commission Staff's Third Request for Information, Item No. 1 in Case No. 2014-00230. Please provide all workpapers electronically in spreadsheet format, with all formulas intact.***

Response) Big Rivers objects to this request on the grounds that it is overly broad and unduly burdensome.

Witness) Lindsay N. Barron

BIG RIVERS ELECTRIC CORPORATION

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014
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AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2012 THROUGH OCTOBER 31, 2014
CASE NO. 2014-00455

Response to the Kentucky Industrial Utility Customers, Inc.'s Request for Information dated March 6, 2015

March 20, 2015

Item 2) ***With respect to Big Rivers' Response to Commission Staff's February 5, 2015 Request for Information Item No. 40 in Case No. 2014-00455, please provide all supporting workpapers electronically in spreadsheet format, with all formulas intact.***

Response) Please refer to the file labeled 'KIUC 1-2 – Average Fuel: Native Load and Off-System Sales' on the CD accompanying these responses for an electronic copy of the spreadsheet requested, with formulas intact. This file reflects the amounts presented in Big Rivers' revised response to Item 40, filed on March 20, 2105, of the Commission Staff's Request for Information dated February 5, 2015.

Witness) Nicholas R. Castlen

Big Rivers Electric Corporation
Native Load Sales Information
Case Nos. 2014-00455 and 2014-00230

		Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13
NL Sales from GENERATION:							
Net Generation (before losses) (MWH)		1,027,844	1,001,899	992,591	934,554	925,070	893,016
Less: Back-Up & Supp. Sales to Smelters (from Gen) (MWH)		2,956	4,190	2,198	2,406	5,872	4,115
Less: Domtar Back-Up Power Sales (from Gen) (MWH)		1,192	235	1,594	2,998	2,689	1,100
Less: Inter-system Sales of Generation (MWH)		212,414	192,436	169,789	164,682	125,607	155,601
Less: System Losses (MWH)		16,471	18,421	19,851	18,775	21,378	15,973
Native Load Sales Volumes from Generation (MWH)	**(A)**	**794,811**	**786,617**	**799,159**	**745,693**	**769,524**	**716,227**
Native Load Sales Volumes from Purchased Power (MWH)	(B)	63,310	114,329	132,098	86,136	138,630	116,633
Native Load Sales Volumes from Inadvertent (MWH)	(C)	11,060	13,214	14,726	15,103	17,209	9,453
Total Native Load Sales Volumes (MWH) [(A) + (B) + (C)]		**869,181**	**914,160**	**945,983**	**846,932**	**925,363**	**842,313**

Case Nos. 2014-00455 and 2014-00230
Attachment No. 1 for Response KIUC Item 4a., 4d., and 4e.
Witness: Nicholas R. Castlen

Big Rivers Electric Corporation
Native Load Sales Information
Case Nos. 2014-00455 and 2014-00230

		May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13
NL Sales from GENERATION:							
Net Generation (before losses) (MWH)		889,735	905,244	979,328	870,248	701,032	749,004
Less: Back-Up & Supp. Sales to Smelters (from Gen) (MWH)		4,245	165	229	1,407	309	2,439
Less: Domtar Back-Up Power Sales (from Gen) (MWH)		220	670	926	1,504	5,538	2,286
Less: Inter-system Sales of Generation (MWH)		140,367	105,690	157,321	165,039	223,616	281,306
Less: System Losses (MWH)		17,558	17,556	25,236	29,878	19,947	15,748
Native Load Sales Volumes from Generation (MWH)	**(A)**	**727,345**	**781,163**	**795,616**	**672,420**	**451,622**	**447,225**
Native Load Sales Volumes from Purchased Power (MWH)	(B)	148,351	102,411	114,163	81,251	52,596	60,816
Native Load Sales Volumes from Inadvertent (MWH)	(C)	10,896	11,560	18,987	23,259	14,995	11,775
Total Native Load Sales Volumes (MWH) [(A) + (B) + (C)]		**886,592**	**895,134**	**928,766**	**776,930**	**519,213**	**519,816**

Big Rivers Electric Corporation
Native Load Sales Information
Case Nos. 2014-00455 and 2014-00230

		Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14
NL Sales from GENERATION:							
Net Generation (before losses) (MWH)		605,688	725,602	709,596	736,225	810,675	766,338
Less: Back-Up & Supp. Sales to Smelters (from Gen) (MWH)		8,193	11,429	12,110	-	-	-
Less: Domtar Back-Up Power Sales (from Gen) (MWH)		137	235	137	418	260	1,115
Less: Inter-system Sales of Generation (MWH)		128,901	242,348	189,235	496,509	600,162	586,077
Less: System Losses (MWH)		16,437	20,560	24,247	18,766	23,865	17,928
Native Load Sales Volumes from Generation (MWH)	**(A)**	**452,020**	**451,030**	**483,867**	**220,532**	**186,388**	**161,218**
Native Load Sales Volumes from Purchased Power (MWH)	(B)	71,369	121,452	132,423	72,871	84,911	46,534
Native Load Sales Volumes from Inadvertent (MWH)	(C)	12,151	15,714	20,340	14,369	15,977	16,710
Total Native Load Sales Volumes (MWH) [(A) + (B) + (C)]		**535,540**	**588,196**	**636,630**	**307,772**	**287,276**	**224,462**
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Big Rivers Electric Corporation
Native Load Sales Information
Case Nos. 2014-00455 and 2014-00230

		May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14
NL Sales from GENERATION:							
Net Generation (before losses) (MWH)		523,106	459,042	685,648	764,902	701,225	650,243
Less: Back-Up & Supp. Sales to Smelters (from Gen) (MWH)		-	-	-	-	-	-
Less: Domtar Back-Up Power Sales (from Gen) (MWH)		541	873	1,110	1,293	2,579	1,067
Less: Inter-system Sales of Generation (MWH)		346,161	234,888	444,585	490,153	476,576	457,253
Less: System Losses (MWH)		19,047	22,574	21,356	21,198	17,422	18,617
Native Load Sales Volumes from Generation (MWH)	**(A)**	**157,357**	**200,707**	**218,597**	**252,258**	**204,648**	**173,306**
Native Load Sales Volumes from Purchased Power (MWH)	(B)	78,525	66,429	54,558	40,275	35,582	48,489
Native Load Sales Volumes from Inadvertent (MWH)	(C)	16,339	15,967	14,483	14,990	13,038	13,474
Total Native Load Sales Volumes (MWH) [(A) + (B) + (C)]		**252,221**	**283,103**	**287,638**	**307,523**	**253,268**	**235,269**

Big Rivers Electric Corporation
Purchased Power Information
Case Nos. 2014-00455 and 2014-00230

	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13
Purchased Power for Native Load (MWH)	63,310	114,329	132,098	86,136	138,630	116,633
Purchased Power for Off-System Sales (MWH)	-	-	-	-	-	-
Total Purchased Power (MWH)	63,310	114,329	132,098	86,136	138,630	116,633
Purchased Power for Native Load ($)	$ 1,440,927	$ 2,640,015	$ 3,035,548	$ 1,875,296	$ 3,361,965	$ 3,200,753
Purchased Power for Off-System Sales ($)	$ -	$ -	$ -	$ -	$ -	$ -
Total Purchased Power ($)	$ 1,440,927	$ 2,640,015	$ 3,035,548	$ 1,875,296	$ 3,361,965	$ 3,200,753

Case Nos. 2014-00455 and 2014-00230
Attachment No. 2 for Response to KIUC Item 4c. and 4g.
Witness: Nicholas R. Castlen

Big Rivers Electric Corporation
Purchased Power Information
Case Nos. 2014-00455 and 2014-00230

	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13
Purchased Power for Native Load (MWH)	148,351	102,411	114,163	81,251	52,596	60,816
Purchased Power for Off-System Sales (MWH)	37,200	36,000	74,400	74,400	36,000	37,200
Total Purchased Power (MWH)	185,551	138,411	188,563	155,651	88,596	98,016
Purchased Power for Native Load ($)	$ 3,969,968	$ 2,595,076	$ 2,805,708	$ 1,736,689	$ 862,309	$ 1,122,218
Purchased Power for Off-System Sales ($)	$ 1,297,744	$ 1,237,289	$ 2,513,391	$ 2,321,878	$ 1,089,854	$ 1,187,995
Total Purchased Power ($)	$ 5,267,712	$ 3,832,365	$ 5,319,098	$ 4,058,568	$ 1,952,162	$ 2,310,213

Big Rivers Electric Corporation
Purchased Power Information
Case Nos. 2014-00455 and 2014-00230

	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14
Purchased Power for Native Load (MWH)	71,369	121,452	132,423	72,871	84,911	46,534
Purchased Power for Off-System Sales (MWH)	42,880	37,200	41,200	-	-	-
Total Purchased Power (MWH)	114,249	158,652	173,623	72,871	84,911	46,534
Purchased Power for Native Load ($)	$ 1,526,653	$ 2,010,542	$ 3,385,802	$ 1,658,863	$ 2,049,196	$ 1,149,809
Purchased Power for Off-System Sales ($)	$ 1,313,914	$ 1,306,002	$ 3,012,055	$ -	$ -	$ -
Total Purchased Power ($)	$ 2,840,567	$ 3,316,543	$ 6,397,857	$ 1,658,863	$ 2,049,196	$ 1,149,809

Big Rivers Electric Corporation
Purchased Power Information
Case Nos. 2014-00455 and 2014-00230

	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14
Purchased Power for Native Load (MWH)	78,525	66,429	54,558	40,275	35,582	48,489
Purchased Power for Off-System Sales (MWH)	-	-	88,000	84,000	67,200	73,600
Total Purchased Power (MWH)	78,525	66,429	142,558	124,275	102,782	122,089
Purchased Power for Native Load ($)	$ 1,507,241	$ 1,460,432	$ 1,024,152	$ 1,030,879	$ 872,320	$ 684,918
Purchased Power for Off-System Sales ($)	$ -	$ -	$ 3,342,855	$ 3,170,868	$ 2,551,202	$ 2,798,902
Total Purchased Power ($)	$ 1,507,241	$ 1,460,432	$ 4,367,007	$ 4,201,746	$ 3,423,522	$ 3,483,820

BIG RIVERS ELECTRIC CORPORATION

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CASE NO. 2014-00455

Response to the Kentucky Industrial Utility Customers, Inc.'s Request for Information dated March 6, 2015

March 20, 2015

Item 3) ***Regarding the information that the Company supplies in response to the prior question, and specifically concerning the following two rows:***

Plus: Fuel (Assigned Cost During F.O.)
Less: Fuel (Substitute Cost for F.O.)

a. ***Provide a detailed narrative explaining the procedure by which the Company developed the data for these two rows.***
b. ***Provide the Company's authority (specific Commission Orders, or other) for including higher fuel costs during the forced outage period.***
c. ***Please provide all calculations for each month of the period under review that were performed to develop these two rows. Please provide this information electronically, in spreadsheet format with all formulas intact.***
d. ***Please provide the root cause analyses for each outage covered in these two rows.***
e. ***Please provide the Company's entire GADS outage report covering all of the Company's units containing information***

about forced, planned, duration and maintenance outages for the period under review.

