

**BOEHM, KURTZ & LOWRY**

ATTORNEYS AT LAW  
36 EAST SEVENTH STREET  
SUITE 1510  
CINCINNATI, OHIO 45202  
TELEPHONE (513) 421-2255  
TELECOPIER (513) 421-2764

**VIA OVERNIGHT MAIL**

October 5, 2017

Talina Mathews, Executive Director  
Kentucky Public Service Commission  
211 Sower Boulevard  
Frankfort, Kentucky 40602

RECEIVED

OCT 6 2017

PUBLIC SERVICE  
COMMISSION

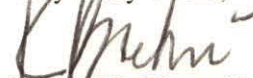
**Re: Case No. 2017-00287**

Dear Ms. Mathews:

We were made aware that the diskette containing the workpapers of Lane Kollen previously filed with his Direct Testimony and Exhibits was unreadable. Please find enclosed a readable diskette.

By copy of this letter, all parties listed on the Certificate of Service have been served.

Very Truly Yours,



Michael L. Kurtz, Esq.

Kurt J. Boehm, Esq.

Jody Kyler Cohn, Esq.

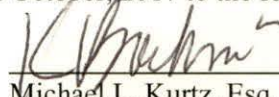
**BOEHM, KURTZ & LOWRY**

MLKkew  
Attachment

cc: Certificate of Service  
Quang Nyugen, Esq.  
Richard Raff, Esq.

**CERTIFICATE OF SERVICE**

I hereby certify that a copy of the foregoing was served by electronic mail (when available) and by regular, U.S. mail, unless otherwise noted, this 5<sup>th</sup> day of October, 2017 to the following:



Michael L. Kurtz, Esq.

Kurt J. Boehm, Esq.

Jody Kyler Cohn, Esq.

Big Rivers Electric Corporation  
201 Third Street  
P. O. Box 24  
Henderson, KY 42420

Honorable James M Miller  
Honorable Tyson A Kamuf  
Sullivan, Mountjoy, Stainback & Miller, PSC  
100 St. Ann Street  
P.O. Box 727  
Owensboro, KENTUCKY 42302-0727

**Big Rivers Electric Corporation**  
**Case No. 2017-00287**

**As Filed:**

	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Total
Total Generation Fuel Cost	\$ 12,194,218	\$ 16,419,188	\$ 14,677,605	\$ 7,111,193	\$ 10,042,142	\$ 10,253,333	\$ 70,697,679
Less: MISO Make Whole Payments	(2,110)	(15,222)	(6,508)	(582)	(7,468)	-	(31,890)
Less: Net Forced Outage Fuel Cost Adjustment <sup>(1)</sup>	(76,576)	(60,896)	(179,523)	(67,362)	(126,735)	(203,746)	(714,838)
Less: Fuel Cost Assigned to Off-System Sales from Generation	(8,319,336)	(11,063,491)	(9,846,618)	(3,756,644)	(5,769,064)	(7,200,859)	(45,956,011)
<b>Total Generation Fuel Cost Assigned to Native Load</b>	<b>\$ 3,796,196</b>	<b>\$ 5,279,579</b>	<b>\$ 4,644,956</b>	<b>\$ 3,286,605</b>	<b>\$ 4,138,875</b>	<b>\$ 2,848,728</b>	<b>\$ 23,994,940</b>
Native Load Sales Volumes from Generation (MWh)	164,361.130	215,737.089	197,189.810	125,947.203	167,855.330	123,717.554	994,808.116
<b>Average Generation Fuel Cost Assigned to Native Load (\$/MWh)</b>	<b>\$ 23.10</b>	<b>\$ 24.47</b>	<b>\$ 23.56</b>	<b>\$ 26.10</b>	<b>\$ 24.66</b>	<b>\$ 23.03</b>	<b>\$ 24.12</b>

**Proforma - Using Stacking Method**

Generation Fuel Cost Assigned to Native Load	\$ 3,669,426	\$ 5,078,020	\$ 4,643,031	\$ 3,210,831	\$ 4,075,736	\$ 2,796,759	\$ 23,473,803
Less: MISO Make Whole Payments <sup>(2)</sup>	-	-	-	-	-	-	-
Less: Net Forced Outage Fuel Cost Adjustment	(76,576)	(60,896)	(179,523)	(67,362)	(126,735)	(203,746)	(714,838)
<b>Total Generation Fuel Cost Assigned to Native Load</b>	<b>\$ 3,592,850</b>	<b>\$ 5,017,124</b>	<b>\$ 4,463,508</b>	<b>\$ 3,143,469</b>	<b>\$ 3,949,001</b>	<b>\$ 2,593,013</b>	<b>\$ 22,758,965</b>
Native Load Sales Volumes from Generation (MWh)	164,361.130	215,737.089	197,189.810	125,947.203	167,855.330	123,717.554	994,808.116
<b>Average Generation Fuel Cost Assigned to Native Load (\$/MWh)</b>	<b>\$ 21.86</b>	<b>\$ 23.26</b>	<b>\$ 22.64</b>	<b>\$ 24.96</b>	<b>\$ 23.53</b>	<b>\$ 20.96</b>	<b>\$ 22.88</b>

