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November 7, 2008

HAND DELIVERED

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Executive Director
Public Service Commission
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PUBLIC SERVICE
COMMISSION

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RE: P.S.C. Case No. 2007-00300

Dear Ms. Stumbo:

Please find enclosed and accept for filing the original and ten copies of Mr. Wagner's testimony on behalf of Kentucky Power Company in this proceeding.

A copy of the testimony is being served on the persons on the attached service list.

Very truly yours,


Mark R. Overstreet

cc: Persons on attached service list

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COMMONWEALTH OF KENTUCKY
BEFORE THE
PUBLIC SERVICE COMMISSION OF KENTUCKY

RECEIVED

NOV 07 2008

PUBLIC SERVICE
COMMISSION

IN THE MATTER OF:

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

DIRECT TESTIMONY OF ERROL K WAGNER

ON BEHALF OF

KENTUCKY POWER COMPANY

November 7, 2008

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.
REGARDING FUEL SOURCES AND FOSSIL)	2007-00300
FUEL GENERATION EFFICIENCY)	

TESTIMONY OF ERROL K. WAGNER

November 7, 2008

**DIRECT TESTIMONY OF
ERROL K. WAGNER, ON BEHALF OF
KENTUCKY POWER COMPANY
BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

INTRODUCTION

1 **Q: PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.**

2 A: My name is Errol K. Wagner. My position is Director of Regulatory Services, Kentucky
3 Power Company ("Kentucky Power, KPCo or Company"). My business address is 101A
4 Enterprise Drive, Frankfort, Kentucky 40602.

BACKGROUND

5 **Q: PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND BUSINESS**
6 **EXPERIENCE.**

7 A: I received a Bachelor of Science degree with a major in accounting from Elizabethtown
8 College, Elizabethtown, Pennsylvania in December 1973. I am a Certified Public
9 Accountant. I worked for two certified public accounting firms prior to joining the
10 Pennsylvania Public Utility Commission Staff in 1976. In 1982, I joined the American
11 Electric Power Service Corporation ("AEPSC") as a Rate Case Coordinator. In 1986, I
12 transferred from AEPSC to Kentucky as the Assistant Rates, Tariffs and Special
13 Contracts Director. In July 1987, I assumed my current position.

14 **Q: WHAT ARE YOUR RESPONSIBILITIES AS DIRECTOR OF REGULATORY**
15 **SERVICES?**

16 A: I supervise and direct the Regulatory Services of the Company, which has the
17 responsibility for rate and regulatory matters affecting Kentucky Power. This includes the
18 preparation of and coordination of the Company's exhibits and testimony in rate cases
19 and any other formal filings before state and federal regulatory bodies. Another

1 responsibility is assuring the proper application of the Company's rates in all
2 classifications of business.

3 **Q: TO WHOM DO YOU REPORT?**

4 A: I report to the President of Kentucky Power, Mr. Timothy C. Mosher, who is also located
5 in Frankfort, Kentucky.

6 **Q: HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?**

7 A: Yes. I have testified before this Commission in numerous regulatory proceedings
8 involving the adjustment in electric base rates, the fuel adjustment clause, the operation
9 of the environmental cost recovery mechanism, approval of certificates of public
10 convenience and necessity and other regulatory matters. I also testified in Case No.
11 2005-00341, KPCo's last case seeking a general adjustment in electric base rates.

PURPOSE OF TESTIMONY

12 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

13 A: To address the questions posed by the Commission in its October 14, 2008 Order in this
14 proceeding. Specifically, I will address whether, in light of the proceedings in P.S.C.
15 Case No. 2007-00477 and otherwise, the Energy Policy Act of 2005 (EPAAct 2005)
16 standards for fuel source diversity and fossil fuel generation efficiency should be adopted
17 in Kentucky.