Response)

a. For each forced outage during a month, an "Assigned Cost during Forced Outage" and a "Substitute Cost for Forced Outage" is calculated.

The Assigned Cost during Forced Outage represents the cost of fuel which would have been used in the plant(s) suffering forced outage(s). To calculate this amount, the average generation per hour (for the unit suffering the forced outage) is calculated based on the unit's generation for the seven most recent days preceding the forced outage, during which the unit was operating under normal conditions. The sum of the kWh generated by the unit during those seven preceding days is divided by 168 hours (the number of hours in seven days) to determine the unit's average generation per hour. The average generation per hour is then multiplied by the number of hours during the forced outage to determine the kWh that could have

been generated by the unit during the forced outage, had the unit not suffered the forced outage. The kWh that could have been generated by the unit during the forced outage is then multiplied by the unit's average fuel cost per kWh to determine the "Assigned Cost during Forced Outage".

The Substitute Cost for Forced Outage represents the cost of fuel related to substitute generation provided by Big Rivers' other units which were operating during the forced outage. In order to calculate this amount, the substitute generation (kWh) is calculated by subtracting any purchased power (kWh) related to the forced outage from the kWh that could have been generated by the unit suffering the forced outage (per the calculation described above). The substitute generation (kWh) is then multiplied by the weighted average cost of generation per kWh for all Big Rivers' units that were generating during the forced outage to calculate the "Substitute Cost for Forced Outage".

b. Not applicable. Big Rivers did not include fuel costs higher than the actual costs incurred for any forced outage during the period under review.

The Fuel (Assigned Cost during Forced Outage) was often higher than the Fuel (Substitute Cost for Forced Outage) during the period under review as a result of the power purchased for forced outages being subtracted from the assigned generation to calculate the Substitute Cost for Forced Outage (as described in a. above). However, the recoverable fuel expense (calculated on page 2 - Fuel Cost Schedule of Big Rivers' monthly Form A filing) is reduced by (a) the amount which Assigned Cost during Forced Outage exceeds Substitute Cost for Forced Outage or (b) the cost of Forced Outage Purchases, whichever is greater. Accordingly, Big Rivers does not include fuel costs higher than the actual costs associated with a forced outage in its FAC calculation.

c. Please see the attachments, provided electronically in spreadsheet format with all formulas intact in the folder labeled 'KIUC 1-3c – Fuel-Related Supporting Info' on the CD accompanying these responses, for all calculations used to develop these two rows for each month during the period under review.

d. For the root causes for each outage covered in the two rows indicated above, please see the folder labeled 'KIUC 1-3d - Forced Outage Reports' on the CD accompanying these responses.

e. The GADS outage reports covering all of Big Rivers' outages during the period under review are shown on the Micro GADS *Event Summary Report* attached to this response.

Witnesses) Nicholas R. Castlen (3a., 3b., and 3c.) and
Lawrence V. Baronowsky (3d. and 3f.)

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Event Summary Report
Outage Reporting; FAC 2 year review outage reporting 11/2012 to 10/2014

Report Period: November 2012 to October 2014
Rollup Weighting: N/A
OMC: None

Coleman - Unit 1							
Event	Type	Start	End	Cause	Description	Eq Hrs	Eq MWH
1	U2	1/2/2013 10:54	1/5/2013 15:38	1060	Repair tube leaks in reheat section by 7R sootblower	76.73	11510.00
5	U2	1/18/2013 4:45	1/19/2013 16:45	1060	Repair tube leaks in reheat section & partition wall	36.00	5400.00
8	U2	1/22/2013 23:15	1/25/2013 1:20	1060	Repair tube leaks in reheat section & partition wall	50.08	7512.50
9	SF	1/25/2013 1:20	1/25/2013 4:59	1710	Extremely cold temperatures for start-up & lower spray control valves	3.65	547.50
10	U1	1/25/2013 5:10	1/25/2013 6:22	4302	Tripped on no load steam flow	1.20	180.00
14	U1	3/28/2013 14:09	3/31/2013 1:48	1000	Repair west water wall tube leaks	59.65	8947.50
16	MO	4/1/2013 23:48	4/2/2013 7:53	0350	Replace gasket on #8 coal pipe	8.08	1212.50
17	U2	4/17/2013 22:15	4/18/2013 4:51	0840	Repair hole in unused inspection port by 10L sootblower	6.60	990.00
20	U2	5/7/2013 13:01	5/9/2013 23:31	1060	Repair tube leaks in reheat section	58.50	8775.00
22	U3	6/7/2013 23:39	6/12/2013 8:00	1100	Clean the furnace	104.35	15652.50
23	MO	6/12/2013 8:00	6/17/2013 1:16	1530	Repair boiler gas leaks	113.27	16990.00
24	U3	6/20/2013 10:18	6/22/2013 8:41	1060	Repair tube leaks in reheat section	46.38	6957.50
29	U2	7/26/2013 22:18	7/30/2013 1:10	1060	Repair tube leaks in reheat section & HRA	74.87	11230.00
33	U2	8/10/2013 11:28	8/12/2013 17:43	1060	Repair tube leaks in reheat section	54.25	8137.50
34	U2	8/23/2013 0:55	8/26/2013 5:47	1060	Repair tube leaks in reheat section.	76.87	11530.00
35	U2	8/31/2013 7:35	9/2/2013 10:42	1060	Repair tube leaks in reheat section.	51.12	7667.50
49	U3	10/7/2013 0:57	10/9/2013 1:58	1493	Wash air heaters, repair steam cleaning device, repair gas leaks, etc.	49.02	7352.50
51	U1	10/14/2013 15:24	10/15/2013 3:33	4302	Solenoid energized on turbine trip block	12.15	1822.50
55	U2	12/11/2013 0:00	12/13/2013 23:47	1020	Repair tube leaks in HRA west wall	71.78	10767.50

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Event Summary Report
Outage Reporting; FAC 2 year review outage reporting 11/2012 to 10/2014

Report Period: November 2012 to October 2014
Rollup Weighting: N/A
OMC: None

8	U2	1/20/2014 16:56	1/22/2014 13:45	1060	Reheater tube leak	44.82	6722.50
15	U1	2/15/2014 18:21	2/19/2014 4:35	1000	Waterwall nose tube leak	82.23	12335.00
20	U2	3/14/2014 14:48	3/17/2014 18:00	1060	Repair tube leak in reheat section	75.20	11280.00
22	MO	3/19/2014 0:00	3/19/2014 18:00	0550	Replace west reheat safety	18.00	2700.00
24	SF	3/20/2014 6:00	3/20/2014 23:22	3410	Starting failure as 1A BFP warm up line blew apart	17.37	2605.00
25	U2	3/21/2014 4:02	3/21/2014 22:30	1430	Repair hole in west side secondary air duct	18.47	2770.00
33	U2	4/27/2014 17:53	4/29/2014 21:00	1060	Reheater tube leak	51.12	7667.50
36	IR	5/1/2014 0:00	6/30/2014 0:00	0002	INACTIVE RESERVE	1440.00	216000.00
37	MB	6/30/2014 0:00	1/1/2015 0:00	9991	MOTHBALLED	2976.00	446400.00

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Event Summary Report
Outage Reporting; FAC 2 year review outage reporting 11/2012 to 10/2014

Report Period: November 2012 to October 2014
Rollup Weighting: N/A
OMC: None

Coleman - Unit 2							
Event	Type	Start	End	Cause	Description	Eq Hrs	Eq MWH
16	U1	11/11/2012 14:53	11/12/2012 5:02	4301	Tripped turbine due to 2A mill motor going to ground & losing drum level indication	14.15	1952.70
17	MO	12/8/2012 23:35	12/9/2012 18:05	4499	Repair a leak on DV4 turbine drain line	18.50	2553.00
1	U3	1/5/2013 23:09	1/8/2013 19:48	1488	Clean the furnace & wash air heaters	68.65	9473.70
9	U2	4/10/2013 1:05	4/12/2013 21:28	1040	Repair tube leaks in superheat section	68.38	9436.90
12	MO	5/19/2013 0:15	5/19/2013 9:47	9510	Install carbon injection ports for MATS testing	9.53	1315.60
13	U2	6/20/2013 22:41	6/21/2013 11:42	0840	Repair hole around A4 sootblower box	13.02	1796.30
15	U1	7/16/2013 13:00	7/16/2013 14:45	4302	Tripped on loss of excitation	1.75	241.50
17	U2	8/22/2013 8:37	8/26/2013 21:26	1000	Repair north water wall tube leak	108.82	15016.70
23	U1	10/21/2013 20:49	10/26/2013 1:43	1000	Tripped on high furnace pressure due to waterwall tube leak	100.90	13924.20
27	U2	12/1/2013 14:11	12/4/2013 23:07	1040	Repair tube leaks in primary superheater	80.93	11168.80
1	U1	1/5/2014 18:25	1/10/2014 9:20	1000	Waterwall tube leak under the nose at elevation 183'.	110.92	15306.50
6	MO	2/16/2014 9:12	2/20/2014 1:00	1100	Deslag the boiler & repaired tube leaks in HRA & reheater	87.80	12116.40
12	U1	3/10/2014 9:42	3/11/2014 7:55	4300	Solenoid trip 20-AST energized	22.22	3065.90
13	U2	4/9/2014 13:54	4/11/2014 22:00	1000	Repair east waterwall tube leak in penthouse	56.10	7741.80
19	IR	5/1/2014 11:16	7/1/2014 11:16	0002	INACTIVE RESERVE	1464.00	202032.00
20	MB	7/1/2014 11:16	1/1/2015 0:00	9991	MOTHBALLED	2940.73	405821.20

