

**COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

**AN EXAMINATION OF THE APPLICATION OF THE)
FUEL ADJUSTMENT CLAUSE OF LOUISVILLE GAS) CASE NO.
AND ELECTRIC COMPANY FROM MAY 1, 2015) 2016-00004
THROUGH OCTOBER 31, 2015)**

**RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY
TO
INFORMATION REQUESTED IN
COMMISSION'S THIRD DATA REQUEST
DATED MARCH 18, 2016**

FILED: MARCH 28, 2016

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Derek Rahn**, being duly sworn, deposes and says that he is Manager - Revenue Requirement for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.



Derek Rahn

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 28th day of March 2016.

 (SEAL)

Notary Public

My Commission Expires:
JUDY SCHOOLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
Notary ID # 512743

VERIFICATION


COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Charles R. Schram**, being duly sworn, deposes and says that he is Director — Energy Planning, Analysis and Forecast for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.



Charles R. Schram

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 28th day of March 2016.



(SEAL)

Notary Public

My Commission Expires:
JUDY SCHOOLER
Notary Public, State at Large, KY
~~My commission expires July 11, 2018~~
Notary ID # 512743

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Mike Dotson**, being duly sworn, deposes and says that he is Manager - LG&E and KU Fuels for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Mike Dotson

Mike Dotson

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 28th day of March 2016.

Judy Scholler (SEAL)

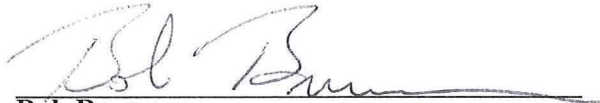
Notary Public

My Commission Expires:
JUDY SCHOLLER
Notary Public, State at Large, KY
My commission expires July 11, 2018
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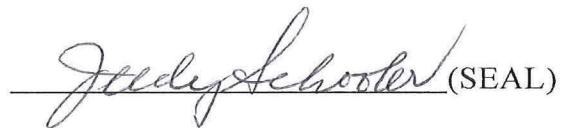
VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Bob Brunner**, being duly sworn, deposes and says that he is Director — Power Supply for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.


Bob Brunner

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 28th day of March 2016.

 (SEAL)

Notary Public

My Commission Expires:

JUDY SCHOOLER
Notary Public, State at Large, KY
~~My commission expires July 11, 2018~~
Notary ID # 512743

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Information Requested in
Commission's Third Data Request Dated March 18, 2016**

Case No. 2016-00004

Question No. 1

Witness: Mike Dotson

Q-1. In its monthly fuel adjustment clause ("FAC") backup files, LG&E provides an analysis of coal purchases that includes a state and coal district number for the source of the coal.

- a) Confirm that LG&E is using District No. 9 (for western Kentucky) when identifying Kentucky coal districts in its FAC backup filings.
- b) State whether the state and coal district numbers are those utilized by the Mine Safety and Health Administration. If not, state the entity that designates the coal district numbers utilized by LG&E in its FAC backup filings.
- c) For the entity identified in part b. above, provide a map showing the current coal districts.
- d) Provide the date of the last change made by the entity identified in part b. above to the coal district numbering. If LG&E did not begin using the new coal district numbering when the change was made, explain why.
- e) Explain the input and review process for the state and coal district numbers provided in the monthly analysis of coal purchase schedule and how LG&E ensures that the information is accurate.

A-1.

- a) Yes, LG&E is using District No. 9 for Western Kentucky and District No. 8 for Eastern Kentucky in its FAC backup filings.
- b) LG&E does not use the state and coal district numbers utilized by the Mine Safety and Health Administration. The district numbers utilized in LG&E's FAC backup filings are those established by Federal Energy Regulatory Commission (FERC) for Form 423 filings.
- c) LG&E is not aware of a map showing the FERC coal districts. However, attached is a list of the FERC coal district numbers with detailed descriptions. This list was provided in the instructions for the FERC 423 Monthly Report of Cost and Quality of Fuels for Electric Plants. The counties for Kentucky Districts 8 and 9 are located on page 3 of 6 and page 4 of 6.

- d) LG&E is not aware of any change in the FERC coal district numbering.

- e) LG&E uses Aligne, a fuel management system purchased from FIS Energy (originally Energy Softworx) in 2006. This software came pre-loaded with base data that included FERC mine district numbers. This data was compared to the FERC 423 instructions and proved to be accurate. This data has not been modified.

As new sources are created, the Fuel Source, State and County are entered into Aligne. Aligne uses this information to associate the FERC mine district numbers using the pre-loaded base data.

LG&E uses the Aligne system to generate the Monthly Analysis of Coal Purchase report for the Form B. LG&E has accounting procedures in place to validate data entered into the fuels system. These procedures are reviewed annually via Sarbanes Oxley Internal Control reviews and by external auditors during their normal audit process.