**Difference:**

<b>Difference in Total Fuel Cost Allocated to Native Load</b>	<b>\$ 203,346</b>	<b>\$ 262,455</b>	<b>\$ 181,448</b>	<b>\$ 143,136</b>	<b>\$ 189,875</b>	<b>\$ 255,715</b>	<b>\$ 1,235,976</b>
<b>Difference in Average Fuel Cost Allocated to Native Load (\$/MWh)</b>	<b>\$ 1.24</b>	<b>\$ 1.21</b>	<b>\$ 0.92</b>	<b>\$ 1.14</b>	<b>\$ 1.13</b>	<b>\$ 2.07</b>	<b>\$ 1.24</b>

<sup>(1)</sup> Net Forced Outage Fuel Cost Adjustment = Fuel (assigned cost during Forced Outage) - Fuel (substitute cost for Forced Outage) - Identifiable fuel cost (substitute for Forced Outage)

<sup>(2)</sup> During the review period, MISO Make Whole Payments received for start-up fuel costs related to the Reid CT (for Nov. 2016 through Apr. 2017) and Green Unit 2 (for Mar. 2017 only). Because none of the generation from these units were assigned to native load during those months under the stacking method, none of the corresponding MISO Make Whole Payments received were assigned to native load under the stacking method.

KIUC 1-11 (Case No. 2017-00287)  
Stacking Calculations for Assigning Fuel Cost to Native Load

	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Total
<b>Total Generation Fuel Cost by Unit (\$):</b>							
Reid - Unit 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Coleman - Unit 1	-	-	-	-	-	-	-
Coleman - Unit 2	-	-	-	-	-	-	-
Coleman - Unit 3	-	-	-	-	-	-	-
Station Two - Unit 1	1,180,544.15	1,502,200.65	1,115,797.24	729,308.46	797,341.52	535,847.49	5,861,039.51
Station Two - Unit 2	1,196,643.71	1,559,949.69	1,099,210.03	362,312.96	1,210,518.29	852,968.52	6,281,603.20
Reid CT	3,080.00	55,407.86	12,670.40	7,673.80	6,159.37	-	84,991.43
Wilson	5,290,307.85	6,196,251.77	6,307,935.18	3,461,567.31	4,609,216.05	5,097,845.34	30,963,123.50
Green - Unit 1	2,001,571.19	3,618,682.28	3,100,054.00	848,535.60	1,874,060.39	2,801,446.25	14,244,349.71
Green - Unit 2	2,522,070.61	3,486,695.49	3,041,938.59	1,701,794.69	1,544,846.07	965,225.47	13,262,570.92
<b>Total Generation Fuel Cost (\$)</b>	<b>\$ 12,194,217.51</b>	<b>\$ 16,419,187.74</b>	<b>\$ 14,677,605.44</b>	<b>\$ 7,111,192.82</b>	<b>\$ 10,042,141.69</b>	<b>\$ 10,253,333.07</b>	<b>\$ 70,697,678.27</b>

<b>Net Generation by Unit (Before Losses) (MWh):</b>							
Reid - Unit 1	(1,394.000)	(1,589.000)	(1,625.000)	(1,488.000)	(1,548.000)	(1,431.000)	(9,075.000)
Coleman - Unit 1	(242.000)	(334.000)	(298.000)	(243.000)	(288.000)	(232.000)	(1,637.000)
Coleman - Unit 2	(242.000)	(334.000)	(297.000)	(244.000)	(288.000)	(232.000)	(1,637.000)
Coleman - Unit 3	(242.000)	(333.000)	(297.000)	(244.000)	(288.000)	(232.000)	(1,636.000)
Station Two - Unit 1	45,431.348	54,653.233	40,089.448	27,646.583	28,008.194	20,703.137	216,531.943
Station Two - Unit 2	43,955.652	56,561.767	39,625.552	12,028.417	44,792.806	31,790.863	228,755.057
Reid CT	(17.000)	578.000	49.000	90.000	17.000	(50.000)	667.000
Wilson	240,258.820	273,206.790	277,894.950	143,232.610	194,753.880	212,626.630	1,341,973.680
Green - Unit 1	88,531.425	154,347.274	134,573.239	33,539.595	82,573.028	128,736.934	622,301.495
Green - Unit 2	117,391.977	149,681.853	131,738.073	73,186.634	64,941.261	40,038.907	576,978.705
<b>Total Net Generation (Before Losses) (MWh)</b>	<b>533,432.222</b>	<b>686,438.917</b>	<b>621,453.262</b>	<b>287,504.839</b>	<b>412,674.169</b>	<b>431,719.471</b>	<b>2,973,222.880</b>