Event Summary Report
Outage Reporting; FAC 2 year review outage reporting 11/2012 to 10/2014

Report Period: November 2012 to October 2014
Rollup Weighting: N/A
OMC: None

Coleman - Unit 3							
Event	Type	Start	End	Cause	Description	Eq Hrs	Eq MWH
14	U1	3/20/2013 23:00	3/21/2013 4:07	4301	Tripped on low EH pressure	5.12	793.08
15	U1	3/21/2013 4:20	3/26/2013 3:29	4301	Tripped on low EH pressure	119.15	18468.25
24	U2	7/2/2013 3:53	7/4/2013 1:06	1000	Repair tube leaks in water wall & economizer	45.22	7008.58
30	U2	10/6/2013 18:51	10/8/2013 21:48	1080	Repair economizer tube leaks	50.95	7897.25
32	U3	10/9/2013 22:39	10/10/2013 16:52	3420	Repair 3A BFP recirculation line leak	18.22	2823.58
33	U2	10/14/2013 13:37	10/18/2013 10:24	1075	Repair tube leaks in penthouse on hot reheat header	92.78	14381.42
43	U1	11/18/2013 13:53	11/18/2013 20:00	4302	Tripped on false indication of low vacuum	6.12	948.08
44	MO	11/22/2013 23:56	11/25/2013 23:30	9650	Bypass Stack Inspection & Cleaning	71.57	11092.83
47	U1	12/1/2013 1:41	12/1/2013 3:16	4301	Tripped during weekly Emergency Governor Exerciser Test	1.58	245.42
2	U1	1/6/2014 5:00	1/9/2014 23:21	1000	Waterwall tube leak around nose at elevation 509'.	90.35	14004.25
5	U2	1/12/2014 14:13	1/17/2014 14:24	1040	Secondary superheater tube leak	120.18	18628.42
14	U1	2/15/2014 8:05	2/18/2014 10:04	1050	Secondary Superheater tube leak	73.98	11467.42
16	U1	3/10/2014 10:01	3/11/2014 0:49	3420	Repair 3A BFP recirc line leak	14.80	2294.00
18	U1	3/11/2014 20:34	3/11/2014 21:51	4302	Tripped on low turbine oil pressure	1.28	198.92
34	U3	4/23/2014 23:26	4/24/2014 14:00	1000	Repair external waterwall tube leak	14.57	2257.83
42	IR	5/8/2014 1:00	7/8/2014 1:00	0002	INACTIVE RESERVE	1464.00	226920.00
43	MB	7/8/2014 1:00	1/1/2015 0:00	9991	MOTHBALLED	2783.00	431365.00

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Event Summary Report
Outage Reporting; FAC 2 year review outage reporting 11/2012 to 10/2014

Report Period: November 2012 to October 2014
Rollup Weighting: N/A
OMC: None

Green - Unit 1							
Event	Type	Start	End	Cause	Description	Eq Hrs	Eq MWH
18	MO	11/8/2012 21:40	11/11/2012 9:36	1000	WW tube leak on the 7t floor - 12 tube to the north from IR #11 behind the buckstary.	59.93	13844.60
2	MO	1/11/2013 23:32	1/12/2013 5:57	3431	Unit removed to replace cap on BFP discharge valve that was leaking steam	6.42	1482.25
4	U1	1/29/2013 17:44	1/31/2013 15:23	1910	manually tripped boiler due to air flow problems	45.65	10545.15
7	MO	3/29/2013 1:00	3/31/2013 0:53	1475	Inspection of ID fans found "A" side control only open 2/3 when "B" side 100% open	47.88	11061.05
8	U2	6/1/2013 9:40	6/4/2013 4:04	1488	"A" air heater gear box failed (locked up).	66.40	15338.40
11	U1	7/1/2013 20:32	7/2/2013 1:00	0250	Unit tripped when "B" & "D" mills tripped.	4.47	1031.80
12	U2	7/10/2013 23:59	7/12/2013 8:55	1060	21st tube from west wall, 1st tube from south - leak due to erosion - thin wall failur	32.93	7607.60
15	U2	10/4/2013 5:04	10/4/2013 12:52	9630	Unit off to determine why section of precips tripped and would not reset.	7.80	1801.80
16	PO	11/2/2013 1:25	11/24/2013 10:26	3245	24 day outage to replace headers/decking on cooling tower and do boiler chem cleaning	538.02	124281.85
19	U3	11/26/2013 23:55	11/27/2013 21:08	3431	Outage to repair packing leak on economizer inlet valve.	21.22	4901.05
20	U1	12/2/2013 7:26	12/3/2013 6:57	1000	Unit tripped on high furnace pressure due to WW tube leak on SE wall boiler	23.52	5432.35
1	U1	1/6/2014 1:56	1/6/2014 6:49	1740	Drum level transmitter sensing line froze up - resulting in unit tripping	4.88	1128.05
2	U2	1/6/2014 9:18	1/6/2014 16:33	3612	Stab in switchyard failed to completely engage when unit was tied to system	7.25	1674.75
3	U1	2/7/2014 6:59	2/7/2014 14:18	0310	two mills tripped, lost unit on last mill in service - 'A' mill reburn mill	7.32	1690.15
5	U1	2/25/2014 0:28	2/25/2014 1:18	0310	Lost two mills, unit tripped on last mill in service 'A' reburn mill	0.83	192.50
6	U2	3/15/2014 15:48	3/16/2014 21:42	1060	Reheater tube leak outage	29.90	6906.90
7	U2	3/17/2014 4:20	3/18/2014 15:58	1040	Primary Superheater tube leak	35.63	8231.30
8	U1	3/19/2014 22:09	3/19/2014 23:13	1740	generator stator alarm resulted in boiler runback, trip on high drum level	1.07	246.40

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Event Summary Report
Outage Reporting; FAC 2 year review outage reporting 11/2012 to 10/2014

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Rollup Weighting: N/A
OMC: None

11	U1	5/3/2014 23:59	5/5/2014 22:06	1000	External WW tube leak on 7th floor resulted in unit tripping on low drum level	46.12	10652.95
14	U2	6/16/2014 6:26	6/19/2014 17:33	1480	'A' ID fan rotor failed - sheared at previous broken spot - 23 yrs ago	83.12	19199.95
17	U1	6/22/2014 6:47	6/22/2014 9:54	4740	System (grid) upset - resulted in generator max. excitation limit trip	3.12	719.95
20	PO	7/15/2014 0:55	7/22/2014 9:55	9510	9 day PMO to install MATS equipment and replace 'A' ID fan rotor	177.00	40887.00
23	U1	8/12/2014 18:55	8/13/2014 0:41	1700	Unit tripped on low drum level due to loss of 'A' mill - feedwater swing!!	5.77	1332.10
24	U1	8/20/2014 8:31	8/20/2014 11:56	3611	Control room operator opened OCB 106 per dispatch and unit tripped	3.42	789.25
25	U1	8/20/2014 14:09	8/20/2014 17:41	3611	Control room operator opened OCB 106 per dispatch and unit tripped	3.53	816.20
27	U3	8/22/2014 0:59	8/23/2014 1:40	0855	Unit off to repair SSH outlet safety which was leaking and could not be fixed on-line	24.68	5701.85
28	U2	10/7/2014 14:09	10/9/2014 3:41	1060	Leak in the Intermediate Reheater Outlet - coal ash corrosion and wall thinning	37.53	8670.20

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Event Summary Report
Outage Reporting; FAC 2 year review outage reporting 11/2012 to 10/2014

Report Period: November 2012 to October 2014
Rollup Weighting: N/A
OMC: None

Green - Unit 2							
Event	Type	Start	End	Cause	Description	Eq Hrs	Eq MWH
5	MO	5/25/2013 1:09	5/27/2013 19:08	1493	Outage to wash air heaters.	65.98	14714.28
8	U3	7/26/2013 0:25	7/27/2013 20:24	8210	'B' Recycle header discharge valve replacement outage	43.98	9808.28
18	MO	11/30/2013 0:02	12/2/2013 0:02	1492	Outage to wash air heaters.	48.00	10704.00
19	U1	12/2/2013 0:02	12/2/2013 7:02	3220	Leak on the circulating water inlet line SW corner of the condenser underground	7.00	1561.00
20	U1	12/7/2013 1:48	12/7/2013 19:12	4430	leak on 2" steam seal header line	17.40	3880.20
21	U1	12/7/2013 20:23	12/8/2013 3:50	3850	High closed cooling water temps resulted in air compressors tripping	7.45	1661.35
22	U2	12/9/2013 0:24	12/10/2013 6:54	1500	Leak on air heater sootblowing steam header at the top of the boiler	30.50	6801.50
23	U1	12/10/2013 10:31	12/10/2013 13:02	4700	Unit tripped due to a bad control card on the volatage regulator system	2.52	561.22
1	MO	4/5/2014 0:51	4/7/2014 3:09	1040	Tube leak found at 0945 on 3/31 unit off for repairs at 0051 on 4/5/14	50.30	11216.90
2	U1	4/7/2014 3:10	4/7/2014 3:29	9930	Operator did not raise load fast enough after unit was tied on-line from prior outage	0.32	70.62
4	U1	5/23/2014 21:32	5/24/2014 5:58	1740	Boiler upset - unit tripped on high drum level due to #5 HP FWH upset	8.43	1880.63
13	PO	10/4/2014 1:00	10/25/2014 1:00	8699	BPO - turb. valve insp. and repair/generator testing/MATS eqmt installation	504.00	112392.00
14	PE	10/25/2014 1:00	10/26/2014 6:19	8699	airside hydrogen seal was installed incorrectly and had to be removed/re-installed	29.32	6537.62
16	U2	10/27/2014 18:08	10/27/2014 20:38	3680	Terminal block behing the BTG board arching/melting resulting in fire	2.50	557.50