**FERC Form No. 423
Coal Producing Districts**

District	States	Counties/Mines
District 1	Maryland	All mines in the State.
	Pennsylvania	All mines in the following counties: Bedford, Blair, Bradford, Cambria, Cameron, Centre, Clarion, Clearfield, Clinton, Elk, Forest, Fulton, Huntingdon, Jefferson, Lycoming, McKean, Mifflin, Potter, Somerset, and Tioga. Selected mines in the following counties: Armstrong County (part), all mines east of the Allegheny River, and those mines served by the Pittsburgh and Shawmut Railroad located on the west bank of the river; Fayette County (part), all mines located on and east of the line of Indian Creek Valley branch of CSX Transportation, Inc. (formally the Baltimore and Ohio Railroad); Indiana County (part), all mines not served by the Saltsburg branch of the Consolidated Rail Corporation; and Westmoreland County (part), all mines served by the Consolidated Rail Corporation from Torrance, east.
	West Virginia	All mines in the following counties: Grant, Mineral, and Tucker.
District 2	Pennsylvania	All mines in the following counties: Allegheny, Beaver, Butler, Greene, Lawrence, Mercer, Venango, and Washington. Selected mines in the following counties: Armstrong County (part), all mines west of the Allegheny River except those mines served by the Pittsburgh and Shawmut Railroad; Fayette County (part), all mines except those on and east of the line of Indian Creek Valley branch of CSX Transportation, Inc. (formally the Baltimore and Ohio Railroad); Indiana County (part), all mines served by the Saltsburg branch of the Consolidated Rail Corporation; and Westmoreland County (part), all mines except those served by the Consolidated Rail Corporation from Torrance, east.
District 3	West Virginia	All mines in the following counties: Barbour, Braxton, Calhoun, Doddridge, Gilmer, Harrison, Jackson, Lewis, Marion, Monongalia, Pleasants, Preston, Randolph, Ritchie, Roane, Taylor, Tyler, Upshur, Webster, Wetzel, Wirt, and Wood. Selected mines in Nicholas County (part), all mines served by or north of CSX Transportation, Inc. (formally the Baltimore and Ohio Railroad).
District 4	Ohio	All mines in the State.
District 5	Michigan	All mines in the State.
District 6	West Virginia	All mines in the following counties: Brooke, Hancock, Marshall, and Ohio.

**FERC Form No. 423
Coal Producing Districts**

District	States	Counties/Mines
District 7	Virginia	All mines in the following counties: Craig, Giles, Montgomery, Pulaski, and Wythe. Selected mines in the following counties: Buchanan County (part), all mines in that portion of the county served by the Richlands-Jewell Ridge branch of the Norfolk & Western Railroad (a subsidiary of the Norfolk Southern Corp.) and in that portion on the headwaters of Dismal Creek east of Lynn Camp Creek (a tributary of Dismal Creek); and Tazewell County (part), all mines in those portions of the county served by the Dry Fork branch to Cedar Bluff and from Bluestone Junction to Boissevain branch of the Norfolk & Western Railroad (a subsidiary of the Norfolk Southern Corp.) and Richlands-Jewell Ridge branch of the Norfolk & Western Railroad (a subsidiary of the Norfolk Southern Corp.).
	West Virginia	All mines in the following counties: Greenbrier, Mercer, Monroe, Pocahontas, and Summers. Selected mines in the following counties: Fayette County (part), all mines east of Gauley River and all mines served by the Gauley River branch of CSX Transportation, Inc. (formally the Chesapeake & Ohio Railroad) and mines served by the Norfolk & Western Railroad (a subsidiary of the Norfolk Southern Corp.); McDowell County (part), all mines in that portion of the county served by the Dry Fork branch of the Norfolk & Western Railroad (a subsidiary of the Norfolk Southern Corp.) and east thereof; Raleigh County (part), all mines except those on the Coal River branch of CSX Transportation, Inc. (formally the Chesapeake & Ohio Railroad) and north thereof; and Wyoming County (part), all mines in that portion served by the Guyandot branch of the Norfolk & Western Railroad (a subsidiary of the Norfolk Southern Corp.) lying east of the mouth of Skin Fork of Guyandot River and in that portion served by the Virginia division main line of the Norfolk & Western Railroad (a subsidiary of the Norfolk Southern Corp.).

