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PUBLIC SERVICE
COMMISSION

Ms. Stephanie L. Stumbo
Executive Director
Kentucky Public Service Commission
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Frankfort, Kentucky 40601

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November 7, 2008

**RE: CONSIDERATION OF THE REQUIREMENTS OF THE
FEDERAL ENERGY POLICY ACT OF 2005 REGARDING FUEL
SOURCES AND FOSSIL FUEL GENERATION EFFICIENCY -
Case No. 2007-00300**

Dear Ms. Stumbo:

Enclosed please find and accept for filing the original and ten (10) copies of Kentucky Utilities Company and Louisville Gas and Electric Company's Testimony of Lonnie E. Bellar, pursuant to the Order dated October 14, 2008 in the above mentioned docket.

Should you have any questions please contact me at your convenience.

Sincerely,

A handwritten signature in black ink that reads "Rick E. Lovekamp". The signature is fluid and cursive.

Rick E. Lovekamp

cc: Parties of Record

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

CONSIDERATION OF THE)	
REQUIREMENTS OF THE FEDERAL)	ADMINISTRATIVE
ENERGY POLICY ACT OF 2005)	CASE NO. 2007-00300
REGARDING FUEL SOURCES AND FOSSIL)	
FUEL GENERATION EFFICIENCY)	

TESTIMONY OF
LONNIE E. BELLAR
VICE PRESIDENT OF STATE REGULATION AND RATES
KENTUCKY UTILITIES COMPANY AND
LOUISVILLE GAS AND ELECTRIC COMPANY

Filed: November 7, 2008

1 **Q. Please state your name, position and business address.**

2 A. My name is Lonnie E. Bellar. I am the Vice President of State Regulation and Rates
3 for Kentucky Utilities Company (“KU”) and Louisville Gas and Electric Company
4 (“LG&E”) (collectively, “Companies”) and an employee of E.ON U.S. Services, Inc.,
5 which provides services to the Companies. My business address is 220 West Main
6 Street, Louisville, Kentucky. A statement of my qualification is attached as
7 Appendix A.

8 **Q. Have you previously testified before the Kentucky Public Service Commission?**

9 A. Yes. I have testified before the Commission multiple times, most recently in Case
10 Nos. 2008-00251 (KU) and 2008-00252 (LG&E) concerning adjustments to the
11 Companies’ base rates.

12 **Q. What are the purposes of your testimony?**

13 A. The purpose of my testimony is to address the questions the Commission posed in its
14 Order dated October 14, 2008, in this proceeding, which are:

15 1. Explain whether or not the EAct 2005 fuel source diversity
16 standard should be adopted. If the utility does not believe
17 that the EAct 2005 fuel source diversity standard should be
18 adopted, identify any alternative fuel source diversity
19 standard the Commission should consider.

20 2. Explain whether or not the EAct 2005 fossil fuel generation
21 efficiency standard should be adopted. If the utility does not
22 believe that the EAct 2005 fossil fuel generation efficiency
23 standard should be adopted, identify any alternative fossil
24 fuel generation efficiency standard the Commission should
25 consider.

26 **I. THE EACT 2005 FUEL SOURCE DIVERSITY STANDARD**

27 **Q. Do the Companies believe the Commission should adopt the EAct 2005 fuel**
28 **source diversity standard or any other fuel source diversity standard?**

1 A. No, the Companies do not believe the Commission should adopt the EPAAct 2005 fuel
2 source diversity standard or any other such standard on the ground that any such
3 standard would be redundant and counterproductive. Beginning with the redundancy
4 of such a standard, the Companies already use multiple generation fuels due to
5 financial prudence and the necessity of having different types of generation to meet
6 demand (i.e., baseload units and peaking units). The Companies' net summer
7 generating capability in 2006 was 7,588 megawatts. Coal-fired generating units
8 accounted for 5,294 megawatts or approximately 70% of the net summer generating
9 capacity. In 1998, the Companies coal-fired generating units accounted for
10 approximately 88% of the net summer generating capacity. Gas-fired or oil-fired
11 units accounted for 2,222 megawatts of the 2006 net summer generating capacity or
12 approximately 29%. The remaining capacity is accounted for by hydroelectric
13 facilities, which generated 72 megawatts of the 2006 net summer capacity.