18 **Q: DOES THE COMPANY FAVOR THE ADOPTION OF THE FEDERAL FUEL**
19 **SOURCE DIVERSITY AND FOSSIL FUEL GENERATION EFFICIENCY**
20 **STANDARDS BY THE COMMISSION, OR WHERE NECESSARY, THE**
21 **KENTUCKY GENERAL ASSEMBLY?**

22 A: No. As I explain in the remainder of my testimony, KPCo believes that a federal fuel
23 diversity standard would impose significant costs on Kentucky ratepayers, is
24 unnecessary, and would contravene long-standing legislatively-established policy. KPCo

1 further believes that the federal fossil fuel generation efficiency standard is inappropriate
2 for Kentucky and unnecessary.

**BACKGROUND REGARDING EPACK 2005 FUEL DIVERSITY AND
FOSSIL FUEL GENERATION EFFICIENCY STANDARDS**

3 **Q: ARE THE FEDERAL STANDARDS FOR FUEL DIVERSITY AND FOSSIL FUEL**
4 **GENERATION EFFICIENCY MANDATORY?**

5 A: No. Section 111 of the Public Utility Regulatory Policies Act of 1978, 16 U.S.C. 2621
6 (“PURPA”), directs the Kentucky Public Service Commission, to consider for each
7 electric utility for which it has ratemaking authority implementation of federal standards.
8 It does not, however, require their adoption as Kentucky standards. EPACK 2005
9 amended 2621(2) to add additional federal standards to those to be considered by the
10 Commission but did not make adoption of those standards mandatory.

11 **Q: WERE THE FEDERAL FUEL DIVERSITY AND FOSSIL FUEL GENERATION**
12 **EFFICIENCY STANDARDS AMONG THOSE INCLUDED WITHIN THE 2005**
13 **AMENDMENTS TO 16 U.S.C. 2621?**

14 A: Yes. New subsections 16 U.S.C. 2621(d)(12) and 16 U.S.C. 2621(d)(13) added the
15 federal fuel diversity and generation efficiency standards:

16 (12) *FUEL SOURCES* Each electric utility shall develop a plan to minimize
17 dependence on [one] fuel source and to ensure that the electric energy it sells to
18 consumers is generated using a diverse range of fuels and technologies, including
19 renewable technologies.

20 (13) *FOSSIL FUEL GENERATION EFFICIENCY* Each electric utility shall
21 develop and implement a 10-year plan to increase the efficiency of its fossil fuel
22 generation.

FEDERAL FUEL DIVERSITY STANDARDS**A. Fuel Diversity Standards Are Likely To Impose Significant Costs On Kentucky Power's Ratepayers.**

1 **Q: WHAT IS THE NATURE OF KENTUCKY POWER'S OWNED GENERATION?**

2 A: KPCo-owned generation consists of the two coal-fired Big Sandy units with a total
3 capacity of 1060 MW. In addition, with the Commission's approval and the agreement
4 of the Attorney General and Kentucky Industrial Utility Customers, Inc., KPCo in 2004
5 extended the Unit Power Agreement for 195 MW of Rockport Unit No. 1 and 195 MW
6 of Rockport Unit No. 2 through December 7, 2022. Both Rockport units are base load
7 coal-fired units.

8 **Q: WHAT IS THE BASIS FOR THE COMPANY'S CONCERN THAT ADOPTING**
9 **THE FEDERAL FUEL DIVERSITY STANDARDS WILL IMPOSE**
10 **SIGNIFICANT COSTS ON KENTUCKY POWER'S RATEPAYERS?**

11 A: Kentucky Power's 1450 MW of generation is entirely coal-fired base load generation and
12 thus any material change in the fuel sources for the Company's generation would require
13 building or otherwise acquiring significant blocks of generation using fuels other than
14 coal. For example, reducing coal-fired generation by 20% of the Company's generation
15 fuel mix would require building 362.5 MW of generation that uses other fuel sources.
16 Alternatively, if it merely maintains total owned generation capacity of 1450 MW, KPCo
17 would be required to replace 290 MW of coal-fired generation with generation powered
18 by other fuel sources to achieve an 80%-20% fuel mix. The significant amount of
19 generation that would have to be acquired for even a minimal shift in the Company's fuel
20 mix will require significant expenditures that must be borne by Kentucky Power's
21 ratepayers.