**FERC Form No. 423
Coal Producing Districts**

District	States	Counties/Mines
District 8	<p>Kentucky</p> <p>North Carolina</p> <p>Tennessee</p> <p>Virginia</p>	<p>All mines in the following counties in eastern Kentucky: Bell, Boyd, Breathitt, Carter, Clay, Clinton, Elliott, Estill, Floyd, Greenup, Harlan, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, McCreary, Magoffin, Martin, Menifee, Morgan, Owsley, Perry, Pike, Pulaski, Rockcastle, Wayne, Whitley, and Wolfe.</p> <p>All mines in the State.</p> <p>All mines in the following counties: Anderson, Campbell, Claiborne, Cumberland, Fentress, Morgan, Overton, Putnam, Roane, and Scott.</p> <p>All mines in the following counties: Dickenson, Lee, Russell, Scott, and Wise. Selected mines in the following counties: Buchanan County (part), all mines in the county, except in that portion on the headwaters of Dismal Creek, east of Lynn Camp Creek (a tributary of Dismal Creek) and in that portion served by the Richlands-Jewell Ridge branch of the Norfolk & Western Railroad (a subsidiary of the Norfolk Southern Corp.); and Tazewell County (part), all mines in the county except in those portions served by the Dry Fork branch of the Norfolk & Western Railroad (a subsidiary of the Norfolk Southern Corp.) and branch from Bluestone Junction to Boissevain of Norfolk & Western Railroad (a subsidiary of the Norfolk Southern Corp.) and Richlands-Jewell Ridge branch of the Norfolk & Western Railroad (a subsidiary of the Norfolk Southern Corp.).</p>
District 8	West Virginia	<p>All mines in the following counties: Boone, Cabell, Clay, Kanawha, Lincoln, Logan, Mason, Mingo, Putnam, and Wayne. Selected mines in the following counties: Fayette County (part), all mines west of the Gauley River except mines served by the Gauley River branch of CSX Transportation, Inc. (formally the Chesapeake & Ohio Railroad); McDowell County (part), all mines west of and not served by the Dry Fork branch of the Norfolk & Western Railroad (a subsidiary of the Norfolk Southern Corp.); Nicholas County (part), all mines in that part of the county south of and not served by CSX Transportation, Inc. (formally the Baltimore & Ohio Railroad); Raleigh County (part), all mines on the Coal River branch of CSX Transportation, Inc. (formally the Chesapeake & Ohio Railroad) and north thereof; and Wyoming County (part), all mines in that portion served by the Guyandot branch of the Norfolk & Western Railroad (a subsidiary of the Norfolk Southern Corp.) lying west of the mouth of Skin Fork of Guyandot River.</p>

**FERC Form No. 423
Coal Producing Districts**

District	States	Counties/Mines
District 9	Kentucky	All mines in the following counties in western Kentucky: Butler, Caldwell, Christian, Crittenden, Daviess, Edmonson, Grayson, Hancock, Henderson, Hopkins, Logan, McLean, Muhlenberg, Ohio, Simpson, Todd, Union, Warren, and Webster.
District 10	Illinois	All mines in the State.
District 11	Indiana	All mines in the State.
District 12	Iowa	All mines in the State.
District 13	Alabama	All mines in the State.
	Georgia	All mines in the State.
	Tennessee	All mines in the following counties: Bledsoe, Grundy, Hamilton, Marion, McMinn, Rhea, Sequatchie, Van Buren, Warren, and White.
District 14	Arkansas	All mines in the State.
	Oklahoma	All mines in the following counties: Haskell, Le Flore, and Sequoyah.
District 15	Kansas	All mines in the State.
	Louisiana	All mines in the State.
	Missouri	All mines in the State.
	Oklahoma	All mines in the following counties: Coal, Craig, Latimer, McIntosh, Muskogee, Nowata, Okmulgee, Pittsburg, Rogers, Tulsa, and Wagoner.
	Texas	All mines in the State.
District 16	Colorado	All mines in the following counties: Adams, Arapahoe, Boulder, Douglas, Elbert, El Paso, Jackson, Jefferson, Larimer, and Weld.
District 17	Colorado	All mines except those included in District 16.
	New Mexico	All mines except those included in District 18.

**FERC Form No. 423
Coal Producing Districts**

District	States	Counties/Mines
District 18	Arizona	All mines in the State.
	California	All mines in the State.
	New Mexico	All mines in the following counties: Grant, Lincoln, McKinley, Rio Arriba, Sandoval, San Juan, San Miguel, Santa Fe, and Socorro.
District 19	Idaho	All mines in the State.
	Wyoming	All mines in the State.
District 20	Utah	All mines in the State.
District 21	North Dakota	All mines in the State.
	South Dakota	All mines in the State.
District 22	Montana	All mines in the State.
District 23	Alaska	All mines in the State.
	Oregon	All mines in the State.
	Washington	All mines in the State.
District 24	Pennsylvania	All mines in the following counties: Berks, Carbon, Columbia, Dauphin, Lackawanna, Lebanon, Luzerne, Northumberland, Schuylkill, Sullivan, and Susquehanna. All anthracite mines in Bradford County.
District 25	Imported Coal	Poland
District 30	Imported Coal	South Africa
District 35	Imported Coal	Australia
District 40	Imported Coal	Canada
District 45	Imported Coal	Columbia

FERC Form No. 423
Coal Producing Districts

District	States	Counties/Mines
District 50	Imported Coal	Venezuela
District 55	Imported Coal	Indonesia

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Information Requested in
Commission's Third Data Request Dated March 18, 2016**

Case No. 2016-00004

Question No. 2

Witness: Bob Brunner / Mike Dotson

- Q-2. Refer to LG&E's response to the Commission's February 5, 2016 Request for Information, Item 25. The question should have asked whether all fuel contracts related to commodity and/or transportation had been filed with the Commission instead of specifying long-term contracts. State whether all contracts have been filed.
- A-2. All coal contracts related to commodity and/or transportation have been filed with the Commission.