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Rollup Weighting: N/A
OMC: None

HMPL - Unit 1							
Event	Type	Start	End	Cause	Description	Eq Hrs	Eq MWH
34	MO	11/30/2012 22:59	12/2/2012 13:05	4279	Change material on before seat drain line MSSV, from grade 6 carbon steel to P22 Cr-Mo	38.10	5829.30
2	U2	2/24/2013 9:50	2/27/2013 6:12	1040	Superheater tube leak outage	68.37	10460.10
3	MO	3/2/2013 0:14	3/4/2013 3:14	1520	Bolts on both 'A' and 'B' side dampers sheared bypassing NOX around SCR	51.00	7803.00
4	U2	3/23/2013 4:37	3/26/2013 2:39	1040	Tube leak on Radiant SH Outlet 4th element from the east wall, elevation 542 ft	70.03	10715.10
6	U2	6/2/2013 16:01	6/5/2013 14:01	1040	Leak superheat outlet on the fifth element from the west wall at elevation 537' 5".	70.00	10710.00
10	U2	7/21/2013 14:05	7/24/2013 17:44	1040	Leak superheat outlet on the fifth element from the east wall at elevation 537' 5".	75.65	11574.45
11	U3	7/27/2013 0:53	7/28/2013 3:48	8825	Outage to replace sheared pins on "B" diverter damper.	26.92	4118.25
12	U3	7/30/2013 22:20	7/31/2013 2:54	4262	Outage to replace servo(s) on left hand intercept valve. Servo failed - valve closed	4.57	698.70
13	U2	8/8/2013 22:42	8/12/2013 10:46	1040	SH tube leak, east wall, 5th element, outlet	84.07	12862.20
14	U3	8/15/2013 0:45	8/16/2013 1:59	8250	"A" side SCR diverter damper sheared pins	25.23	3860.70
15	U2	8/17/2013 1:56	8/18/2013 11:39	3622	H-2 came offline, B main 4160 bkr did not open, tripped SU tranformer, lost H-1 CWPs	33.72	5158.65
18	U2	9/19/2013 10:19	9/24/2013 2:19	1040	SH tube leak, east wall, 6th element, outlet	112.00	17136.00
19	U2	9/24/2013 22:53	9/25/2013 4:55	4293	Leak on piping to the right hand intercept valve.	6.03	923.10
2	MO	2/8/2014 15:46	2/9/2014 21:38	1090	External leak at buck stay clip. Unit ran with leak for several weeks.	29.87	4569.60
7	MO	4/10/2014 7:05	4/11/2014 7:09	3110	Outage to repair condenser tube leaks.	24.07	3682.20
10	PO	4/26/2014 0:13	5/17/2014 0:13	3661	21 day PO to replace "B" buss 4160v switchgear, replace mill liners, etc.	504.00	77112.00

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Rollup Weighting: N/A
OMC: None

11	PE	5/17/2014 0:13	5/17/2014 4:14	0345	Extended PO due to improper bolting of new mill liners. All bolting had to be redone.	4.02	614.55
12	PO	5/17/2014 4:38	5/17/2014 8:01	3661	Wiring issue on new 4160v switchgear, unit tripped when 1B main breaker closed.	3.38	517.65
13	PO	5/17/2014 9:10	5/17/2014 13:23	3661	Wiring issue on new 4160v switchgear, unit tripped when 1B main breaker closed.	4.22	645.15
19	MO	5/28/2014 0:51	5/30/2014 13:12	0600	Outage to repair east SH spray nozzle.	60.35	9233.55
20	MO	5/30/2014 13:14	5/30/2014 14:03	4740	Testing new trip setting for reverse current on generator relay.	0.82	124.95
24	U1	6/12/2014 18:50	6/12/2014 21:17	1741	Tripped on high drum level due to "B" mill upset - mill swinging	2.45	374.85
31	MO	9/20/2014 0:24	9/22/2014 3:24	1493	Outage to wash air heaters, repair external tube leak, repair BFP drum leak off leak.	51.00	7803.00
32	MO	10/1/2014 20:35	10/2/2014 15:52	4270	Outage to repair steam leak on north cross over pipe flange.	19.28	2950.35
33	U1	10/2/2014 17:19	10/3/2014 2:47	0250	Unit tripped when "B" mill tripped from loss of flame.	9.47	1448.40
34	SF	10/3/2014 2:47	10/3/2014 7:34	4261	RHICV stuck closed. Had to change servo on valve.	4.78	731.85
35	U1	10/30/2014 5:20	10/30/2014 11:24	3149	Tripped on low vacuum, 1 cooling tower circulator on after H-2 tripped.	6.07	928.20

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Event Summary Report
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Report Period: November 2012 to October 2014
Rollup Weighting: N/A
OMC: None

HMPL - Unit 2							
Event	Type	Start	End	Cause	Description	Eq Hrs	Eq MWH
48	U1	11/29/2012 11:47	11/29/2012 19:50	0830	C/O tripped unit due to #24 boiler port failing allowing fire to escape boiler.	8.05	1279.95
50	U2	12/10/2012 13:15	12/12/2012 12:59	1000	Waterwall tube leak in the wettbottom area of the boiler	47.73	7589.60
51	SF	12/12/2012 12:59	12/12/2012 14:49	1700	Start-up delayed due to problems with the DA regulator controller	1.83	291.50
7	U2	1/26/2013 18:09	1/28/2013 3:45	1040	Outage to repair leak in radiant superheat outlet section.	33.60	5342.40
10	PO	3/31/2013 7:02	5/19/2013 6:02	4400	49 day planned outage. Major turbine overhaul, replacing L0 blading.	1175.00	186825.00
11	PE	5/19/2013 6:02	5/27/2013 16:01	4400	49 day PO extended due to trouble balancing new LP L-0 blades.	201.98	32115.35
12	PO	5/27/2013 20:33	5/27/2013 21:33	4460	Testing turbine mechanical and electrical overspeed protection	1.00	159.00
15	U2	6/15/2013 6:25	6/16/2013 1:37	4420	Unit tripped due to high vibration on #7 turbine bearing (exciter end)	19.20	3052.80
18	U3	6/18/2013 23:22	6/21/2013 17:08	4420	Outage to determine high vibration of #7 turbine bearing. Oil seal clearance to tight.	65.77	10456.90
23	U1	7/22/2013 15:35	7/22/2013 22:18	8240	Unit tripped on high furnace press - bypass damper failed to open after boost fan trip	6.72	1067.95
25	MO	8/17/2013 1:00	8/18/2013 13:00	1493	Unit off to wash air heaters.	36.00	5724.00
26	U1	8/18/2013 13:00	8/20/2013 22:38	4040	Inspecting #1&4 bearing after losing lube oil while turbine was coasting down.	57.63	9163.70
33	U2	9/5/2013 19:46	9/6/2013 18:33	1599	Unit off to replace gear box on B AH.	22.78	3622.55
36	U2	10/5/2013 5:46	10/6/2013 21:16	4280	DC lube oil pump motor failed during weekly test.	39.50	6280.50
37	SF	10/6/2013 21:16	10/7/2013 1:09	4284	DC lube oil pump coupling came loose during start-up.	3.88	617.45
40	U1	12/6/2013 11:51	12/6/2013 14:19	1741	Unit tripped on low drum level after C/O tripped "B" mill due to classifier fire.	2.47	392.20

Event Summary Report
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Rollup Weighting: N/A
OMC: None

7	U2	1/31/2014 19:14	2/3/2014 6:03	1040	Tube leak on outlet superheat, 4th element from west wall.	58.82	9351.85
12	U1	4/26/2014 0:37	4/26/2014 2:46	9900	Auxiliary operator opened vacuum breaker on wrong unit while removing H-1 for PO.	2.15	341.85
16	U3	5/30/2014 19:40	6/2/2014 0:49	1090	Penthouse tube leak.	53.15	8450.85
19	U1	6/18/2014 6:00	6/22/2014 1:37	1040	Unit tripped on high furance pressure due to SH tube leak.	91.62	14567.05
20	U2	7/10/2014 13:21	7/10/2014 22:17	0870	Refract failed around #19 sootblower box, box failed allowing fire to escape boiler.	8.93	1420.40
21	U2	7/17/2014 10:09	7/17/2014 16:28	9720	Inspection glass near B-4 burner blew out.	6.32	1004.35
24	MO	7/26/2014 0:51	7/27/2014 13:34	1493	Outage to wash air heaters.	36.72	5837.95
25	U3	8/12/2014 1:01	8/14/2014 4:12	1060	Outage to repair reheater tube leak.	51.18	8138.15
31	MO	9/5/2014 23:52	9/8/2014 0:44	1493	Outage to wash air heaters.	48.87	7769.80
33	U1	10/30/2014 5:16	10/30/2014 14:24	1750	MFT trip due to loss of control power caused by fire on power inverter.	9.13	1452.20

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Event Summary Report
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Report Period: November 2012 to October 2014
Rollup Weighting: N/A
OMC: None