1 **Q: OTHER THAN THE SIZE OF THE GENERATION CAPACITY THAT WOULD**
2 **HAVE TO BE ACQUIRED TO ACHIEVE EVEN MINIMAL FUEL DIVERSITY**
3 **ARE THERE ANY OTHER FACTORS THAT WOULD RESULT IN**
4 **INCREASED COSTS TO RATEPAYERS?**

5 A: Yes. The cost of renewable generating resources is both uncertain at this time and such
6 resources generally cost more than conventional sources. More generally, AEP has
7 investigated renewable resources for both its East and West zones and has found that,
8 among renewable resources, wind and biomass can provide the most generation for the
9 least cost but, for the East Zone, at a cost that is generally above that of conventional
10 resources. Landfill gas and solar provide incremental distributed generation at costs even
11 higher than those for wind and biomass.

12 **Q: DO THESE INCREASED COSTS RAISE ANY REGULATORY CONCERNS?**

13 A: Yes. Traditionally, Kentucky Power has planned its generation on a least-cost basis. In
14 addition, it is Kentucky Power's understanding that to date the Commission, for purposes
15 of examining applications for certificates of public convenience and necessity and for
16 purposes of rate recovery, has emphasized the need for any additions to generation to be
17 the least-cost alternative.

18 **Q: HAS THIS REGULATORY UNCERTAINTY AFFECTED KENTUCKY**
19 **POWER'S CHOICES?**

20 A: From time to time, the Company may be offered the opportunity to obtain renewable
21 generation at prices above the current cost of conventional coal-fired generation, but
22 which may prove to be very competitive in the future. Under existing regulatory
23 constraints it is difficult for the Company to justify expending the resources required to
24 plan, acquire and seek approval for the addition of renewable generation resources.

1 **Q: ARE RENEWABLE RESOURCES LIKELY TO REMAIN MORE EXPENSIVE**
 2 **IN THE FUTURE THAN TRADITIONAL COAL-FIRED BASE LOAD**
 3 **GENERATION?**

4 A: It is difficult to predict. Certainly, further tightening of emission standards or the
 5 imposition of costs or limits on carbon emissions will increase the cost of conventional
 6 coal-fire generation. On the other hand, if such higher costs for coal-fired generation
 7 increase the demand for renewable resources, then the cost of those resources may also
 8 increase.

9 **Q: ARE THERE ANY OTHER CONSIDERATIONS WITH RENEWABLE**
 10 **GENERATION?**

11 A: Yes. Many of the renewable generating sources pose operational and planning issues.
 12 For example, by their very nature neither solar nor wind power is available around the
 13 clock. As a result, using such generation in the place of coal-fired base load generation
 14 results in additional expenses for stand-by power and ancillary services. Also, for
 15 capacity planning purposes, PJM credits wind power with only 10-15% of its name plate
 16 value.

B. Fuel Diversity Standards Are Unnecessary.

17 **Q: WHAT IS THE BASIS FOR THE COMPANY'S POSITION THAT FUEL**
 18 **DIVERSITY STANDARDS ARE UNNECESSARY?**

19 A. Kentucky Power believes the Commission already enjoys sufficient authority under
 20 existing statutes to ensure that Kentucky ratepayers garner the benefits of fuel diversity,
 21 where appropriate, without saddling ratepayers with unnecessary costs and the higher
 22 rates they inevitably bring. Most important of these abilities is the oversight afforded the
 23 Commission as part of the certificate of public convenience and necessity process
 24 provided for by KRS 278.020. Because utilities are required to obtain a certificate before

1 beginning construction of generating facilities, the Commission has ample opportunity to
2 consider the utility's fuel mix as part of that proceeding. More importantly, a certificate
3 proceeding allows the Commission to consider all relevant factors, including acquisition
4 cost, reliability, operating costs and efficiency. The federal standard, by contrast, would
5 have fuel source diversity considered in a vacuum and without consideration of all of the
6 factors necessary to ensure the best choice – for ratepayer and shareholder alike – is
7 made.