All long-term natural gas contracts related to commodity and/or transportation have been filed with the Commission. Regarding spot contracts for natural gas, see the response to Question No. 2 of the Commission's first data request in this case regarding discussion of the Master Agreements with various natural gas suppliers that provide a contractual framework for potential spot purchase transactions.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Information Requested in
Commission's Third Data Request Dated March 18, 2016**

Case No. 2016-00004

Question No. 3

Witness: Mike Dotson / Derek Rahn

- Q-3. Refer to LG&E's response to the Commission Staff's Second Request for Information ("Staff's Second Request"), Item 1.
- a) Refer to the response to Item 1.a. Explain how the existence of the rail car lease agreements impact the analysis of coal bids received by LG&E (i.e., do the agreements make transportation costs cheaper from certain coal suppliers?).
 - b) Refer to the response to Item 1.e. It appears LG&E may have misunderstood the question. Explain the advantages of leasing/owning railcars versus not leasing/owning railcars.
- A-3. a) The railcar lease cost is not included in the delivered cost for the LG&E's coal bid evaluations. The lease cost is considered a "sunk" cost, therefore only the railroad transportation cost and any fuel adjustment are included in the cost of delivery. The existence of the rail car lease does make coal originating by rail both feasible and lower cost. As explained in the answer to Question 1-b, leasing railcars is the lowest cost method to guarantee railcars are available when needed.
- b) Leasing/owning railcars provide two main advantages:
- 1. Enhances the reliability of LG&E's coal supply by ensuring rapid discharge railcars are available when needed. Availability of rapid discharge railcars from the railroad is limited.
 - 2. Provides the lowest cost option for rail coal delivery. To ensure a reliable coal supply for rail-served power stations, railcar capacity must be available when needed. Most railroads only provide the engine power and crews to move the railcars due to limited railcar availability. Therefore, the shipper is responsible for providing railcars. When railroads have offered railcars, the cost has been much higher than the cost of leasing or owning. Railroad railcars are not dedicated to a specific move and could be pulled for other moves when the railroad determines it is necessary.

LOUISVILLE GAS AND ELECTRIC COMPANY

**Response to Information Requested in
Commission's Third Data Request Dated March 18, 2016**

Case No. 2016-00004

Question No. 4

Witness: Charles R. Schram / Derek Rahn

Q-4. Refer to LG&E's response to the Staff's Second Request, Item 2.

- a) Explain how LG&E decided on the methodology used for calculating its highest-cost unit.
- b) For each month of the review period, provide the \$/MWh that was calculated as the highest-cost unit.
- c) For each month of the review period, provide the natural gas price used in the calculation of the highest-cost unit.
- d) State the origin of the natural gas price provided in part c. above.
- e) State whether Zorn Unit 1 operated during the review period.

A-4.

- a) On a monthly basis, LG&E reviews the forecasted generating cost for each unit available for dispatch based on the product of its heat rate at maximum load and its forecasted delivered fuel cost. The unit with the maximum forecasted generating cost is the highest cost unit. The methodology stems from a May 17, 2002 Order from the Commission defining LG&E's and KU's purchases of power on and after November 1, 2001:

The purchase power price of all "economy power purchases" shall be permitted to be recovered through LG&E's and KU's respective FACs. "Economy power purchases" will mean purchases made to serve native load, which displace the utility's higher cost of generation and have an energy cost that is less than the utility's avoided cost of generation.

"Non-economy power purchases" will mean purchases made to serve native load at a purchase power price greater than the avoided variable cost of the utility's highest cost generating unit available to be dispatched during an expense month to serve native load...

- b) See the attached pages from the monthly LG&E Form B for the period under review.

- c) See the response to subpart b above.

- d) The forecasted delivered natural gas price is the forecasted cost of natural gas plus the estimated cost of delivering the natural gas to the site. Gas is supplied by the LG&E gas distribution company. This service allows LG&E to take firm gas at any time at the tariffs specified rates.

- e) Zorn 1 was available to be dispatched during each month of the review period. See the table below for the Zorn 1 operating hours by month:

Review	Zorn
Period	Operating
<u>Month</u>	<u>Hours</u>
May 15	5.78
Jun 15	0.00
Jul 15	0.87
Aug 15	0.00
Sep 15	0.00
Oct 15	0.00

Adjustments for Purchases Above KU/LGE Highest Priced Units (May 2015)

Cost Components of Highest Priced Units:

UNIT NAME	(1)	(2) FUEL COST		(3)	(4)	(5)	(6)	(7)	(8)	(6)=(3)+(4)+(5)	(7)	(8)=(6)+(7)
	FULL LOAD HR (BTU/KWH)	(2)	(3)	SCRUBBER CONSUME (\$/MWH)	SO2 ADDER (\$/MWH)	SCR CONSUME (\$/MWH)	NOx ADDER (\$/MWH)	Hg CONSUME (\$/MWH)	DISPATCH COST (\$/MWH)	Maint V O&M (\$/MWH)	TOTAL PRICE (\$/MWH)	
ZORN 1	18,676	610.28	113.98	0.00	0.00	0.00	0.00	0.00	113.98	13.30	127.28	
HAEFLING	17,000	875.00	148.75	0.00	0.00	0.00	0.00	0.00	148.75	10.00	158.75	