<b>Total System Losses:</b>	16,168.064	25,024.610	22,344.292	20,516.008	18,198.904	16,138.326	118,390.204
<b>Allocation of System Losses to Generation Units</b>							
Reid - Unit 1	(42.251)	(57.928)	(58.427)	(106.182)	(68.267)	(53.493)	(386.548)
Coleman - Unit 1	(7.335)	(12.176)	(10.715)	(17.340)	(12.701)	(8.673)	(68.939)
Coleman - Unit 2	(7.335)	(12.176)	(10.679)	(17.412)	(12.701)	(8.673)	(68.975)
Coleman - Unit 3	(7.335)	(12.140)	(10.679)	(17.412)	(12.701)	(8.673)	(68.938)
Station Two - Unit 1	1,377.001	1,992.422	1,441.412	1,972.828	1,235.160	773.915	8,792.737
Station Two - Unit 2	1,332.274	2,061.999	1,424.733	858.334	1,975.360	1,188.390	8,841.089
Reid CT	(0.515)	21.071	1.762	6.422	0.750	(1.869)	27.621
Wilson	7,282.125	9,959.944	9,991.686	10,220.911	8,588.633	7,948.305	53,991.604
Green - Unit 1	2,683.343	5,626.838	4,838.568	2,393.346	3,641.465	4,812.381	23,995.941
Green - Unit 2	3,558.092	5,456.756	4,736.630	5,222.512	2,863.905	1,496.715	23,334.611
<b>Total System Losses (MWh)</b>	<b>16,168.064</b>	<b>25,024.610</b>	<b>22,344.292</b>	<b>20,516.008</b>	<b>18,198.904</b>	<b>16,138.326</b>	<b>118,390.204</b>

<b>Net Generation by Unit (After Allocated Losses):</b>							
Reid - Unit 1	(1,351.749)	(1,531.072)	(1,566.573)	(1,381.818)	(1,479.733)	(1,377.507)	(8,688.452)
Coleman - Unit 1	(234.665)	(321.824)	(287.285)	(225.660)	(275.299)	(223.327)	(1,568.060)
Coleman - Unit 2	(234.665)	(321.824)	(286.321)	(226.588)	(275.299)	(223.327)	(1,568.024)
Coleman - Unit 3	(234.665)	(320.860)	(286.321)	(226.588)	(275.299)	(223.327)	(1,567.060)
Station Two - Unit 1	44,054.347	52,660.811	38,648.036	25,673.755	26,773.034	19,929.222	207,739.205
Station Two - Unit 2	42,623.378	54,499.768	38,200.819	11,170.083	42,817.446	30,602.473	219,913.967
Reid CT	(16.485)	556.929	47.238	83.578	16.250	(48.131)	639.379
Wilson	232,976.695	263,246.846	267,903.264	133,011.699	186,165.247	204,678.325	1,287,982.076
Green - Unit 1	85,848.082	148,720.436	129,734.671	31,146.249	78,931.563	123,924.553	598,305.554
Green - Unit 2	113,833.885	144,225.097	127,001.443	67,964.122	62,077.356	38,542.192	553,644.095
<b>Total Net Generation (After Losses) (MWh)</b>	<b>517,264.158</b>	<b>661,414.307</b>	<b>599,108.971</b>	<b>266,988.832</b>	<b>394,475.266</b>	<b>415,581.146</b>	<b>2,854,832.680</b>

KIUC 1-11 (Case No. 2017-00287)  
Stacking Calculations for Assigning Fuel Cost to Native Load