14 The Commission already routinely reviews the Companies' diverse generation
15 mix in triennial Integrated Resource Planning ("IRP") filings and proceedings, one of
16 which, Case No. 2008-00148, is currently pending. The very purpose of the
17 Commission's IRP regulation, 807 KAR 5:058, is to ensure that utilities consider all
18 reasonable options for the supply of electricity in the future, and to ensure that
19 utilities provide their customers a low-cost and reliable supply of electricity. Under
20 807 KAR 5:058, utilities must "consider the potential impacts of selected, key
21 uncertainties" and assess potentially cost-effective resource options that are available.
22 Also, when addressing expansion, construction, and operation of generating facilities,
23 utilities are required to assess economic opportunities for coordination with other

1 utilities and for generating capacity provided by cogeneration, renewable
2 technologies, and other non-utility sources. Furthermore, under 807 KAR 5:058 §
3 8(4)(c), in their IRPs utilities must “provide estimates of total energy input in primary
4 fuels by fuel type and total generation by primary fuel type required to meet load.”
5 This IRP process ensures that utilities are regularly reviewing all reasonable options
6 for generation resources to meet future demand, including renewable fuel-powered
7 resources, making a fuel diversity standard redundant.

8 In addition to the IRP review process, the Commission has the authority under
9 KRS 278.020 to approve the construction of any plant, equipment, property, or
10 facility for furnishing to the public any utility service. In order to grant a utility’s
11 application for a certificate, the Commission must find that public convenience and
12 necessity require the proposed service or construction.

13 Moreover, the Commission already enjoys broad investigative power under
14 KRS 278.280 to consider the practices of every jurisdictional utility in the
15 Commonwealth to ensure that “just, reasonable, safe, proper, adequate or sufficient
16 rules, regulations, practices, equipment, appliances, facilities, service or methods” are
17 “observed, furnished, constructed, enforced or employed.”

18 **Q. What steps have the Companies taken on their own to ensure reasonable and**
19 **prudent fuel diversity?**

20 A. In 2005, the Companies formally adopted their own Fuel Procurement Policies and
21 Procedures which identify the process by which they seek to obtain an adequate and
22 reliable fuel supply of sufficient quality at the lowest possible cost, consistent with
23 the Companies’ obligation to provide adequate and reliable service to its customers,

1 to meet operational and environmental standards, and to meet any other applicable
2 legal requirements.

3 Also, in 2007, KU and LG&E proposed, and the Commission approved, a
4 Green Energy program, which allows the Companies to aggregate the resources
5 provided by participating customers to develop energy generated from renewable
6 sources (known as “green power”), purchase green power, or purchase Renewable
7 Energy Certificates. Again, therefore, a fuel diversity standard would be redundant;
8 the Companies are already pursuing their own fuel security and diversity initiatives to
9 ensure they will be able to provide energy to their customers for years to come.

10 With respect to renewable energy, though the Companies are pursuing a
11 sensible renewable energy strategy through their Commission-approved Green
12 Energy program, there simply are not many cost-effective and prudent renewable
13 resources to pursue in Kentucky at the moment, as the Commission recognized in its
14 July 1, 2008 Report to the General Assembly:

15 The Commission believes that currently there is minimal
16 opportunity for developing a significant degree of economic
17 renewable resources in Kentucky (relative to other states) and
18 the existing renewable resources are less reliable than
19 traditional fossil-fueled generating units. With the imposition
20 of carbon rules, the industry will be driven to the development
21 of a broader array of resources including more reliable and cost
22 effective renewables.¹

23 **Q. Beyond being redundant, how might a mandatory fuel diversity standard be**
24 **counterproductive?**

¹ Kentucky Public Service Commission, “Electric Utility Regulation and Energy Policy in Kentucky: A Report to the Kentucky General Assembly Prepared Pursuant to Section 50 of the 2007 Energy Act,” Case No. 2007-00477, Report at 35 (July 1, 2008).

1 A. A mandatory fuel diversity standard could be counterproductive by compelling
2 utilities to employ a range of generation fuels that are neither financially prudent nor
3 needed to meet demand, which likely would raise the cost of providing service
4 unnecessarily. The EAct 2005 standard would require a utility “[to] develop a plan
5 to minimize dependence on one fuel source and to ensure that the electric energy it
6 sells to consumers is generated using a diverse range of fuels and technologies,
7 including renewable technologies.”² Such an approach is wise if there is reason to
8 doubt a utility’s ability to obtain a sufficient supply of its primary fuel in the near- or
9 long-term future. But Kentucky and surrounding states (indeed, the United States
10 generally) have significant and available coal reserves that ensure reliable and secure
11 supply for the foreseeable future, and Kentucky’s economy benefits from its utilities’
12 use of Kentucky coal. Moreover, in KRS 278.020(1) and the preamble to KRS
13 278.183, the General Assembly has articulated a policy of fostering and encouraging
14 the continued use of Kentucky coal by electric utilities serving the state. If a fuel
15 diversity standard arbitrarily required utilities to use less low-cost and readily
16 available coal in favor of higher-cost fuels solely for the purpose of having greater
17 fuel diversity, it would be financially counterproductive, both for utility customers
18 (who bear utilities’ fuel costs) and Kentucky’s coal-based businesses; it would also
19 appear to be contrary to statute, as discussed above.