Reid - CT							
Event	Type	Start	End	Cause	Description	Eq Hrs	Eq MWH
78	MO	11/17/2012 6:00	11/17/2012 15:10	5041	Replaced relief valves on NG line. Used if fuel is switched from gas to liquid.	9.17	595.83
84	MO	12/18/2012 6:00	12/21/2012 7:15	5272	Unit removed to do maintenance - boroscope inspection of gas path	73.25	4761.25
2	U1	1/22/2013 15:34	1/22/2013 17:55	5073	Tripped on loss of stable flame indication, #7 flame can.	2.35	152.75
4	MO	1/25/2013 6:00	1/25/2013 10:00	5100	Inspect expansion chamber for air leak, found small hole in floor of chamber.	4.00	260.00
6	MO	2/5/2013 7:00	2/5/2013 15:30	5041	air leak in expansion chamber and problems with two gas valves	8.50	552.50
8	U1	2/8/2013 0:15	2/8/2013 13:00	5140	NO power and NO hydrogen pressure on generator - UPS system not working	12.75	828.75
10	U1	2/9/2013 9:02	2/9/2013 16:00	5140	Still charging battery system - UPS	6.97	452.83
12	MO	2/10/2013 10:33	2/10/2013 14:16	5140	Still having problems with control power - intermittent	3.72	241.58
14	MO	2/11/2013 8:05	2/12/2013 12:45	5140	Control power problems intermittent - PLC issues	28.67	1863.33
16	SF	3/21/2013 5:30	3/21/2013 12:07	5001	Limit switch for inlet guide vane stuck in open position.	6.62	430.08
18	SF	4/3/2013 5:10	4/3/2013 7:33	5001	Control switch for inlet guide vane stuck	2.38	154.92
20	MO	4/3/2013 8:30	4/3/2013 16:15	5001	Replacing control switch for inlet guide vane	7.75	503.75
32	SF	7/16/2013 11:20	7/16/2013 15:00	5246	Limit switch not recognizing cranking motor was engaged. Limit switch replaced.	3.67	238.33
36	SF	8/24/2013 17:02	8/24/2013 17:17	5255	Lost computer connection from field to CR. Reboot of computer system fixed prob.	0.25	16.25
42	MO	9/10/2013 6:00	9/11/2013 16:12	5041	Inspection/repair of natural gas pressure regulator.	34.20	2223.00
44	MO	9/13/2013 7:00	9/13/2013 9:30	5041	Repair gas leak.	2.50	162.50
49	MO	11/4/2013 7:00	11/4/2013 16:40	3620	Inspection of combustion turbine cranking motor transformer.	9.67	628.33
51	SF	11/4/2013 17:05	11/4/2013 18:37	4810	Contact on generator breaker not making up, not showing generator breaker closed.	1.53	99.67
3	SF	1/6/2014 5:57	1/6/2014 6:22	5073	Trouble with #8 flame scanner.	0.42	27.08
27	U1	1/7/2014 6:00	1/9/2014 0:00	9130	Natural gas unavailable from Texas Gas.	42.00	2730.00

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Rollup Weighting: N/A
OMC: None

5	MO	1/14/2014 6:00	1/16/2014 0:19	5272	Boroscope inspection of turbine.	42.32	2750.58
7	SF	2/11/2014 5:43	2/11/2014 6:41	5041	Natural gas regulator sticking closed.	0.97	62.83
13	SF	3/3/2014 5:14	3/3/2014 5:49	5073	Flame scanner not detecting flame in combustion zone.	0.58	37.92
15	MO	3/13/2014 8:00	3/13/2014 11:38	3680	Remove from RS for transmission to work on switch 01181 (discon. to scrub transf)	3.63	236.17
18	MO	3/25/2014 7:00	3/25/2014 13:00	3680	Remove from RS for transmission to work on switch 01181 (discon. to scrub transf)	6.00	390.00

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Rollup Weighting: N/A
OMC: None

Reid - CT							
22	MO	4/10/2014 6:00	4/10/2014 14:00	5274	Outage to inspect exhaust duct, silecer, and stack.	8.00	520.00
25	MO	5/13/2014 14:00	5/15/2014 18:34	5130	Outage to replace cranking motor transformer due to paper insulation breakdown.	52.57	3416.83
31	SF	6/23/2014 12:27	6/23/2014 13:00	4810	Had to rack out the generator fied breaker and then rack it back it to get unit tied	0.55	35.75
33	MO	7/25/2014 6:45	7/25/2014 12:50	5274	Removed from RS to take measurements of ducts for Fall outage.	6.08	395.42
38	PO	9/16/2014 0:01	11/10/2014 23:01	5260	56 day PO for major overhaul (turbine/compressor inspect&repair, new duct, etc.)	1103.98	71758.92

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Event Summary Report
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Report Period: November 2012 to October 2014
Rollup Weighting: N/A
OMC: None

Reid - Unit 1							
Event	Type	Start	End	Cause	Description	Eq Hrs	Eq MWH
2	U1	6/28/2013 22:58	6/29/2013 5:36	3149	Unit tripped on low vacuum.	6.63	431.17
3	U1	7/2/2013 12:57	7/2/2013 13:57	3149	Unit tripped on low vacuum.	1.00	65.00
6	U1	8/17/2013 1:05	8/20/2013 16:30	4311	Computer servers for turbine controls crashed after voltage surge.	87.42	5682.08
8	MO	10/21/2013 6:00	10/28/2013 6:00	0855	Inspection of safety valves.	168.00	10920.00
2	U1	1/2/2014 2:04	1/2/2014 5:28	3149	Unit tripped on low vacuum.	3.40	221.00
7	U1	2/6/2014 21:58	2/7/2014 3:26	3983	Trip from MFT due to loose wire on fuse to PLC, indicated coal valve went closed.	5.47	355.33
8	U2	2/14/2014 8:12	2/16/2014 2:37	1040	8th element from the east wall, third set of loops from the south wall, elev. 517 ft	42.42	2757.08
9	U1	2/16/2014 2:46	2/16/2014 6:03	3149	Trip on low vacuum.	3.28	213.42
10	U1	3/12/2014 0:56	3/12/2014 6:01	3149	Loss of circulating water pump caused unit to trip on low vac.	5.08	330.42
11	U1	3/22/2014 22:54	3/23/2014 2:54	3149	Tripped on low vacuum whicle back washing condenser.	4.00	260.00
15	MO	5/10/2014 0:45	5/12/2014 2:22	1493	Outage to wash air heaters.	49.62	3225.08
16	U1	6/11/2014 11:18	6/13/2014 20:40	1000	Waterwall tube leak tripped unit on loss of flames!	57.37	3728.83
17	MO	6/13/2014 20:40	6/16/2014 1:42	1530	Outage classification changed to repair gas leaks on the boiler/wet bottom, etc.	53.03	3447.17
20	U3	6/30/2014 15:57	7/1/2014 18:03	0350	Unit removed due to coal pipe pluggage/hot coal pipe	26.10	1696.50
21	SF	7/1/2014 18:03	7/2/2014 23:00	4410	Turning gear will not engage externally. Found bolts broken inside gear box.	28.95	1881.75
23	U2	7/6/2014 22:36	7/7/2014 0:51	0590	C/O tripped unit when SH sat. temp got to 5 F. SH spray regulator not closing all way.	2.25	146.25
24	U2	7/7/2014 3:43	7/7/2014 20:33	0350	Pipe to "A" mill classifier, east side plugged with coal.	16.83	1094.17
27	MO	7/31/2014 6:00	8/1/2014 16:00	0510	Removed from RS to repair/replace 2 drum safeties, a FW safety, and a SH safety.	34.00	2210.00
29	U1	8/14/2014 6:40	8/14/2014 19:55	4410	Rolled off gear and would not re-engage. Removed and internal broken bolts replaced	13.25	861.25

MicroGADS Gold

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Event Summary Report
Outage Reporting; FAC 2 year review outage reporting 11/2012 to 10/2014

Report Period: November 2012 to October 2014
Rollup Weighting: N/A
OMC: None

Wilson - Unit 1							
Event	Type	Start	End	Cause	Description	Eq Hrs	Eq MWH
26	MO	12/1/2012 12:07	12/2/2012 7:42	1000	water wall tube leak, east wall	19.58	8166.25
28	U2	12/8/2012 14:51	12/9/2012 19:57	1000	water wall tube leak, east wall	29.10	12134.70
29	U1	12/9/2012 21:09	12/9/2012 22:03	3410	control problem startup valve on Aux BFP, unit tripped on low drum level	0.90	375.30
30	U1	12/9/2012 22:45	12/10/2012 1:06	3410	Control issue startup valve on Aux BFP, unit tripped on high drum level	2.35	979.95
31	U1	12/10/2012 1:14	12/10/2012 4:18	3410	control issue startup valve on Aux BFP, unit tripped on low drum level	3.07	1278.80
32	U2	12/29/2012 13:48	1/1/2013 0:00	1040	Tube leak in platen SH, extended due to drag chain	58.20	24269.40
1	U2	1/1/2013 0:00	1/1/2013 5:29	0897	SH Tube leak outage was extended by 11 hrs due to problem with drag chain	5.48	2286.55
3	U3	1/26/2013 23:27	1/28/2013 14:09	1000	Two waterwall tube leaks	38.70	16137.90
17	U2	5/18/2013 2:43	5/19/2013 5:00	1000	Two water wall tube leaks, plus one in HRA	26.28	10960.15
18	MO	5/19/2013 5:00	5/20/2013 19:36	8580	Opted to keep the unit offline to make needed precipitator repairs	38.60	16096.20
19	U1	6/15/2013 11:42	6/15/2013 22:12	1455	#1IDF tripped resulting in unit trip	10.50	4378.50
20	U1	6/15/2013 23:49	6/16/2013 2:15	1740	Unit tripped on high drum level shortly after startup	2.43	1014.70
28	U1	9/2/2013 15:52	9/2/2013 22:40	9300	Unit trip due to lightening strike	6.80	2835.60
29	U3	10/18/2013 20:40	10/20/2013 11:02	1000	Tube leak, east water wall	38.37	15998.90
31	U2	11/1/2013 2:10	11/2/2013 10:28	0620	repair leak on superheater spray line	32.30	13469.10
32	U3	12/4/2013 22:58	12/8/2013 11:42	1040	Tube leak in B platen SH	84.73	35333.80