	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Total
<b>Average Fuel Cost per Net MWh of Generation (After Losses) (\$/MWh):</b>							
Reid - Unit 1	N/A	N/A	N/A	N/A	N/A	N/A	\$ -
Coleman - Unit 1	N/A	N/A	N/A	N/A	N/A	N/A	\$ -
Coleman - Unit 2	N/A	N/A	N/A	N/A	N/A	N/A	\$ -
Coleman - Unit 3	N/A	N/A	N/A	N/A	N/A	N/A	\$ -
Station Two - Unit 1	\$ 26.797	\$ 28.526	\$ 28.871	\$ 28.407	\$ 29.782	\$ 26.888	\$ 28.213
Station Two - Unit 2	\$ 28.075	\$ 28.623	\$ 28.775	\$ 32.436	\$ 28.272	\$ 27.873	\$ 28.564
Reid CT	N/A	\$ 99.488	\$ 268.225	\$ 91.816	\$ 379.038	N/A	\$ 132.928
Wilson	\$ 22.707	\$ 23.538	\$ 23.546	\$ 26.025	\$ 24.759	\$ 24.907	\$ 24.040
Green - Unit 1	\$ 23.315	\$ 24.332	\$ 23.895	\$ 27.244	\$ 23.743	\$ 22.606	\$ 23.808
Green - Unit 2	\$ 22.156	\$ 24.175	\$ 23.952	\$ 25.040	\$ 24.886	\$ 25.043	\$ 23.955
<b>Average Fuel Cost per Net MWh of Gen (After Losses) (\$/MWh)</b>	<b>\$ 23.574</b>	<b>\$ 24.824</b>	<b>\$ 24.499</b>	<b>\$ 26.635</b>	<b>\$ 25.457</b>	<b>\$ 24.672</b>	<b>\$ 24.764</b>

**Average Fuel Cost for Stacked Units:**

1st	\$ 22.156	\$ 23.538	\$ 23.546	\$ 25.040	\$ 23.743	\$ 22.606
2nd	\$ 22.707	\$ 24.175	\$ 23.895	\$ 26.025	\$ 24.759	\$ 24.907
3rd	\$ 23.315	\$ 24.332	\$ 23.952	\$ 27.244	\$ 24.886	\$ 25.043
4th	\$ 26.797	\$ 28.526	\$ 28.775	\$ 28.407	\$ 28.272	\$ 26.888
5th	\$ 28.075	\$ 28.623	\$ 28.871	\$ 32.436	\$ 29.782	\$ 27.873

**Unit Rank in Stack**

1st	Green - Unit 2	Wilson	Wilson	Green - Unit 2	Green - Unit 1	Green - Unit 1
2nd	Wilson	Green - Unit 2	Green - Unit 1	Wilson	Wilson	Wilson
3rd	Green - Unit 1	Green - Unit 1	Green - Unit 2	Green - Unit 1	Green - Unit 2	Green - Unit 2
4th	Station Two - Unit 1	Station Two - Unit 1	Station Two - Unit 2	Station Two - Unit 1	Station Two - Unit 2	Station Two - Unit 1
5th	Station Two - Unit 2	Station Two - Unit 2	Station Two - Unit 1	Station Two - Unit 2	Station Two - Unit 1	Station Two - Unit 2

**Native Load Sales from Generation (MWh)**

<b>164,361.130</b>	<b>215,737.089</b>	<b>197,189.810</b>	<b>125,947.203</b>	<b>167,855.330</b>	<b>123,717.554</b>	<b>994,808.116</b>
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**Volumes (MWh) Units by Stacking Position:**

1st	113,833.885	215,737.089	197,189.810	67,964.122	78,931.563	123,717.554
2nd	50,527.245			57,983.081	88,923.767	
3rd						
4th						
5th						
<b>Total</b>	<b>164,361.130</b>	<b>215,737.089</b>	<b>197,189.810</b>	<b>125,947.203</b>	<b>167,855.330</b>	<b>123,717.554</b>

**Fuel Costs Allocated to Native Load by Unit:**

1st	\$ 2,522,103.56	\$ 5,078,019.60	\$ 4,643,031.27	\$ 1,701,821.61	\$ 1,874,072.10	\$ 2,796,759.03	\$ 18,615,807.16
2nd	\$ 1,147,322.15	\$ -	\$ -	\$ 1,509,009.68	\$ 2,201,663.55	\$ -	\$ 4,857,995.38
3rd	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4th	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5th	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	<b>\$ 3,669,425.71</b>	<b>\$ 5,078,019.60</b>	<b>\$ 4,643,031.27</b>	<b>\$ 3,210,831.30</b>	<b>\$ 4,075,735.65</b>	<b>\$ 2,796,759.03</b>	<b>\$ 23,473,802.55</b>

**KIUC 1-6 and 1-7  
DETAIL SUPPORT**

FAC Review Case No. 2017-00287 (Detail Calcs for KIUC 1-6 & KIUC 1-7)

Fuel Cost (\$/MWh) Assigned to NL & OSS and Purchased Power Cost Assigned to NL & OSS in FAC