20 **Q. Are there ways to ensure the security and reliability of fuel supply that do not**
21 **involve arbitrarily using different kinds of fuel?**

22 A. Yes, there are ways to ensure the security and reliability of fuel supply that do not
23 require arbitrary and costly fuel diversity. One way the Companies mitigate the risk

² EAct § 1251(12).

1 of being heavily reliant on coal as a generation fuel is by emphasizing the importance
2 of diversity when selecting mine sources and the methods for transporting coal to
3 each of the Companies' generating facilities. This diversity of supply helps to ensure
4 the reliability and long-term availability of coal at reasonable prices.

5 **II. THE EPACK 2005 FOSSIL FUEL GENERATION EFFICIENCY STANDARD**

6 **Q. Do the Companies believe the Commission should adopt the EPACK 2005 fossil**
7 **fuel generation efficiency standard or any other fossil fuel generation efficiency**
8 **standard?**

9 A. No, the Companies do not believe the Commission should adopt the EPACK 2005
10 fossil fuel generation efficiency standard or any other such standard. The EPACK
11 2005 standard would require a utility "[to] develop and implement a 10-year plan to
12 increase the efficiency of its fossil fuel generation." The Companies oppose this
13 standard and others like it for four reasons: (1) because utilities already have an
14 economic incentive to increase generation efficiency; (2) the Commission already can
15 review the fossil fuel efficiency of utilities' generating units in IRP proceedings; (3)
16 system operating constraints, such as maintaining reliability and meeting
17 environmental requirements, often make it difficult or impossible or fully realize
18 theoretically attainable efficiency improvements; and (4) it is highly unlikely that the
19 Companies' generation fleet, which is relatively low-cost but aging, will improve its
20 fossil fuel generation efficiency at a reasonable cost in the next ten years.

21 **Q. What economic incentive do utilities have to improve fossil fuel generation**
22 **efficiency?**

23 A. Because less fuel results in lower costs, the Companies continuously search for ways
24 to improve their units' heat rates. (The efficiency of fossil fuel generation is typically

1 evaluated by the net heat rate, because it is a direct measure of the amount of fuel
2 required to produce a kilowatt hour of electrical energy.) The Companies place a
3 focus on testing and reviewing approaches for making incremental efficiency
4 improvements to existing thermal generation in order to optimize performance.
5 Optimizing this performance not only benefits the Companies' customers in the form
6 of lower fuel costs, but also makes more energy available for the Companies to sell
7 off-system at more competitive prices.

8 Also, the Commission has recognized utilities' economic incentives to pursue
9 reasonable and prudent fossil fuel generation efficiency improvements, and has stated
10 that it does not believe that customers should bear the costs of any such
11 improvements that are not cost-effective:

12 We do not believe that additional incentives are needed to
13 encourage utilities to invest in cost-effective improvements.
14 Utilities currently have incentives to implement cost-effective
15 programs for which they are allowed to recover the costs and
16 which enable them to sell increased output. To the extent that
17 such improvements are not cost-effective, the Commission
18 believes any financial incentives should be provided through
19 grants, tax credits, low interest rate loans or some other similar
20 method and should not be borne by ratepayers.³

21 If customers are not to bear the costs, a fossil fuel generation efficiency standard
22 cannot require utilities to pursue cost-effective efficiency improvements; but, as the
23 Commission has recognized, utilities already have an incentive to pursue cost-
24 effective improvements, rendering any standard requiring such redundant, at best.

³ Kentucky Public Service Commission, "Electric Utility Regulation and Energy Policy in Kentucky: A Report to the Kentucky General Assembly Prepared Pursuant to Section 50 of the 2007 Energy Act," Case No. 2007-00477, Report at 51 (July 1, 2008).