LGE Purchases Above LGE's Highest Priced Unit (ZORN 1):

MM/DD/YY Hr	Purchase From	Cost \$	MWh Purch	Cost \$/MWh	Excluded Amount Prior to FO Calculation \$/MWh	\$	Excluded in FO Calculation?	Additional Exclusion For FAC	ZORN 1 Available?
1							YES	\$ -	Yes
2							YES	\$ -	Yes
3							YES	\$ -	Yes
4							YES	\$ -	Yes
5							YES	\$ -	Yes
6							YES	\$ -	Yes
7							YES	\$ -	Yes
8							YES	\$ -	Yes
9							YES	\$ -	Yes
10							YES	\$ -	Yes
11							YES	\$ -	Yes
12							YES	\$ -	Yes
13							YES	\$ -	Yes
14							YES	\$ -	Yes
15							YES	\$ -	Yes
16							YES	\$ -	Yes
17							YES	\$ -	Yes
18							YES	\$ -	Yes
19							YES	\$ -	Yes
20							YES	\$ -	Yes
21							YES	\$ -	Yes
22							YES	\$ -	Yes
23							YES	\$ -	Yes
24							YES	\$ -	Yes
25							YES	\$ -	Yes
					LG&E Total	\$ -	\$0.00	\$ -	

KU Purchases Above KU's Highest Priced Unit (HAEFLING):

MM/DD/YY Hr	Purchase From	Cost \$	MWh Purch	Cost \$/MWh	Excluded Amount Prior to FO Calculation \$/MWh	\$	Excluded in FO Calculation?	Additional Exclusion For FAC	HAEFLING Available?
1							Yes	\$ -	Yes
2							Yes	\$ -	Yes
3							Yes	\$ -	Yes
4							Yes	\$ -	Yes
5							Yes	\$ -	Yes
6							Yes	\$ -	Yes
7							Yes	\$ -	Yes
8							Yes	\$ -	Yes
9							Yes	\$ -	Yes
10							Yes	\$ -	Yes
11							Yes	\$ -	Yes
12							Yes	\$ -	Yes
13							Yes	\$ -	Yes
14							Yes	\$ -	Yes
15							Yes	\$ -	Yes
16							Yes	\$ -	Yes
17							Yes	\$ -	Yes
18							Yes	\$ -	Yes
19							Yes	\$ -	Yes
20							Yes	\$ -	Yes
21							Yes	\$ -	Yes
22							Yes	\$ -	Yes
23							Yes	\$ -	Yes
24							Yes	\$ -	Yes
25							Yes	\$ -	Yes
					KU Total	\$ -	\$0.00	\$ -	

**Adjustments for Purchases Above
KU/LGE Highest Priced Units
(June 2015)**

Cost Components of Highest Priced Units:

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(6)=(3)+(4)+(5)	(7)	(8)=(6)+(7)
UNIT NAME	FULL LOAD HR <small>(BTU/KWH)</small>	FUEL COST <small>(\$/MBTU)</small>	SCRUBBER CONSUME <small>(\$/MWH)</small>	SO2 ADDER <small>(\$/MWH)</small>	SCR CONSUME <small>(\$/MWH)</small>	NOx ADDER <small>(\$/MWH)</small>	Hg CONSUME <small>(\$/MWH)</small>	DISPATCH COST <small>(\$/MWH)</small>	Maint V O&M <small>(\$/MWH)</small>	TOTAL PRICE <small>(\$/MWH)</small>	
ZORN 1	18,676	610.28	113.98	0.00	0.00	0.00	0.00	113.98	13.30	127.28	
HAEFLING	17,000	800.00	136.00	0.00	0.00	0.00	0.00	136.00	10.00	146.00	

LGE Purchases Above LGE' s Highest Priced Unit (ZORN 1):

	Purchase From	Cost \$	MWh Purch	Cost \$/MWh	Excluded Amount Prior to FO Calculation \$/MWh	Excluded in FO Calculation?	Additional Exclusion For FAC	ZORN 1 Available?
1						YES	\$ -	Yes
2						YES	\$ -	Yes
3						YES	\$ -	Yes
4						YES	\$ -	Yes
5						YES	\$ -	Yes
6						YES	\$ -	Yes
7						YES	\$ -	Yes
8						YES	\$ -	Yes
9						YES	\$ -	Yes
10						YES	\$ -	Yes
11						YES	\$ -	Yes
12						YES	\$ -	Yes
13						YES	\$ -	Yes
14						YES	\$ -	Yes
15						YES	\$ -	Yes
16						YES	\$ -	Yes
17						YES	\$ -	Yes
18						YES	\$ -	Yes
19						YES	\$ -	Yes
20						YES	\$ -	Yes
21						YES	\$ -	Yes
22						YES	\$ -	Yes
23						YES	\$ -	Yes
24						YES	\$ -	Yes
25						YES	\$ -	Yes
					LG&E Total \$	-	\$0.00	\$ -