Nov-16 through Apr-17

	SOURCE	Expense Month:	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Six-Month Total
<b>Inputs:</b>									
+ Coal Burned	Form A, p.2	\$	10,545,722	14,601,582	12,602,110	6,215,542	8,453,818	9,185,498	\$ 61,604,272
+ Pet Coke Burned	Form A, p.2	\$	1,407,158	1,460,090	1,924,610	674,208	1,339,461	810,929	\$ 7,616,456
+ Oil Burned	Form A, p.2	\$	238,258	302,108	138,215	213,769	242,704	256,906	\$ 1,391,960
+ Gas Burned	Form A, p.2	\$	3,080	55,408	12,670	7,674	6,159	-	\$ 84,991
+ Propane Burned	Form A, p.2	\$	-	-	-	-	-	-	\$ -
- MISO Make Whole Payments (for start up costs)	Form A, p.2	\$	2,110	15,222	6,508	582	7,468	-	\$ 31,890
+ Fuel (Assigned Cost During F.O.)	Form A, p.2	\$	347,768	699,996	696,328	2,434,554	338,644	937,028	\$ 5,454,318
- Fuel (Substitute Cost for FO)	Form A, p.2	\$	143,017	323,077	258,269	1,586,220	91,777	200,388	\$ 2,602,748
- Fuel (Supp. & Back-Up Energy to Smelters)	Form A, p.2	\$	-	-	-	-	-	-	\$ -
- Fuel (Domtar Back-Up/ Imbalance Generation)	Form A, p.2	\$	-	-	-	-	-	-	\$ -
<b>Sub-Total</b>		\$	<b>12,396,859</b>	<b>16,780,885</b>	<b>15,109,156</b>	<b>7,958,945</b>	<b>10,281,541</b>	<b>10,989,973</b>	\$ <b>73,517,359</b>
+ Net Energy Cost - Economy Purchases	Form A, p.2	\$	709,815	1,076,649	1,145,646	819,446	538,450	509,007	\$ 4,799,013
+ Identifiable Fuel Cost - Other Purchases	Form A, p.2	\$	4,613,123	4,821,106	9,383,094	9,357,862	3,297,704	1,213,869	\$ 32,686,758
+ Identifiable fuel cost - Forced Outage purchases	Form A, p.2	\$	281,327	437,815	617,582	915,696	373,602	940,386	\$ 3,566,408
- Identifiable fuel cost (substitute for Forced Outage)	Form A, p.2	\$	281,327	437,815	617,582	915,696	373,602	940,386	\$ 3,566,408
- Less Purchases for Supp. & Back-Up energy to Smelters	Form A, p.2	\$	-	-	-	-	-	-	\$ -
- Less Purchases for Domtar back up	Form A, p.2	\$	115,628	290,598	161,505	151,128	134,181	88,250	\$ 941,290
- Less Purchases Above Highest Cost Units	Form A, p.2	\$	69,329	81	-	517	-	6,291	\$ 76,218
<b>Sub-Total</b>		\$	<b>5,137,981</b>	<b>5,607,076</b>	<b>10,367,235</b>	<b>10,025,663</b>	<b>3,701,973</b>	<b>1,628,335</b>	\$ <b>36,468,263</b>
Total Energy Cost of Purchased Power	"Form A Support & Calcs-YYYY-MM.xlsx", tab "PowerTransactionSummary"	\$	6,511,037	8,168,698	13,667,476	11,031,963	4,910,299	3,982,737	\$ 48,272,209
Purchases for Off-System Sales (Total Energy \$)	"Form A Support & Calcs-YYYY-MM.xlsx", tab "PowerTransactionSummary"	\$	5,093,514	6,361,026	11,629,883	8,893,647	3,459,402	2,088,038	\$ 37,525,510
Purchases for Off-System Sales (kWh)	"Form A Support & Calcs-YYYY-MM.xlsx", tab "PowerTransactionSummary"		177,600,000	182,400,000	371,800,000	336,200,000	108,373,300	31,151,240	1,207,524,540
Off-system Sales of Generation (Fuel \$)	"Form A Support & Calcs-YYYY-MM.xlsx", tab "PowerTransactionSummary"	\$	8,319,336	11,063,491	9,846,618	3,756,644	5,769,064	7,200,859	\$ 45,956,011
Off-system Sales of Generation (kWh)	"Form A Support & Calcs-YYYY-MM.xlsx", tab "PowerTransactionSummary"		352,903,028	445,677,218	401,919,160	141,041,628	226,619,935	291,863,591	1,860,024,560
Net Generation (before losses) (kWh)	Form A, p.3		533,432,222	686,438,917	621,453,262	287,504,839	412,674,169	431,719,471	2,973,222,880
Back-Up & Supp. Sales to Smelters (from Gen) (kWh)	"Form A Support & Calcs-YYYY-MM.xlsx", tab "SmelterFuelCost"		-	-	-	-	-	-	-
Domtar Back-Up Power Sales (from Gen) (kWh)	"Form A Support & Calcs-YYYY-MM.xlsx", tab "DomtarFuelCost"		-	-	-	-	-	-	-
Total Purchased Power (kWh)	"Form A Support & Calcs-YYYY-MM.xlsx", tab "PowerTransactionSummary"		242,687,803	255,720,206	452,080,250	434,880,950	176,835,562	115,709,741	1,677,914,512
Net Interchange In/(Out) (kWh)	Form A Filing (Inputs)		11,809,724	22,872,000	20,980,000	17,448,023	16,660,000	13,265,584	103,035,331
Total Purchased Power Including Net Interchange (kWh)			254,497,527	278,592,206	473,060,250	452,328,973	193,495,562	128,975,325	1,780,949,843
Total Purchased Power assigned to Native Load (kWh)	"Form A Support & Calcs-YYYY-MM.xlsx", tab "PowerTransactionSummary"		60,428,723	65,151,232	74,813,015	92,732,776	64,227,323	81,335,450	438,688,519
Net Interchange In/(Out) (kWh)	Form A Filing (Inputs)		11,809,724	22,872,000	20,980,000	17,448,023	16,660,000	13,265,584	103,035,331
<b>Total Purchased Power &amp; Net Interchange Assigned to NL</b>			<b>72,238,447</b>	<b>88,023,232</b>	<b>95,793,015</b>	<b>110,180,799</b>	<b>80,887,323</b>	<b>94,601,034</b>	<b>541,723,850</b>
System Losses (kWh)	Form A, p.3		16,168,064	25,024,610	22,344,292	20,516,008	18,198,904	16,138,326	118,390,204
Total Native Load (Member) Sales (kWh)	Form A, p.3		236,599,577	303,760,321	292,982,825	236,128,002	248,742,653	218,318,588	1,536,531,966