1 **Q. What opportunity does the Commission have to review the fossil fuel efficiency**
2 **of utilities' generating units if it does not put in place a new efficiency standard?**

3 A. In addition to a review of generation fuel diversity, the Commission's IRP process
4 includes a review of each utility's plans for the efficient operation and utilization of
5 their generating units.

6 **Q. Why is it often difficult to attain in real operation the efficiency improvements**
7 **theoretically attainable?**

8 A. Though utilities can implement changes in equipment design that should result in
9 improved efficiency, system conditions may force utilities to operate inefficiently at
10 times in order to maintain the reliability of the system. Also, changes in
11 environmental regulations may result in the addition of pollution-control equipment
12 that could reduce overall efficiency. Because such detrimental efficiency impacts are
13 unavoidable, a fossil fuel generation efficiency standard may be difficult, if not
14 practically impossible, to meet.

15 **Q. Why else might it be difficult for the Companies and other utilities to meet a new**
16 **fossil fuel generation efficiency standard?**

17 A. As stated in the Companies' response to the First Data Request of the Commission
18 Staff, Question No. 4, it is a fact of an aging generation fleet that its heat rate will
19 tend to decline over time, particularly with respect to those units that the Companies
20 will fit with new environmental equipment such as flue gas desulfurization systems.
21 Therefore, it is more realistic to expect that the Companies' fleet and those of other
22 generating utilities may be able to slow that decline at a reasonable cost; in fact, the
23 Companies have undertaken a number of such measures on their generating units,

1 including routine maintenance to minimize efficiency degradation, and the
2 installation of new digital control systems to more precisely and rapidly adjust unit
3 operations to increase efficiency.

4 **III. CONCLUSION**

5 **Q. Please summarize your testimony.**

6 A. The Companies oppose the EPAAct 2005 fuel diversity and fossil fuel generation
7 efficiency standards, not because fuel diversity or efficient generation are poor ideas,
8 but precisely because the Companies and other utilities already do what is reasonable
9 and prudent in both those areas to ensure reliable and cost-effective service to their
10 customers. Through IRP, certificate of public convenience, and other proceedings,
11 the Commission already has the ability to monitor and affect how utilities approach
12 these matters. And perhaps most importantly, mandatory standards in either or both
13 of these areas could have the unintended effect of being counterproductive by
14 unnecessarily increasing costs to customers and the utilities, as well as harming
15 Kentucky's economy more broadly in the case of a fuel diversity standard.

16 **Q. Does this conclude your testimony?**

17 A. Yes.

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Lonnie E. Bellar**, being duly sworn, deposes and says he is the Vice President of State Regulation and Rates for Kentucky Utilities Company and Louisville Gas and Electric Company, that he has personal knowledge of the matters set forth in the foregoing testimony, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

Lonnie E. Bellar

LONNIE E. BELLAR

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 7th day of November, 2008.

Victoria B. Harper (SEAL)

Notary Public

My Commission Expires:

Sept 20, 2016

APPENDIX A

Lonnie E. Bellar

E.ON U.S. Services Inc.
220 West Main Street
Louisville, Kentucky 40202

Education

Bachelors in Electrical Engineering;
University of Kentucky, May 1987
Bachelors in Engineering Arts;
Georgetown College, May 1987
E.ON Academy, Intercultural Effectiveness Program: 2002-2003
E.ON Finance, Harvard Business School: 2003
E.ON Executive Pool: 2003-2007
E.ON Executive Program, Harvard Business School: 2006
E.ON Academy, Personal Awareness and Impact: 2006

Professional Experience

E.ON U.S.

Vice President, State Regulation and Rates	Aug. 2007 – Present
Director, Transmission	Sept. 2006 – Aug. 2007
Director, Financial Planning and Controlling	April 2005 – Sept. 2006
General Manager, Cane Run, Ohio Falls and Combustion Turbines	Feb. 2003 – April 2005
Director, Generation Services	Feb. 2000 – Feb. 2003
Manager, Generation Systems Planning	Sept. 1998 – Feb. 2000
Group Leader, Generation Planning and Sales Support	May 1998 – Sept. 1998

Kentucky Utilities Company

Manager, Generation Planning	Sept. 1995 – May 1998
Supervisor, Generation Planning	Jan. 1993 – Sept. 1995
Technical Engineer I, II and Senior, Generation System Planning	May 1987 – Jan. 1993

Professional Memberships

IEEE

Civic Activities

E.ON U.S. Power of One Co-Chair – 2007
Louisville Science Center – Board of Directors – 2008
Metro United Way Campaign – 2008