KU Purchases Above KU' s Highest Priced Unit (HAEFLING):

	Purchase From	Cost \$	MWh Purch	Cost \$/MWh	Excluded Amount Prior to FO Calculation \$/MWh	Excluded in FO Calculation?	Additional Exclusion For FAC	HAEFLING Available?
1						Yes	\$ -	Yes
2						Yes	\$ -	Yes
3						Yes	\$ -	Yes
4						Yes	\$ -	Yes
5						Yes	\$ -	Yes
6						Yes	\$ -	Yes
7						Yes	\$ -	Yes
8						Yes	\$ -	Yes
9						Yes	\$ -	Yes
10						Yes	\$ -	Yes
11						Yes	\$ -	Yes
12						Yes	\$ -	Yes
13						Yes	\$ -	Yes
14						Yes	\$ -	Yes
15						Yes	\$ -	Yes
16						Yes	\$ -	Yes
17						Yes	\$ -	Yes
18						Yes	\$ -	Yes
19						Yes	\$ -	Yes
20						Yes	\$ -	Yes
21						Yes	\$ -	Yes
22						Yes	\$ -	Yes
23						Yes	\$ -	Yes
24						Yes	\$ -	Yes
25						Yes	\$ -	Yes
					KU Total \$	-	\$0.00	\$ -

**Adjustments for Purchases Above
KU/LGE Highest Priced Units
(July 2015)**

Cost Components of Highest Priced Units:

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(6)=(3)+(4)+(5)	(7)	(8)=(6)+(7)
UNIT NAME	FULL LOAD HR (BTU/KWH)	FUEL COST (\$/MFTU)	SCRUBBER CONSUME (\$/MWH)	SO2 ADDER (\$/MWH)	SCR CONSUME (\$/MWH)	NOx ADDER (\$/MWH)	Hg CONSUME (\$/MWH)	DISPATCH COST (\$/MWH)	Maint V O&M (\$/MWH)	TOTAL PRICE (\$/MWH)	
ZORN 1	18,676	610.28	113.98	0.00	0.00	0.00	0.00	113.98	13.30	127.28	
HAEFLING	17,000	815.00	138.55	0.00	0.00	0.00	0.00	138.55	10.00	148.55	

LGE Purchases Above LGE' s Highest Priced Unit (ZORN 1):

	Purchase From	Cost \$	MWh Purch	Cost \$/MWh	Excluded Amount Prior to FO Calculation		Excluded in FO Calculation?	Additional Exclusion For FAC	ZORN 1 Available ?
MM/DD/YY Hr					\$/MWh	\$			
1							YES	\$ -	Yes
2							YES	\$ -	Yes
3							YES	\$ -	Yes
4							YES	\$ -	Yes
5							YES	\$ -	Yes
6							YES	\$ -	Yes
7							YES	\$ -	Yes
8							YES	\$ -	Yes
9							YES	\$ -	Yes
10							YES	\$ -	Yes
11							YES	\$ -	Yes
12							YES	\$ -	Yes
13							YES	\$ -	Yes
14							YES	\$ -	Yes
15							YES	\$ -	Yes
16							YES	\$ -	Yes
17							YES	\$ -	Yes
18							YES	\$ -	Yes
19							YES	\$ -	Yes
20							YES	\$ -	Yes
21							YES	\$ -	Yes
22							YES	\$ -	Yes
23							YES	\$ -	Yes
24							YES	\$ -	Yes
25							YES	\$ -	Yes
						LG&E Total \$	\$ -	\$0.00	\$ -

KU Purchases Above KU' s Highest Priced Unit (HAEFLING):

	Purchase From	Cost \$	MWh Purch	Cost \$/MWh	Excluded Amount Prior to FO Calculation		Excluded in FO Calculation?	Additional Exclusion For FAC	HAEFLING Available ?
MM/DD/YY Hr					\$/MWh	\$			
1							Yes	\$ -	Yes
2							Yes	\$ -	Yes
3							Yes	\$ -	Yes
4							Yes	\$ -	Yes
5							Yes	\$ -	Yes
6							Yes	\$ -	Yes
7							Yes	\$ -	Yes
8							Yes	\$ -	Yes
9							Yes	\$ -	Yes
10							Yes	\$ -	Yes
11							Yes	\$ -	Yes
12							Yes	\$ -	Yes
13							Yes	\$ -	Yes
14							Yes	\$ -	Yes
15							Yes	\$ -	Yes
16							Yes	\$ -	Yes
17							Yes	\$ -	Yes
18							Yes	\$ -	Yes
19							Yes	\$ -	Yes
20							Yes	\$ -	Yes
21							Yes	\$ -	Yes
22							Yes	\$ -	Yes
23							Yes	\$ -	Yes
24							Yes	\$ -	Yes
25							Yes	\$ -	Yes
						KU Total \$	\$ -	\$0.00	\$ -

**Adjustments for Purchases Above
KU/LGE Highest Priced Units
(AUGUST 2015)**

Cost Components of Highest Priced Units:

	(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)	(6)=(3)+(4)+(5)	(7)	(8)=(6)+(7)
UNIT NAME	FULL LOAD HR	FUEL COST		SCRUBBER CONSUME	SO2 ADDER	SCR CONSUME	NOx ADDER	Hg CONSUME	DISPATCH COST	Maint V O&M	TOTAL PRICE	
	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	
ZORN 1	18,676	610.28	113.98	0.00	0.00	0.00	0.00	0.00	113.98	13.30	127.28	
HAEFLING	17,000	815.00	138.55	0.00	0.00	0.00	0.00	0.00	138.55	10.00	148.55	

LGE Purchases Above LGE' s Highest Priced Unit (ZORN 1):

	Purchase From	Cost \$	MWh Purch	Cost \$/MWh	Excluded Amount Prior to FO Calculation		Excluded in FO Calculation?	Additional Exclusion For FAC	ZORN 1 Available ?
	MM/DD/YY Hr				\$/MWh	\$			
1							YES	\$ -	Yes
2							YES	\$ -	Yes
3							YES	\$ -	Yes
4							YES	\$ -	Yes
5							YES	\$ -	Yes
6							YES	\$ -	Yes
7							YES	\$ -	Yes
8							YES	\$ -	Yes
9							YES	\$ -	Yes
10							YES	\$ -	Yes
11							YES	\$ -	Yes
12							YES	\$ -	Yes
13							YES	\$ -	Yes
14							YES	\$ -	Yes
15							YES	\$ -	Yes
16							YES	\$ -	Yes
17							YES	\$ -	Yes
18							YES	\$ -	Yes
19							YES	\$ -	Yes
20							YES	\$ -	Yes
21							YES	\$ -	Yes
22							YES	\$ -	Yes
23							YES	\$ -	Yes
24							YES	\$ -	Yes
25							YES	\$ -	Yes
						LG&E Total \$	\$ -	\$0.00	\$ -

KU Purchases Above KU' s Highest Priced Unit (HAEFLING):

	Purchase From	Cost \$	MWh Purch	Cost \$/MWh	Excluded Amount Prior to FO Calculation		Excluded in FO Calculation?	Additional Exclusion For FAC	HAEFLING Available ?
	MM/DD/YY Hr				\$/MWh	\$			
1							Yes	\$ -	Yes
2							Yes	\$ -	Yes
3							Yes	\$ -	Yes
4							Yes	\$ -	Yes
5							Yes	\$ -	Yes
6							Yes	\$ -	Yes
7							Yes	\$ -	Yes
8							Yes	\$ -	Yes
9							Yes	\$ -	Yes
10							Yes	\$ -	Yes
11							Yes	\$ -	Yes
12							Yes	\$ -	Yes
13							Yes	\$ -	Yes
14							Yes	\$ -	Yes
15							Yes	\$ -	Yes
16							Yes	\$ -	Yes
17							Yes	\$ -	Yes
18							Yes	\$ -	Yes
19							Yes	\$ -	Yes
20							Yes	\$ -	Yes
21							Yes	\$ -	Yes
22							Yes	\$ -	Yes
23							Yes	\$ -	Yes
24							Yes	\$ -	Yes
25							Yes	\$ -	Yes
						KU Total \$	\$ -	\$0.00	\$ -

**Adjustments for Purchases Above
KU/LGE Highest Priced Units
(SEPTEMBER 2015)**

Cost Components of Highest Priced Units:

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(6)=(3)+(4)+(5)	(7)	(8)=(6)+(7)
UNIT NAME	FULL LOAD HR	FUEL COST	SCRUBBER CONSUME	SO2 ADDER	SCR CONSUME	NOx ADDER	Hg CONSUME	DISPATCH COST	Maint V O&M	TOTAL PRICE	
	(MTU/KWH)	(\$/MTU)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	
ZORN 1	18,676	558.97	104.39	0.00	0.00	0.00	0.00	0.00	104.39	N/A	104.39
HAEFLING	17,000	725.00	123.25	0.00	0.00	0.00	0.00	0.00	123.25	N/A	123.25

LGE Purchases Above LGE' s Highest Priced Unit (ZORN 1):

	Purchase From	Cost \$	MWh Purch	Cost \$/MWh	Excluded Amount Prior to FO Calculation \$/MWh	Excluded in FO Calculation?	Additional Exclusion For FAC	ZORN 1 Available?
1						YES	\$ -	Yes
2						YES	\$ -	Yes
3						YES	\$ -	Yes
4						YES	\$ -	Yes
5						YES	\$ -	Yes
6						YES	\$ -	Yes
7						YES	\$ -	Yes
8						YES	\$ -	Yes
9						YES	\$ -	Yes
10						YES	\$ -	Yes
11						YES	\$ -	Yes
12						YES	\$ -	Yes
13						YES	\$ -	Yes
14						YES	\$ -	Yes
15						YES	\$ -	Yes
16						YES	\$ -	Yes
17						YES	\$ -	Yes
18						YES	\$ -	Yes
19						YES	\$ -	Yes
20						YES	\$ -	Yes
21						YES	\$ -	Yes
22						YES	\$ -	Yes
23						YES	\$ -	Yes
24						YES	\$ -	Yes
25						YES	\$ -	Yes
					LG&E Total \$	\$ -	\$0.00	\$ -