**KIUC 1-6 and 1-7  
DETAIL SUPPORT**

FAC Review Case No. 2017-00287 (Detail Calcs for KIUC 1-6 & KIUC 1-7)

Fuel Cost (\$/MWh) Assigned to NL & OSS and Purchased Power Cost Assigned to NL & OSS in FAC

Nov-16 through Apr-17

<u>SOURCE</u>	Expense Month:	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	Six-Month Total
<b>KIUC 1-6 Calculations:</b>								
<b>Fuel for Generation - Native Load</b>								
Coal Burned	\$	10,545,722	\$ 14,601,582	\$ 12,602,110	\$ 6,215,542	\$ 8,453,818	\$ 9,185,498	\$ 61,604,272
Pet Coke Burned	\$	1,407,158	\$ 1,460,090	\$ 1,924,610	\$ 674,208	\$ 1,339,461	\$ 810,929	\$ 7,616,456
Oil Burned	\$	238,258	\$ 302,108	\$ 138,215	\$ 213,769	\$ 242,704	\$ 256,906	
Gas Burned	\$	3,080	\$ 55,408	\$ 12,670	\$ 7,674	\$ 6,159	\$ -	\$ 84,991
Propane Burned	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Less: MISO Make Whole Payments	\$	2,110	\$ 15,222	\$ 6,508	\$ 582	\$ 7,468	\$ -	\$ 31,890
Plus: Fuel (Assigned Cost During F.O.)	\$	347,768	\$ 699,996	\$ 696,328	\$ 2,434,554	\$ 338,644	\$ 937,028	\$ 5,454,318
Less: Fuel (Substitute Cost for F.O.)	\$	143,017	\$ 323,077	\$ 258,269	\$ 1,586,220	\$ 91,777	\$ 200,388	\$ 2,602,748
Less: Identifiable Fuel Cost (Substitute for F.O.)	\$	281,327	\$ 437,815	\$ 617,582	\$ 915,696	\$ 373,602	\$ 940,386	\$ 3,566,408
Less: Fuel (Supp. and Back-Up Energy to Smelters)	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Less: Domtar Back-Up/ Imbalance Generation	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Less: Fuel Cost of Generation for OSS	\$	8,319,336	\$ 11,063,491	\$ 9,846,618	\$ 3,756,644	\$ 5,769,064	\$ 7,200,859	\$ 45,956,011
Total Cost of Fuel for Generation Allocated to Native Load	\$	3,796,196	\$ 5,279,579	\$ 4,644,956	\$ 3,286,605	\$ 4,138,875	\$ 2,848,728	\$ 23,994,940
Native Load Sales Volumes from Generation (kWh)		164,361,130	215,737,089	197,189,810	125,947,203	167,855,330	123,717,554	994,808,116
<b>Generation Fuel Cost for Native Load (\$/MWH)</b>	\$	<b>23.10</b>	\$ <b>24.47</b>	\$ <b>23.56</b>	\$ <b>26.10</b>	\$ <b>24.66</b>	\$ <b>23.03</b>	\$ <b>24.12</b>
<b>Fuel for Generation - OSS</b>								
Fuel Cost of Generation for OSS	\$	8,319,336	\$ 11,063,491	\$ 9,846,618	\$ 3,756,644	\$ 5,769,064	\$ 7,200,859	\$ 45,956,011