8 **Q: ARE THERE ANY OTHER PROCEEDINGS IN WHICH THE COMMISSION**
9 **MIGHT CONSIDER FUEL DIVERSITY ISSUES?**

10 A: Yes. In addition to certificate cases, the Commission regularly reviews electric utilities'
11 fuel choice in connection with its examination of generating utilities' fuel adjustment
12 clause.¹ These reviews, which take place at six-month and two-year intervals, allow the
13 Commission to monitor fuel procurement practices and to order refunds of unjustified
14 charges. The Commission also exercises oversight every three years through its review
15 of Integrated Resource Plans filed by electric utilities.²

16 **Q: IS THERE ANY OTHER BASIS FOR THE COMPANY'S BELIEF THAT THE**
17 **FEDERAL STANDARD IS UNNECESSARY?**

18 A: Yes, there are two. First, the Commission itself has recognized that recent developments
19 have afforded it the opportunity to foster distributed generation, which in turn involves
20 principally, if not exclusively, solar and wind generation. Specifically, in its July 1, 2008
21 Report in Case No. 2007-00477³ the Commission indicated that Recommendation No. 14
22 made by Overland Consulting Group in its report in that proceeding, which advocated the

¹ 807 KAR 5:056.

² 807 KAR 5:058.

1 adoption of uniform net metering and interconnection guidelines,⁴ was most important of
 2 the recommendations developed by the Overland to address diversification through
 3 renewable generation and distributed generation.⁵ As explained by the Commission, the
 4 recommendation for uniform guidelines was being implemented by the Commission
 5 through proceedings in Case No. 2008-00169.⁶ In fact, since the Commission's report
 6 the parties have developed such guidelines and recently proposed them for the
 7 Commission's consideration and adoption.

8 **Q: WHAT IS THE OTHER BASIS YOU MENTIONED EARLIER?**

9 A: In P.S.C. Case No. 2008-00151,⁷ the Company sought and received approval to
 10 implement a "Green Pricing Option Rider" that would permit Kentucky Power's
 11 customer's to support the generation of electricity through renewable resources.
 12 Although the GPO Rider was only recently approved by the Commission,⁸ it could
 13 provide the Company and the Commission with some indication of the willingness of
 14 Kentucky Power's customers to support renewable resources and fuel source diversity
 15 through higher rates.

C. Fuel Diversity Standards Must Be Considered In Light Of The
 Legislatively Prescribed Policy Of The Commonwealth.

³ Kentucky Public Service Commission, A REPORT TO THE GENERAL ASSEMBLY PREPARED PURSUANT TO SECTION 50 OF THE 2007 ENERGY ACT, *In the Matter of: An Investigation of the Energy and Regulatory Issues in Section 50 of Kentucky's 2007 Energy Act*, P.S.C. Case No. 2007-00477 (July 1, 2008).

⁴ Overland Consulting Group, REVIEW OF THE INCENTIVES FOR THE ENERGY INDEPENDENCE ACT OF 2007 SECTION 50, P.S.C. Case No. 2007-00477 at 73 (Filed March 4, 2008).

⁵ Kentucky Public Service Commission, A REPORT TO THE GENERAL ASSEMBLY PREPARED PURSUANT TO SECTION 50 OF THE 2007 ENERGY ACT, *In the Matter of: An Investigation of the Energy and Regulatory Issues in Section 50 of Kentucky's 2007 Energy Act*, P.S.C. Case No. 2007-0477 at 33, 38-39 (July 1, 2008).

⁶ *In the Matter of: Interconnection and Net Metering Guidelines for Retail Electric Suppliers and Qualifying Customer-Owned Generators*.