MicroGADS Gold

3/9/2015 2:37:08 PM

Event Summary Report
Outage Reporting; FAC 2 year review outage reporting 11/2012 to 10/2014

Report Period: November 2012 to October 2014
Rollup Weighting: N/A
OMC: None

1	U2	1/1/2014 9:43	1/6/2014 3:41	4289	Oil leak in front standard resulting in fire	113.97	47524.10
2	U2	1/7/2014 23:16	1/12/2014 12:47	1050	Tube leak in finishing super heater	109.52	45668.45
3	U1	1/12/2014 13:53	1/12/2014 14:58	1999	unit tripped during startup on low drum level	1.08	451.75
18	PO	5/10/2014 0:06	6/21/2014 0:06	1812	Planned outage	1008.00	420336.02
19	PE	6/21/2014 0:06	6/23/2014 13:37	1999	Extention of planned outage to complete work in original outage scope	61.52	25652.45
20	U1	6/23/2014 13:50	6/23/2014 17:32	1999	Unit tripped on high drum level during startup	3.70	1542.90
27	U2	7/8/2014 2:10	7/9/2014 17:56	1060	Tube leak in reheater	39.77	16582.70
30	MO	9/12/2014 17:46	9/15/2014 2:45	1000	External tube leak and repair scrubber module dampers.	56.98	23762.05
31	U2	9/17/2014 13:07	9/17/2014 19:14	9300	broken disconnect switch on MOD 2079	6.12	2550.65

BIG RIVERS ELECTRIC CORPORATION

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014
CASE NO. 2014-00230

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2012 THROUGH OCTOBER 31, 2014
CASE NO. 2014-00455

Response to the Kentucky Industrial Utility Customers, Inc.'s Request for Information dated March 6, 2015

March 20, 2015

Item 4) *For each month during the period under review, please provide the following.*

a. *Native load sales (MWH);*
b. *Generation by generating unit, and provide the allocation of the generation to native load customers and off-system sales (MWH);*
c. *Purchase power energy (MWH), and provide the allocation of the purchases to native load customers and off-system sales (MWH);*
d. *Losses (MWH)*
e. *Provide evidence of an energy balance between sales and generation for each period. If any other categories of energy are required to complete the energy balance, please provide those categories individually.*
f. *Generation fuel costs by generating unit, and provide the allocation of the generation fuel costs to native load customers and off-system sales;*
g. *Purchase power costs and the allocation of the purchase power costs to native load and off-system sales.*

h. If any other categories of costs are allocated to either native load or off-system sales that have not been included in the above two questions, please provide those fuel costs by individual categories.

Please provide all data electronically, in spreadsheet format with all formulas intact.

Response)

a. Please see attachment 1 to this response.

b. Please see the attachment to Item 2 of these responses.

c. Please see attachment 2 to this response.

d. Please see attachment 1 to this response.

e. Please see attachment 1 to this response.

f. Please see attachment to Item 2 of these responses for generation fuel costs by generating unit and the attachment provided electronically in the file labeled 'KIUC 1-4 - Attachments 1 and 2 – Native Load Sales and Purchased Power Info' on the CD accompanying these responses for the generation fuel costs allocated to native load customers and off-system sales.

g. Please see attachment 2 to this response

h. Not applicable.

Witness) Nicholas R. Castlen

Big Rivers Electric Corporation
Native Load Sales Information
Case Nos. 2014-00455 and 2014-00230

NL Sales from GENERATION:		**Nov-12**	**Dec-12**	**Jan-13**	**Feb-13**	**Mar-13**	**Apr-13**
Net Generation (before losses) (MWH)		1,027,844	1,001,899	992,591	934,554	925,070	893,016
Less: Back-Up & Supp. Sales to Smelters (from Gen) (MWH)		2,956	4,190	2,198	2,406	5,872	4,115
Less: Domtar Back-Up Power Sales (from Gen) (MWH)		1,192	235	1,594	2,998	2,689	1,100
Less: Inter-system Sales of Generation (MWH)		212,414	192,436	169,789	164,682	125,607	155,601
Less: System Losses (MWH)		16,471	18,421	19,851	18,775	21,378	15,973
Native Load Sales Volumes from Generation (MWH)	**(A)**	**794,811**	**786,617**	**799,159**	**745,693**	**769,524**	**716,227**
Native Load Sales Volumes from Purchased Power (MWH)	(B)	63,310	114,329	132,098	86,136	138,630	116,633
Native Load Sales Volumes from Inadvertent (MWH)	(C)	11,060	13,214	14,726	15,103	17,209	9,453
Total Native Load Sales Volumes (MWH)	**[(A) + (B) + (C)]**	**869,181**	**914,160**	**945,983**	**846,932**	**925,363**	**842,313**

Case Nos. 2014-00455 and 2014-00230
Attachment No. 1 for Response KIUC Item 4a., 4d., and 4e.
Witness: Nicholas R. Castlen

Big Rivers Electric Corporation
Native Load Sales Information
Case Nos. 2014-00455 and 2014-00230

		May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13
NL Sales from GENERATION:							
Net Generation (before losses) (MWH)		889,735	905,244	979,328	870,248	701,032	749,004
Less: Back-Up & Supp. Sales to Smelters (from Gen) (MWH)		4,245	165	229	1,407	309	2,439
Less: Domtar Back-Up Power Sales (from Gen) (MWH)		220	670	926	1,504	5,538	2,286
Less: Inter-system Sales of Generation (MWH)		140,367	105,690	157,321	165,039	223,616	281,306
Less: System Losses (MWH)		17,558	17,556	25,236	29,878	19,947	15,748
Native Load Sales Volumes from Generation (MWH)	**(A)**	**727,345**	**781,163**	**795,616**	**672,420**	**451,622**	**447,225**
Native Load Sales Volumes from Purchased Power (MWH)	(B)	148,351	102,411	114,163	81,251	52,596	60,816
Native Load Sales Volumes from Inadvertent (MWH)	(C)	10,896	11,560	18,987	23,259	14,995	11,775
Total Native Load Sales Volumes (MWH)	**[(A) + (B) + (C)]**	**886,592**	**895,134**	**928,766**	**776,930**	**519,213**	**519,816**

Big Rivers Electric Corporation
Native Load Sales Information
Case Nos. 2014-00455 and 2014-00230

		Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14
NL Sales from GENERATION:							
Net Generation (before losses) (MWH)		605,688	725,602	709,596	736,225	810,675	766,338
Less: Back-Up & Supp. Sales to Smelters (from Gen) (MWH)		8,193	11,429	12,110	-	-	-
Less: Domtar Back-Up Power Sales (from Gen) (MWH)		137	235	137	418	260	1,115
Less: Inter-system Sales of Generation (MWH)		128,901	242,348	189,235	496,509	600,162	586,077
Less: System Losses (MWH)		16,437	20,560	24,247	18,766	23,865	17,928
Native Load Sales Volumes from Generation (MWH)	**(A)**	**452,020**	**451,030**	**483,867**	**220,532**	**186,388**	**161,218**
Native Load Sales Volumes from Purchased Power (MWH)	(B)	71,369	121,452	132,423	72,871	84,911	46,534
Native Load Sales Volumes from Inadvertent (MWH)	(C)	12,151	15,714	20,340	14,369	15,977	16,710
Total Native Load Sales Volumes (MWH) [(A) + (B) + (C)]		**535,540**	**588,196** 0	**636,630**	**307,772**	**287,276**	**224,462**

Big Rivers Electric Corporation
Native Load Sales Information
Case Nos. 2014-00455 and 2014-00230

		May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14
NL Sales from GENERATION:							
Net Generation (before losses) (MWH)		523,106	459,042	685,648	764,902	701,225	650,243
Less: Back-Up & Supp. Sales to Smelters (from Gen) (MWH)		-	-	-	-	-	-
Less: Domtar Back-Up Power Sales (from Gen) (MWH)		541	873	1,110	1,293	2,579	1,067
Less: Inter-system Sales of Generation (MWH)		346,161	234,888	444,585	490,153	476,576	457,253
Less: System Losses (MWH)		19,047	22,574	21,356	21,198	17,422	18,617
Native Load Sales Volumes from Generation (MWH)	**(A)**	**157,357**	**200,707**	**218,597**	**252,258**	**204,648**	**173,306**
Native Load Sales Volumes from Purchased Power (MWH)	(B)	78,525	66,429	54,558	40,275	35,582	48,489
Native Load Sales Volumes from Inadvertent (MWH)	(C)	16,339	15,967	14,483	14,990	13,038	13,474
Total Native Load Sales Volumes (MWH) [(A) + (B) + (C)]		**252,221**	**283,103**	**287,638**	**307,523**	**253,268**	**235,269**

Big Rivers Electric Corporation
Purchased Power Information
Case Nos. 2014-00455 and 2014-00230

	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13
Purchased Power for Native Load (MWH)	63,310	114,329	132,098	86,136	138,630	116,633
Purchased Power for Off-System Sales (MWH)	-	-	-	-	-	-
Total Purchased Power (MWH)	63,310	114,329	132,098	86,136	138,630	116,633
Purchased Power for Native Load ($)	$ 1,440,927	$ 2,640,015	$ 3,035,548	$ 1,875,296	$ 3,361,965	$ 3,200,753
Purchased Power for Off-System Sales ($)	$ -	$ -	$ -	$ -	$ -	$ -
Total Purchased Power ($)	$ 1,440,927	$ 2,640,015	$ 3,035,548	$ 1,875,296	$ 3,361,965	$ 3,200,753