OSS Volumes from Generation		352,903,028	445,677,218	401,919,160	141,041,628	226,619,935	291,863,591	1,860,024,560
<b>Generation Fuel Cost for OSS (\$/MWH)</b>	\$	<b>23.57</b>	\$ <b>24.82</b>	\$ <b>24.50</b>	\$ <b>26.64</b>	\$ <b>25.46</b>	\$ <b>24.67</b>	\$ <b>24.71</b>
<b>KIUC 1-7 Calculations:</b>								
<b>Purchased Power - Native Load</b>								
Total Energy Cost of Purchased Power	\$	6,511,037	\$ 8,168,698	\$ 13,667,476	\$ 11,031,963	\$ 4,910,299	\$ 3,982,737	\$ 48,272,209
Less: Total Energy Cost of Purchased Power for OSS	\$	5,093,514	\$ 6,361,026	\$ 11,629,883	\$ 8,893,647	\$ 3,459,402	\$ 2,088,038	\$ 37,525,510
Less: Purchases for Supp. & Back-Up Energy to Smelters	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Less: Purchases for Domtar Back-Up Power	\$	115,628	\$ 290,598	\$ 161,505	\$ 151,128	\$ 134,181	\$ 88,250	\$ 941,290
Less: Purchases Above Highest Cost Units	\$	69,329	\$ 81	\$ -	\$ 517	\$ -	\$ 6,291	\$ 76,218
Energy Cost of Purchased Power for Native Load Recovered through FAC	\$	1,232,566	\$ 1,516,993	\$ 1,876,088	\$ 1,986,671	\$ 1,316,716	\$ 1,800,157	\$ 9,729,191
Native Load Volumes from Purchased Power (kWh)		72,238,447	88,023,232	95,793,015	110,180,799	80,887,323	94,601,034	541,723,850
<b>Total Energy Cost of Purchased Power for Native Load (\$/MWH)</b>	\$	<b>17.06</b>	\$ <b>17.23</b>	\$ <b>19.58</b>	\$ <b>18.03</b>	\$ <b>16.28</b>	\$ <b>19.03</b>	\$ <b>17.96</b>
<b>Purchased Power - OSS</b>								
Total Energy Cost of Purchased Power for OSS <sup>(1)</sup>	\$	5,093,514	\$ 6,361,026	\$ 11,629,883	\$ 8,893,647	\$ 3,459,402	\$ 2,088,038	\$ 37,525,510
OSS Volumes from Purchased Power		177,600,000	182,400,000	371,800,000	336,200,000	108,373,300	31,151,240	1,207,524,540
<b>Total Energy Cost of Purchased Power for OSS (\$/MWH)</b>	\$	<b>28.68</b>	\$ <b>34.87</b>	\$ <b>31.28</b>	\$ <b>26.45</b>	\$ <b>31.92</b>	\$ <b>67.03</b>	\$ <b>31.08</b>
<b>OSS - Total \$/MWH in FAC</b>	\$	<b>25.28</b>	\$ <b>27.74</b>	\$ <b>27.76</b>	\$ <b>26.51</b>	\$ <b>27.55</b>	\$ <b>28.76</b>	\$ <b>27.21</b>
<b>NATIVE LOAD - Total \$/MWH in FAC</b>	\$	<b>21.25</b>	\$ <b>22.37</b>	\$ <b>22.26</b>	\$ <b>22.33</b>	\$ <b>21.93</b>	\$ <b>21.29</b>	\$ <b>21.95</b>
<b>Difference (OSS vs. NL \$/MWH)</b>	\$	<b>4.03</b>	\$ <b>5.37</b>	\$ <b>5.50</b>	\$ <b>4.17</b>	\$ <b>5.62</b>	\$ <b>7.46</b>	\$ <b>5.27</b>