⁷ *In the Matter of: The Application of Kentucky Power Company for Approval of Its Green Pricing Option Rider (Rider GPO)*, P.S.C. Case No. 2008-00151

⁸ Order, *In the Matter of: The Application of Kentucky Power Company for Approval of Its Green Pricing Option Rider (Rider GPO)*, P.S.C. Case No. 2008-00151 (August 26, 2008).

1 **Q: WHAT IS THE COMPANY'S UNDERSTANDING OF THE PUBLIC POLICY**
 2 **OF THE COMMONWEALTH WITH RESPECT TO FUEL CHOICE FOR**
 3 **ELECTRIC GENERATION?**

4 A: In 1992, the General Assembly declared that the public policy of the Commonwealth was
 5 to foster and encourage the use of coal, particularly Kentucky-mined coal, as the fuel
 6 source for electric generation. SB 341, which was enacted by the 1992 General
 7 Assembly and codified at KRS 278.183, thus provided for the recovery as a matter of
 8 right of certain environmental compliance costs incurred by electric generating utilities.
 9 The preamble to SB 341 in particular provided that:

10 WHEREAS, it is hereby declared the policy of the General Assembly to
 11 foster and encourage the continued use of Kentucky coal by electric
 12 utilities serving the Commonwealth; and

13 WHEREAS, electric utilities should have incentive to use Kentucky coal
 14 in deciding how to best achieve and maintain compliance with the
 15 Federal Clean Air Act as amended and those environmental requirements
 16 which apply to coal combustion wastes and by-products from facilities
 17 utilized for production of energy from coal....⁹

18 The Commission recognized this policy in its August 3, 2007 Order establishing this
 19 proceeding.¹⁰

20 **Q: HAS THAT LEGISLATIVELY-DIRECTED POLICY CHANGED OVER TIME?**

21 A: Not really. For example, while House Bill 1, enacted by the 2007 Special Session of the
 22 General Assembly, required certain studies of, and provided incentives for, renewable
 23 fuels and energy sources, the General Assembly took no action to limit the use of coal-
 24 fired electric generation. To the contrary, the General Assembly took steps to permit the
 25 continued use of coal-fired generation in the event of increased environmental regulation

⁹ 1992 Ky. Acts Chapter 102, § 1.

¹⁰ Order, *In the Matter of: Consideration of the Requirements of the Federal Energy Policy Act of 2005 Regarding Fuel Sources and Fossil Fuel Generation Efficiency* at 3, Case No, 2007-300 (August 3, 2007)

1 of carbon emissions.¹¹ Moreover, as the Commission itself recognized in its Report to
 2 the General Assembly pursuant to Section 50 of House Bill 1, many of the
 3 recommendations made by Overland Consulting to further fuel diversity would require
 4 further legislative authorization.¹²

5 **Q: HAS THE GENERAL ASSEMBLY PRONOUNCED PUBLIC POLICY WITH**
 6 **RESPECT TO THE USE OF OTHER TYPES OF FUELS FOR ELECTRIC**
 7 **GENERATION?**

8 A: Yes. Through KRS 278.605 the General Assembly proscribed the construction of any
 9 nuclear power facility in the Commonwealth until the Commission finds the United
 10 States government has “identified and approved a demonstrable technology or means for
 11 the disposal of high level nuclear waste.” The Company is unaware of the Commission
 12 having made the legislatively-required finding and thus nuclear power facilities can not
 13 be constructed in the Commonwealth.