Big Rivers Electric Corporation
Purchased Power Information
Case Nos. 2014-00455 and 2014-00230

	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13
Purchased Power for Native Load (MWH)	148,351	102,411	114,163	81,251	52,596	60,816
Purchased Power for Off-System Sales (MWH)	37,200	36,000	74,400	74,400	36,000	37,200
Total Purchased Power (MWH)	185,551	138,411	188,563	155,651	88,596	98,016
Purchased Power for Native Load ($)	$ 3,969,968	$ 2,595,076	$ 2,805,708	$ 1,736,689	$ 862,309	$ 1,122,218
Purchased Power for Off-System Sales ($)	$ 1,297,744	$ 1,237,289	$ 2,513,391	$ 2,321,878	$ 1,089,854	$ 1,187,995
Total Purchased Power ($)	$ 5,267,712	$ 3,832,365	$ 5,319,098	$ 4,058,568	$ 1,952,162	$ 2,310,213

Big Rivers Electric Corporation
Purchased Power Information
Case Nos. 2014-00455 and 2014-00230

	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14
Purchased Power for Native Load (MWH)	71,369	121,452	132,423	72,871	84,911	46,534
Purchased Power for Off-System Sales (MWH)	42,880	37,200	41,200	-	-	-
Total Purchased Power (MWH)	114,249	158,652	173,623	72,871	84,911	46,534
Purchased Power for Native Load ($)	$ 1,526,653	$ 2,010,542	$ 3,385,802	$ 1,658,863	$ 2,049,196	$ 1,149,809
Purchased Power for Off-System Sales ($)	$ 1,313,914	$ 1,306,002	$ 3,012,055	$ -	$ -	$ -
Total Purchased Power ($)	$ 2,840,567	$ 3,316,543	$ 6,397,857	$ 1,658,863	$ 2,049,196	$ 1,149,809

Big Rivers Electric Corporation
Purchased Power Information
Case Nos. 2014-00455 and 2014-00230

	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14
Purchased Power for Native Load (MWH)	78,525	66,429	54,558	40,275	35,582	48,489
Purchased Power for Off-System Sales (MWH)	-	-	88,000	84,000	67,200	73,600
Total Purchased Power (MWH)	78,525	66,429	142,558	124,275	102,782	122,089
Purchased Power for Native Load ($)	$ 1,507,241	$ 1,460,432	$ 1,024,152	$ 1,030,879	$ 872,320	$ 684,918
Purchased Power for Off-System Sales ($)	$ -	$ -	$ 3,342,855	$ 3,170,868	$ 2,551,202	$ 2,798,902
Total Purchased Power ($)	$ 1,507,241	$ 1,460,432	$ 4,367,007	$ 4,201,746	$ 3,423,522	$ 3,483,820

BIG RIVERS ELECTRIC CORPORATION

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014
CASE NO. 2014-00230

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2012 THROUGH OCTOBER 31, 2014
CASE NO. 2014-00455

Response to the Kentucky Industrial Utility Customers, Inc.'s Request for Information dated March 6, 2015

March 20, 2015

Item 5) ***Please provide a monthly billing summary for all sales to all electric utilities for each month during the period under review. Please provide the information in the same format as the Attachment to Big Rivers' Response to Commission Staff's February 5, 2015 Request for Information, Item No. 12 in Case No. 2014-00455. Please provide this electronically in spreadsheet format, with all formulas intact.***

Response) Please see the folder labeled 'KIUC 1-5 – Monthly Billing Summaries' on the CD accompanying these responses. Therein are four files, one each for Case Nos. 2014-00455, 2014-00230, 2013-00449, and 2013-00266, respectively.

Witness) Nicholas R. Castlen

BIG RIVERS ELECTRIC CORPORATION

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014
CASE NO. 2014-00230

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2012 THROUGH OCTOBER 31, 2014
CASE NO. 2014-00455

Response to the Kentucky Industrial Utility Customers, Inc.'s Request for Information dated March 6, 2015

March 20, 2015

Item 6) ***List Big Rivers' generating units in economic dispatch order for each month during the period under review. State whether Big Rivers operated its generating units in economic dispatch order during the period under review. If the response is no, explain. Please provide the information in the same format as Big Rivers' Response to Commission Staff's February 5, 2015 Request for Information, Item No. 39 in Case No. 2014-00455.***

Response) The attached table lists Big Rivers' generating units in economic dispatch order, from highest cost to lowest cost, for the review period of November 1, 2012, through October 31, 2014. As a member of the Midcontinent Independent System Operator, Inc. ("MISO"), Big Rivers does not determine the order of dispatch of its units. MISO dispatches generation to optimize system reliability and economics.

Witness) Wayne O'Bryan

Big Rivers Electric Corporation
Generating Units in Economic Dispatch Order
From Highest Cost to Lowest Cost
From November 1, 2012 through October 31, 2014

November 2012	December 2012	January 2013	February 2013	March 2013	April 2013
Reid CT	Reid CT	Reid CT	Reid CT	Reid CT	Reid CT
Reid Unit 1	Reid Unit 1	Reid Unit 1	Reid Unit 1	Coleman Unit 2	HMP&L Unit 2
HMP&L Unit 2	HMP&L Unit 2	HMP&L Unit 2	HMP&L Unit 2	Coleman Unit 3	Reid Unit 1
HMP&L Unit 1	HMP&L Unit 1	HMP&L Unit 1	HMP&L Unit 1	Reid Unit 1	HMP&L Unit 1
Coleman Unit 2	Wilson	Coleman Unit 1	Coleman Unit 2	HMP&L Unit 2	Coleman Unit 1
Coleman Unit 1	Coleman Unit 2	Coleman Unit 2	Coleman Unit 3	Coleman Unit 1	Coleman Unit 2
Coleman Unit 3	Coleman Unit 1	Coleman Unit 3	Coleman Unit 1	HMP&L Unit 1	Coleman Unit 3
Green Unit 2	Coleman Unit 3	Green Unit 2	Green Unit 1	Green Unit 2	Green Unit 2
Green Unit 1	Green Unit 1	Green Unit 1	Green Unit 2	Green Unit 1	Green Unit 1
Wilson	Green Unit 2	Wilson	Wilson	Wilson	Wilson

May 2013	June 2013	July 2013 thru August 2013	September 2013	October 2013 thru November 2013	December 2013
Reid CT	Reid CT	Reid CT	Reid CT	Reid CT	Reid CT
Reid Unit 1	Reid Unit 1	Reid Unit 1	Reid Unit 1	Reid Unit 1	Reid Unit 1
HMP&L Unit 2	HMP&L Unit 2	HMP&L Unit 2	Coleman Unit 1	HMP&L Unit 2	Green Unit 2
HMP&L Unit 1	HMP&L Unit 1	HMP&L Unit 1	HMP&L Unit 2	HMP&L Unit 1	HMP&L Unit 2
Coleman Unit 1	Coleman Unit 1	Coleman Unit 2	HMP&L Unit 1	Coleman Unit 1	HMP&L Unit 1
Coleman Unit 2	Coleman Unit 2	Coleman Unit 1	Coleman Unit 2	Coleman Unit 2	Coleman Unit 2
Coleman Unit 3	Coleman Unit 3	Coleman Unit 3	Coleman Unit 3	Coleman Unit 3	Coleman Unit 1
Green Unit 2	Green Unit 1	Green Unit 2	Green Unit 2	Green Unit 2	Coleman Unit 3
Green Unit 1	Green Unit 2	Green Unit 1	Green Unit 1	Green Unit 1	Green Unit 1
Wilson	Wilson	Wilson	Wilson	Wilson	Wilson

Big Rivers Electric Corporation
Generating Units in Economic Dispatch Order
From Highest Cost to Lowest Cost
From November 1, 2012 through October 31, 2014

January 2014 thru March 2014	April 2014	May 2014	June 2014	July 2014	August 2014 thru October 2014
Reid CT	Reid CT	Reid CT	Reid CT	Reid CT	Reid CT
Reid Unit 1	HMP&L Unit 2	HMP&L Unit 1	HMP&L Unit 2	Green Unit 1	Reid Unit 1
HMP&L Unit 2	Reid Unit 1	HMP&L Unit 2	Reid Unit 1	HMP&L Unit 2	HMP&L Unit 2
HMP&L Unit 1	Coleman Unit 1	Reid Unit 1	HMP&L Unit 1	Reid Unit 1	HMP&L Unit 1
Coleman Unit 2	Coleman Unit 2	Green Unit 1	Wilson	HMP&L Unit 1	Green Unit 2
Coleman Unit 1	HMP&L Unit 1	Wilson	Green Unit 1	Green Unit 2	Green Unit 1
Coleman Unit 3	Coleman Unit 3	Green Unit 2	Green Unit 2	Wilson	Wilson
Green Unit 2	Green Unit 1				
Green Unit 1	Wilson				
Wilson	Green Unit 2				

Case Nos. 2014-00455 and 2014-00230
Attachment for Response to KIUC Item 6
Witness: Wayne O'Bryan

BIG RIVERS ELECTRIC CORPORATION

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014
CASE NO. 2014-00230

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2012 THROUGH OCTOBER 31, 2014
CASE NO. 2014-00455

Response to the Kentucky Industrial Utility Customers, Inc.'s Request for Information dated March 6, 2015

March 20, 2015

Item 7) *Regarding Big Rivers' off-system sales profits, please provide the following by month for each month during the period under review:*

a. *Provide generation and purchase power (MWHs) allocated to off-system sales. In the case of Company generation, provide generation (MWHs) by generating unit. In the case of purchases, provide the purchase energy in total purchase MWHs.*
b. *Please provide the generation and purchase power costs allocated to the off-system sales. In the case of Company generation, provide generation dollars by generating unit. In the case of purchases, provide the purchase cost in total purchase dollars.*
c. *Provide the revenue received for the off-system sales.*
d. *Provide the resulting profit for the off-system sales.*

Please provide all calculations electronically, in spreadsheet format with all formulas intact.