**Reconciliation to Form A Filings:**

Total Member Fuel & Purchased Power Recoverable from Above:	\$	5,028,762	\$ 6,796,572	\$ 6,521,045	\$ 5,273,276	\$ 5,455,591	\$ 4,648,886	\$ 33,724,131
Less: Over/(Under) Recovery <i>Form A Filing, p. 2, Over/(Under)</i>	\$	10,630	\$ (69,713)	\$ (6,984)	\$ (76,697)	\$ 21,760	\$ (27,777)	\$ (148,781)
Less: FAC Credits <i>Form A Filing, p. 2, FAC Credits</i>	\$	311,111	\$ 311,111	\$ -	\$ -	\$ -	\$ -	\$ 622,222
Recalculated Total Fuel Recovery from Detail Above	\$	4,707,021	\$ 6,555,174	\$ 6,528,029	\$ 5,349,974	\$ 5,433,831	\$ 4,676,663	\$ 33,250,690
Form A Filing - Total Fuel Recovery <i>Form A Filing, p. 1, Fuel "Fm"</i>	\$	4,707,021	\$ 6,555,174	\$ 6,528,029	\$ 5,349,974	\$ 5,433,831	\$ 4,676,663	\$ 33,250,692
<b>Difference</b>	\$	<b>(0)</b>	\$ <b>(0)</b>	\$ <b>(0)</b>	\$ <b>(0)</b>	\$ <b>0</b>	\$ <b>(0)</b>	\$ <b>(2)</b>
Total Member Sales (Used in NL Fuel & Purchased \$/MWh Calcs Above)		236,599,577	303,760,321	292,982,825	236,128,002	248,742,653	218,318,588	1,536,531,966
Total Member Sales per Form A Filing <i>Form A Filing, p. 1, Sales "Sm"</i>		236,599,577	303,760,321	292,982,825	236,128,002	248,742,653	218,318,588	1,536,531,966
<b>Difference</b>								

**Native Load Sales Volumes by Source**  
(MWh)

	<b>Nov-16</b> (MWh)	<b>Dec-16</b> (MWh)	<b>Jan-17</b> (MWh)	<b>Feb-17</b> (MWh)	<b>Mar-17</b> (MWh)	<b>Apr-17</b> (MWh)	<b>6-Mo. Total</b> (Nov-16 to Apr-17)
<b>Native Load Sales From Generation:</b>							
Net Generation (before losses)	533,432,222	686,438,917	621,453,262	287,504,839	412,674,169	431,719,471	2,973,222,880
Less: Back-Up & Supp. Sales to Smelters (from Gen)	-	-	-	-	-	-	-
Less: Domtar Back-Up Power Sales (from Gen)	-	-	-	-	-	-	-
Less: Inter-system Sales of Generation	(352,903.028)	(445,677.218)	(401,919.160)	(141,041.628)	(226,619.935)	(291,863.591)	(1,860,024.560)
Less: System Losses	(16,168,064)	(25,024.610)	(22,344.292)	(20,516.008)	(18,198.904)	(16,138.326)	(118,390.204)
<b>NL Sales Volumes from Generation</b>	<b>164,361.130</b>	<b>215,737.089</b>	<b>197,189.810</b>	<b>125,947.203</b>	<b>167,855.330</b>	<b>123,717.554</b>	<b>994,808.116</b>
<b>Native Load Sales From Purchased Power &amp; Net Interchange:</b>							
Native Load Sales Volumes from Purchased Power (Excl. Net Interchange)	60,428.723	65,151.232	74,813.015	92,732.776	64,227.323	81,335.450	438,688.519
Native Load Sales Volumes from Net Interchange	11,809.724	22,872.000	20,980.000	17,448.023	16,660.000	13,265.584	103,035.331
<b>NL Sales Volumes from Purch. Power (Incl. Net Interchange)</b>	<b>72,238.447</b>	<b>88,023.232</b>	<b>95,793.015</b>	<b>110,180.799</b>	<b>80,887.323</b>	<b>94,601.034</b>	<b>541,723.850</b>
<b>Total Native Load Sales Volumes</b>	<b>236,599.577</b>	<b>303,760.321</b>	<b>292,982.825</b>	<b>236,128.002</b>	<b>248,742.653</b>	<b>218,318.588</b>	<b>1,536,531.966</b>
<b>Total Native Load Sales Volume per FAC Filings</b>	<b>236,599.577</b>	<b>303,760.321</b>	<b>292,982.825</b>	<b>236,128.002</b>	<b>248,742.653</b>	<b>218,318.588</b>	<b>1,536,531.966</b>
<i>Difference/ Error Check:</i>							