14 **Q: WHAT IS THE SIGNIFICANCE OF THESE LEGISLATIVELY-PRESCRIBED**
 15 **PUBLIC POLICIES?**

16 A: Any decision as to the advisability of adopting the federal fuel diversity standard should
 17 be informed by public policy, as established by the Kentucky General Assembly,
 18 regarding fuel use. Such a clearly enunciated and long-standing legislative policy
 19 favoring the use of coal should not, and it is my understanding can not, be lightly
 20 disregarded by the Commission, even in connection with a federally mandated
 21 investigation. Moreover, any shift in the policy toward the promotion of renewable

¹¹ House Bill 1 § 57 (\$5,000,000 appropriation for research regarding, among other topics, sequestration of carbon dioxide in coal beds); House Bill 1 § 58 (\$2,000,000 appropriation to expand programs dealing with, among other topics, sequestration of carbon dioxide produced by electric power generation)

¹² Kentucky Public Service Commission, A REPORT TO THE GENERAL ASSEMBLY PREPARED PURSUANT TO SECTION 50 OF THE 2007 ENERGY ACT at 19 (July 1, 2008).

1 energy sources should, like the policy promoting the use of Kentucky coal, come from
2 the General Assembly.

3 D. Alternative Fuel Diversity Standards.

4 **Q: IN ITS OCTOBER 14, 2008 ORDER IN THIS PROCEEDING THE**
5 **COMMISSION REQUESTED THAT THE PARTIES PROVIDE ANY**
6 **ALTERNATIVE FUEL DIVERSITY STANDARDS THEY BELIEVE WOULD**
7 **BE APPROPRIATE. DOES KENTUCKY POWER BELIEVE THE ADOPTION**
8 **OF AN ALTERNATIVE FUEL DIVERSITY STANDARD IS APPROPRIATE?**

9 A: No. For the reasons set forth above, Kentucky Power believes the Commission should
10 refrain from adopting any fuel diversity standard. If the Commission nevertheless deems
11 that such a standard is in the best interest of Kentucky ratepayers, Kentucky Power
12 believes that the standard adopted should include at a minimum the following five
13 attributes:

14 (a) The Commission should seek and receive appropriate legislative authority;

15 (b) The renewable portfolio standard should be voluntary. Given the
16 differences between utilities in current fuel diversity, load growth, age of their generating
17 facilities, planned additions to generating capacity, demand and operating characteristics,
18 and access to diverse generation through contractual and other relationships, there is no
19 “one size fits all” standard;

20 (c) Any standard should recognize the diversity of generating resources
21 available to a particular utility through contractual and other relationships. KPCo, for
22 example, is a party to the AEP-East Interconnection Agreement, and as a result has
23 available to it the generating resources of the AEP-East Zone companies and their fuel
24 mix. The AEP-East Zone companies view fuel diversity in light of the potential costs
25 and risks of having or not having a diverse set of fuel sources. Economic forces already

1 have driven the AEP-East Zone companies to diversify fuel sources in connection with
 2 supplying their load. After considering over time the associated risks and costs of
 3 various fuels, the AEP East Zone companies have developed a generating fleet that uses
 4 an appropriately diverse mix of fuels:

AEP System -- East Zone Fuel Mix Diversity		
Resource	Capacity MW	Percent of Total
Nuclear	2,191	8.3
Coal	20,561	77.6
Natural Gas	3,019	11.4
Oil	3	0
Hydro (a)	135	0.5
Pumped Storage	586	2.2
Wind (b)	10	0

Notes: (a) Based on the average (Run-of-river) or Peak Dispatchable MW output.

(b) Reflects 13% of nameplate capacity (75 MW) as specified by PJM.

5 As the AEP System load grows, the proportion of capacity fueled by natural gas also is
 6 likely to increase if, and as, additional peaking capacity is added. In that sense, fuel
 7 diversity will increase and overall system economic efficiency will be improved.¹³

8 (d) Any standard should be coupled with incentives, such as the 300- basis
 9 point incentive recommended by Overland Consulting Group for investment in
 10 renewable resources. In light of the limited availability of wind and solar renewable

¹³ AEP has announced a plan to acquire 1,000 MW of wind power and energy by the year 2010 as part of its comprehensive strategy to voluntarily reduce, avoid, or offset future greenhouse gas emissions. While wind power has certain operational challenges, it is also a non-emitting source of electricity that can further diversify the fuel sources for the AEP East System. Moreover, the addition of renewable power can act as a hedge against increasingly stringent future environmental regulations and convey other economic benefits that can reduce or offset higher costs or, in some cases, render an overall net cost that is projected to be lower than fossil alternatives over the long-term.