BIG RIVERS ELECTRIC CORPORATION

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014
CASE NO. 2014-00230

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2012 THROUGH OCTOBER 31, 2014
CASE NO. 2014-00455

Response to the Kentucky Industrial Utility Customers, Inc.'s Request for Information dated March 6, 2015

March 20, 2015

Response) Please see the file labeled 'KIUC 1-7 – Off-System Sales Information' on the CD accompanying these responses.

Witnesses) Nicholas R. Castlen

BIG RIVERS ELECTRIC CORPORATION

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2013 THROUGH APRIL 30, 2014
CASE NO. 2014-00230

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2012 THROUGH OCTOBER 31, 2014
CASE NO. 2014-00455

Response to the Kentucky Industrial Utility Customers, Inc.'s Request for Information dated March 6, 2015

March 20, 2015

Item 8) ***Please provide Big Rivers' reserve margin by month for each month during the period under review. Please provide the calculations electronically in spreadsheet format, with all formulas intact. In providing the calculations, please provide installed capacity broken down by generating unit, by purchase etc.***

Response) As a member of MISO, Big Rivers does not hold operating reserves itself. The reserve margins necessary to promote Resource Adequacy need to be assessed on both a near-term operational basis and on a longer-term planning basis. For the near-term members are required to procure regulating, spinning, and supplemental reserves from MISO. This is done to ensure the Planning Reserve Margin ("PRM") is sufficient to cover planned maintenance, forced outages and derates, load forecast error, and local system reliability.

For a longer term planning basis, Big Rivers does not currently calculate reserve margin by month. Big Rivers' Planning Reserve Margin Requirement ("PRMR") is calculated for each planning year within the MISO system. The PRM and Transmission Loss percentage are determined by MISO each year. Examples of the 2013–2014 and the 2014–2015 planning years are in the table below. The data covers the review period beginning in June 2013 as the planning years begin in June each year. Prior to June 2013, MISO required

submission of monthly data, with an annual calculation of PRMR. However, this data is not readily available.

Planning Year	Asset	Demand Forecast	Planning Reserve Margin % (PRM)	Transmission Loss %	Planning Reserve Margin Requirement (PRMR)
2013 - 2014	BRPS[1]	1583	6.2	1.3	1703
2014 - 2015	BRPS	1084.2	7.3	1.3	1178.5

The capacity of each of Big Rivers' generators is determined with Generation Verification Test Capacity ("GVTC") data (*i.e.*, annual capacity test information) and XEFORd calculations (*i.e.*, MISO Equivalent Forecast Outage Rate ("EFOR") data point) for each unit (forced outage and derate information). This compilation of information yields an Unforced Capacity Rating ("UCAP") for each unit. This rating is converted to Zonal Resource Credits ("ZRCs") for submission in MISO's annual capacity auction process. After fulfilling its performance obligations, Big Rivers can sell or auction excess capacity. The tables below illustrate Installed Capacity ("ICAP") for each unit and UCAP totals that can be converted to ZRCs. These tables are downloaded from the MISO portal and do not include all

[1] BRPS = Big Rivers Power Supply.

calculations. The two screen shots below the tables display the remaining ZRCs after satisfying the PRMR requirements. It should be noted that the PRMR for both planning years listed include obligations for the Century smelters.

Planning Year 2013–2014 –

Resource Name	Asset Owner	Effective ICAP	GVTC	XEFORd	UCAP (Total)
BREC.COLE1	BRPS	150	150	0.04993	142.5
BREC.COLE2	BRPS	138	138	0.03415	133.3
BREC.COLE3	BRPS	155	156	0.03469	149.6
BREC.GREEN1	BRPS	231	232	0.03066	223.9
BREC.GREEN2	BRPS	223	223	0.01033	220.7
BREC.HMP1	BRPS	153	153	0.04597	146
BREC.HMP2	BRPS	158	158	0.06891	147.1
BREC.REID1	BRPS	52	52	0.16113	43.6
BREC.REIDCT	BRPS	56	56	0.15396	47.4
BREC.WILSON1	BRPS	417	432	0.03508	402.4
SEPA-BREC RENEW	BRPS	181.1	181.1	0.01726	178
SEPA-HMPL NEW	BRPS	12.2	12.2	0.01726	12

BIG RIVERS ELECTRIC CORPORATION

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CASE NO. 2014-00230

AN EXAMINATION OF THE APPLICATION OF THE FUEL ADJUSTMENT CLAUSE OF BIG RIVERS ELECTRIC CORPORATION FROM NOVEMBER 1, 2012 THROUGH OCTOBER 31, 2014
CASE NO. 2014-00455

Response to the Kentucky Industrial Utility Customers, Inc.'s Request for Information dated March 6, 2015

March 20, 2015

Screen Shots 2013–2014 –

Plan Year: 2013-2014 Auction: Annual Submit Cancel Refresh PRMR

Zone 6

Auction PRMR	1703.0	ZRC Available from Resources	1846.5
Auction FRAP	0.0	Total Capacity Resources	1656.5
Capacity Deficient Amt (MW)	0.0	Total LMR/Energy Efficiency	0.0
Auction	1703.0	Total External	190.0
Self-Scheduled Offers	1294.5	ZRC Bilateral Net	32.0
		ZRC Bilateral Purchased	32.0
		ZRC Bilateral Sold	0.0
		Total ZRC	1878.5
		Total FRAP	0.0
		Cleared Offers	1294.5
		Pending Offers	0.0
		Pending ZRC Bilateral	0.0
		Available ZRC	584.0

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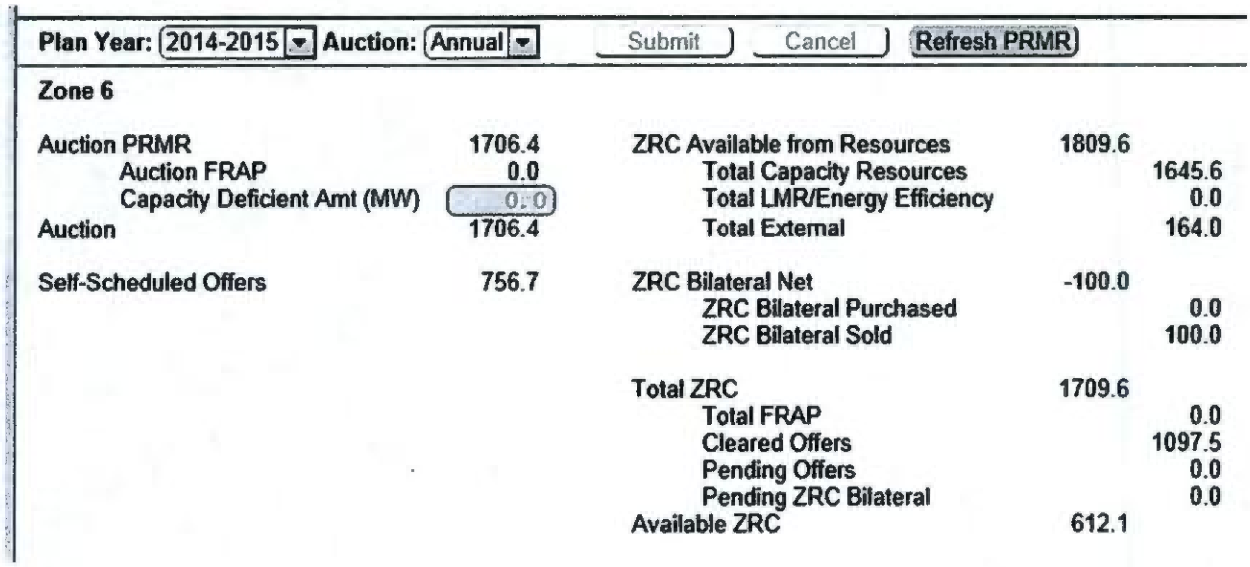
Planning Year 2014–2015 –

Resource Name	Asset Owner	Effective ICAP	GVTC	XEFORd	UCAP (Total)
BREC.COLE1	BR_COLE1AO	150	151	0.07829	138.3
BREC.COLE2	BR_COLE2AO	138	138	0.03332	133.4
BREC.COLE3	BR_COLE3AO	155	156	0.03476	149.6
BREC.GREEN1	BRPS	231	233	0.01951	226.5
BREC.GREEN2	BRPS	223	223	0.01369	220
BREC.HMP1	BRPS	153	153	0.05174	145.1
BREC.HMP2	BRPS	157	157	0.07440	145.3
BREC.REID1	BRPS	49	49	0.12912	42.7
BREC.REIDCT	BRPS	55	55	0.15289	46.6
BREC.WILSON1	BRPS	417	421	0.04542	398.1
SEPA-BREC RENEW REV	BRPS	154	154	0	154
SEPA-HMPL NEW	BRPS	10.1	10.1	0.00753	10

Screen Shots 2013–2014 –



Plan Year: 2014-2015 Auction: Annual Submit Cancel Refresh PRMR

Zone 6

Auction PRMR	1706.4	ZRC Available from Resources	1809.6
Auction FRAP	0.0	Total Capacity Resources	1645.6
Capacity Deficient Amt (MW)	0.0	Total LMR/Energy Efficiency	0.0
Auction	1706.4	Total External	164.0
Self-Scheduled Offers	756.7	ZRC Bilateral Net	-100.0
		ZRC Bilateral Purchased	0.0
		ZRC Bilateral Sold	100.0
		Total ZRC	1709.6
		Total FRAP	0.0
		Cleared Offers	1097.5
		Pending Offers	0.0
		Pending ZRC Bilateral	0.0
		Available ZRC	612.1

Witness) Wayne O'Bryan