KU Purchases Above KU' s Highest Priced Unit (HAEFLING):

	Purchase From	Cost \$	MWh Purch	Cost \$/MWh	Excluded Amount Prior to FO Calculation \$/MWh	Excluded in FO Calculation?	Additional Exclusion For FAC	HAEFLING Available?
1						Yes	\$ -	Yes
2						Yes	\$ -	Yes
3						Yes	\$ -	Yes
4						Yes	\$ -	Yes
5						Yes	\$ -	Yes
6						Yes	\$ -	Yes
7						Yes	\$ -	Yes
8						Yes	\$ -	Yes
9						Yes	\$ -	Yes
10						Yes	\$ -	Yes
11						Yes	\$ -	Yes
12						Yes	\$ -	Yes
13						Yes	\$ -	Yes
14						Yes	\$ -	Yes
15						Yes	\$ -	Yes
16						Yes	\$ -	Yes
17						Yes	\$ -	Yes
18						Yes	\$ -	Yes
19						Yes	\$ -	Yes
20						Yes	\$ -	Yes
21						Yes	\$ -	Yes
22						Yes	\$ -	Yes
23						Yes	\$ -	Yes
24						Yes	\$ -	Yes
25						Yes	\$ -	Yes
					KU Total \$	\$ -	\$0.00	\$ -

**Adjustments for Purchases Above
KU/LGE Highest Priced Units
(OCTOBER 2015)**

Cost Components of Highest Priced Units:

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(6)=(3)+(4)+(5)	(7)	(8)=(6)+(7)
UNIT NAME	FULL LOAD HR	FUEL COST	SCRUBBER CONSUME	SO2 ADDER	SCR CONSUME	NOx ADDER	Hg CONSUME	DISPATCH COST	Maint V O&M	TOTAL PRICE	
	(BTU/KWH)	(\$/MFTU)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	(\$/MWH)	
ZORN 1	18,676	558.97	104.39	0.00	0.00	0.00	0.00	104.39	N/A	104.39	
HAEFLING	17,000	725.00	123.25	0.00	0.00	0.00	0.00	123.25	N/A	123.25	

LGE Purchases Above LGE's Highest Priced Unit (ZORN 1):

MM/DD/YY Hr	Purchase From	Cost \$	MWh Purch	Cost \$/MWh	Excluded Amount Prior to FO Calculation \$/MWh	\$	Excluded in FO Calculation?	Additional Exclusion For FAC	ZORN 1 Available?
1							YES	\$ -	Yes
2							YES	\$ -	Yes
3							YES	\$ -	Yes
4							YES	\$ -	Yes
5							YES	\$ -	Yes
6							YES	\$ -	Yes
7							YES	\$ -	Yes
8							YES	\$ -	Yes
9							YES	\$ -	Yes
10							YES	\$ -	Yes
11							YES	\$ -	Yes
12							YES	\$ -	Yes
13							YES	\$ -	Yes
14							YES	\$ -	Yes
15							YES	\$ -	Yes
16							YES	\$ -	Yes
17							YES	\$ -	Yes
18							YES	\$ -	Yes
19							YES	\$ -	Yes
20							YES	\$ -	Yes
21							YES	\$ -	Yes
22							YES	\$ -	Yes
23							YES	\$ -	Yes
24							YES	\$ -	Yes
25							YES	\$ -	Yes
					LG&E Total	\$ -	\$0.00	\$ -	

KU Purchases Above KU's Highest Priced Unit (HAEFLING):

MM/DD/YY Hr	Purchase From	Cost \$	MWh Purch	Cost \$/MWh	Excluded Amount Prior to FO Calculation \$/MWh	\$	Excluded in FO Calculation?	Additional Exclusion For FAC	HAEFLING Available?
1							Yes	\$ -	Yes
2							Yes	\$ -	Yes
3							Yes	\$ -	Yes
4							Yes	\$ -	Yes
5							Yes	\$ -	Yes
6							Yes	\$ -	Yes
7							Yes	\$ -	Yes
8							Yes	\$ -	Yes
9							Yes	\$ -	Yes
10							Yes	\$ -	Yes
11							Yes	\$ -	Yes
12							Yes	\$ -	Yes
13							Yes	\$ -	Yes
14							Yes	\$ -	Yes
15							Yes	\$ -	Yes
16							Yes	\$ -	Yes
17							Yes	\$ -	Yes
18							Yes	\$ -	Yes
19							Yes	\$ -	Yes
20							Yes	\$ -	Yes
21							Yes	\$ -	Yes
22							Yes	\$ -	Yes
23							Yes	\$ -	Yes
24							Yes	\$ -	Yes
25							Yes	\$ -	Yes
					KU Total	\$ -	\$0.00	\$ -	