1 resources in Kentucky, any such incentives should be applicable without regard to
2 whether the generation is located within or without the boundaries of the
3 Commonwealth. In addition, to permit utilities to secure the least-cost renewable
4 generation the incentives should not discriminate in favor of owned generation or against
5 purchased power.

6 (e) There should be no disincentives for the use of coal. While fuel
7 diversity may increase over time, the vast majority of the energy produced by the AEP
8 System will continue to be provided by low-cost coal and nuclear generation. The
9 largest part of the energy will continue to be provided by relatively low-risk solid-fuel
10 resources. Prices for solid fuels, such as coal, are more stable than prices for natural gas.
11 The primary risks for solid fuels are labor problems for eastern coal, rail delivery
12 problems for western, sub-bituminous coals, and winter barge delivery problems for both
13 sources. While these risks are real, they seldom materialize and they can be mitigated to
14 some extent by having fuel supplies on hand at the generating stations. Natural gas, the
15 main alternative to solid fuels, on the other hand, is at risk for more frequent price spikes
16 and supply interruptions at the sources; and storage at generating stations is not possible.
17 The Company should be free to make changes in its generation mix as economically
18 appropriate to meet the load of all of its customers reliably and efficiently.

FEDERAL FOSSIL FUEL GENERATION EFFICIENCY STANDARDS

19 **Q: DOES KENTUCKY POWER BELIEVE THE ADOPTION OF FEDERAL**
20 **FOSSIL FUEL EFFICIENCY STANDARDS IS IN THE BEST INTEREST OF**
21 **RATEPAYERS?**

22 **A: No.**

23 **Q: CAN YOU ELABORATE?**

1 A: Certainly. First, the requirement that each jurisdictional electric utility adopt a “10-year
2 plan” to increase fossil fuel generation efficiency as mandated by the federal standard
3 ignores the fact that generation efficiency is a company-specific issue. The efficient
4 operation of fossil fuel generating plants requires flexibility in operations, maintenance,
5 and equipment upgrades, all of which would be limited by rigid plans driven only by the
6 pursuit of generating unit efficiency. For example, a ten percent increase in the
7 efficiency of a poorly operating plant might be brought about at a reasonable cost. On
8 the other hand, a similar increase in a state-of-the-art unit, operating at peak efficiency,
9 might be possible, if at all, by expenditures that can not be justified under even the most
10 forgiving cost-benefit analysis.

11 **Q: ARE THERE OTHER PROBLEMS WITH THE ADOPTION OF THE FEDERAL**
12 **STANDARD?**

13 A: Yes. The imposition of a uniform standard, which would be required absent extensive
14 investigation and analysis of each company’s generation facilities, would punish those
15 companies and their ratepayers who have already made significant investments in
16 improving generation efficiency.

17 **Q: ARE THERE OTHER FACTORS THAT AFFECT GENERATION EFFICIENCY**
18 **OF FOSSIL FUEL PLANTS?**

19 A: Yes. Increases in efficiency are oftentimes masked by the installation of environmental
20 controls that consume significant amounts of energy.

21 **Q: COULD THE IMPOSITION OF FOSSIL FUEL GENERATION EFFICIENCY**
22 **STANDARDS HAVE UNINTENDED ADVERSE CONSEQUENCES?**

23 A: Certainly. The imposition of fossil fuel generation efficiency standards may, for
24 example, result in capital budgets being directed toward generation when similar

1 improvements in overall efficiency can be obtained by a smaller investment in
2 transmission and distribution facilities.

3 **Q: DOES KENTUCKY POWER HAVE OTHER CONCERNS ABOUT THE**
4 **FEDERAL STANDARD FOR FOSSIL FUEL GENERATION EFFICIENCY?**

5 A: Yes. It appears to the Company that the standard may be unnecessary. From a
6 regulatory standpoint, Commission review of fuel and generation costs in base rate and
7 fuel adjustment clause proceedings already compels the Company toward efficient
8 generation.

9 **Q: DO ECONOMICS PLAY A PART?**

10 A: Certainly. KPCo recognizes the economic need to improve fossil fuel generation
11 efficiency and strives to improve the operating performance of its generating units
12 through wise capital expenditures, the use of proven new technologies, efficient
13 operation and careful planning. The AEP System, of which KPCo is a part, has
14 employed these concepts over time in the development and utilization of generation
15 efficiency improvements to provide reliable, low cost electricity to its customers.

16 **Q: CAN YOU PROVIDE THE COMMISSION WITH SOME EXAMPLES OF**
17 **THESE IMPROVEMENTS?**

18 A: Some of AEP's notable accomplishments include the development and operation of the
19 first supercritical double reheat unit, the development of a sliding pressure technique for
20 supercritical units to improve part load efficiency, the installation of more efficient
21 turbine valves on the 1300 MW series units and the installation of Advanced Design
22 Steam Paths on the System's larger units. More recently, the AEP System has focused
23 on the utilization of tools to help it assess the efficiency of its plants. Examples include
24 the development of on-line performance monitors for plant operators, the creation of a

1 heat rate deviation calculation, a reporting tool that allows engineers and management to
2 identify problem areas in major equipment, and the introduction of facility health reports
3 for outage planning and condition monitoring.

4 **Q: HAVE SOME OF THESE IMPROVEMENTS BEEN QUANTIFIED?**

5 A: Yes. EKW-1 details the efficiencies obtained through some of these improvements as
6 implemented at Big Sandy.

7 **Q: HAS THE COMPANY UNDERTAKEN OTHER INITIATIVES TO IMPROVE**
8 **EFFICIENCY?**

9 A: Yes. The AEP System has implemented several initiatives designed to improve the
10 reliability and efficiency of its generation fleet. Among these activities are critical heat-
11 cycle balance-of-plant mechanical equipment condition assessments, utilization of
12 monitoring programs to rank major capital and maintenance expenditures, and
13 establishment of a Generation Performance Team to coordinate efficiency improvement
14 activities across the System, to improve heat rate education and intra-System
15 communication on best practices.

16 **Q: WHAT IS THE COMPANY'S RECOMMENDATION CONCERNING THE**
17 **KENTUCKY COMMISSION'S ADOPTION OF THE FEDERAL FUEL**
18 **DIVERSITY AND FOSSIL FUEL GENERATION EFFICIENCY STANDARDS?**

19 A: For the reasons I previously mentioned in this testimony, Kentucky Power recommends
20 the Commission not adopt the federal fuel diversity and fossil fuel generation efficiency
21 standards.

22 **Q: DOES THIS CONCLUDE YOUR TESTIMONY?**

23 A: Yes.

VERIFICATION

The undersigned, Errol K. Wagner, being duly sworn, deposes and says he is the Director of Regulatory Services for Kentucky Power 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.

Errol K. Wagner

ERROL K. WAGNER

COMMONWEALTH OF KENTUCKY)
) SS
COUNTY OF FRANKLIN)

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

Judy K. (Nickett) Koginski

Notary Public

My Commission Expires:

January 14, 2009

EXHIBIT EKW-1

Kentucky Power Company

Big Sandy Unit #	Heat Rate Improvements	Heat Rate Improvement
Unit 1	HP Turbine Replacement and New IP/SFLP Turbine Internals	250 Btu/kWh
Unit 1	On-Line Performance Monitor	100 Btu/kWh
Unit 1&2	Evaporator replaced by Reverse Osmosis Filter	10 Btu/kWh
Unit 1	Cooling Tower fill Replacement and Upgrade	22 Btu/kWh
Unit 2	ADSP HP and 1 st RH Turbine	70 Btu/kWh
Unit 2	On-Line Performance Monitor	100 Btu/kWh