



EAST KENTUCKY POWER COOPERATIVE

RECEIVED

DEC 22 2008  
PUBLIC SERVICE  
COMMISSION

December 22, 2008

HAND DELIVERED

Ms. Stephanie L. Stumbo  
Executive Director  
Public Service Commission  
211 Sower Boulevard  
Frankfort, KY 40602

Re: PSC Case No. 2007-00300

Dear Ms. Stumbo:

Please find enclosed for filing with the Commission in the above-referenced case an original and seven copies of the responses of East Kentucky Power Cooperative, Inc. ("EKPC"), to the Commission Staff's Second Data Request dated December 10, 2008.

Very truly yours,

  
David A. Smart  
General Counsel

Enclosures

Cc: Parties of Record

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

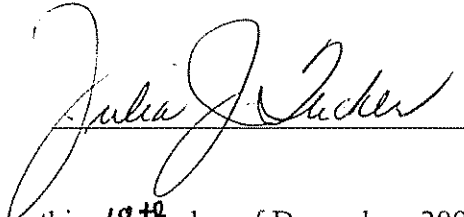
In the Matter of:

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

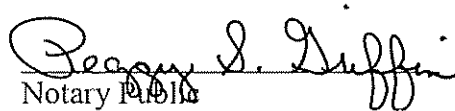
CERTIFICATE

STATE OF KENTUCKY )  
 )  
 COUNTY OF CLARK )

Julia J. Tucker, being duly sworn, states that she has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission Staff Second Data Request in the above-referenced case dated December 10, 2008, and that the matters and things set forth therein are true and accurate to the best of her knowledge, information and belief, formed after reasonable inquiry.



Subscribed and sworn before me on this 18<sup>th</sup> day of December, 2008.



Notary Public

My Commission expires:

December 8, 2009

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

**In the Matter of:**

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

**RESPONSES TO COMMISSION STAFF'S SECOND DATA REQUEST  
TO EAST KENTUCKY POWER COOPERATIVE, INC.  
DATED DECEMBER 10, 2008**



**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC CASE NO. 2007-00300**  
**FUEL SOURCES AND FOSSIL FUEL GENERATION EFFICIENCY**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 12/10/08**  
**REQUEST 1**

**RESPONSIBLE PERSON:**           **Julia J. Tucker**

**COMPANY:**                       **East Kentucky Power Cooperative, Inc.**

**Request 1.**           With regard to Strategy 1, *Improve the Energy Efficiency of Kentucky's Homes, Buildings, Industries and Transportation Fleet* and Strategy 2, *Increase Kentucky's Use of Renewable Energy*, explain any changes that will or may impact the utility's fuel or energy requirements for:

- a. the near-term (1-3 years);
- b. the mid-term (4-7 years); and
- c. the long-term (beyond 7 years)?

**Response 1.**           Strategy 1, *Improve the Energy Efficiency of Kentucky's Homes, Buildings, Industries and Transportation Fleet* seeks to reduce utility energy requirements by at least 16 percent below projected (with no changes) 2025 energy requirements. EKPC's 2007 total energy requirements were 13,080,367 MWh to serve its member systems. Projected 2025 requirements are 18,422,561 MWh. To reach the strategic goal, EKPC will need to find ways to help its member owners reduce their energy consumption by 2 to 3 million MWh. Over the forecast period, naturally occurring appliance efficiency improvements are expected to decrease residential retail sales nearly 4% or approximately 500,000 MWh. Appliances particularly affected are refrigerators, freezers, and air conditioners. EKPC's 2006 IRP identified 69,000 MWh of energy savings that are expected to be realized from Demand Side Management ("DSM")

programs currently in place. EKPC members have given away more than 502,000 compact fluorescent light bulbs since 2003. They offer home energy audits. The Touchstone Energy Home program provides incentives for efficiency in new home construction. About 400 qualifying homes have been built to date. The Button-Up and Tune-Up programs aim to improve insulation and HVAC efficiency in existing homes. The Smart Saver load management program will reduce peak demand usage by residential customers' air conditioners and water heaters during system peak conditions. The goal is to have 50,000 participants in five years. In addition to the efficiency improvements and energy savings that have already been identified in EKPC's plans, it will need to develop methods to aggressively reduce energy by another 1.4 to 2.4 million MWh by 2025.

Strategy 2, *Increase Kentucky's Use of Renewable Energy*, has a goal of tripling Kentucky's renewable energy generation to provide the equivalent of 1,000 MW of clean energy while continuing to produce safe, abundant, and affordable food, feed, and fiber. EKPC would need to provide approximately 150 MW of renewable energy resources for its 15% share of statewide energy requirements. EKPC currently owns and operates 5 landfill gas to energy projects producing 15 MW of capacity and more than 91,000 MWh of energy in 2007. A sixth plant will be operational in 2009. EKPC purchases hydro generation from the Greenup Hydro Station (65MW), the Laurel Dam Hydro Station (70 MW) and the Cumberland River System of Dams (100 MW). Renewable energy is offered to EKPC's members via the EnviroWatts program. EKPC issued a Request for Proposals for Renewable Energy, and continues to talk to bidders about feasible project opportunities. EKPC is a founding member of the National Renewable Cooperative Organization, which is a group of cooperatives working together to develop cost effective renewable resources across the nation. EKPC has partnered with the University of Kentucky and farmers in the Maysville area to develop a pilot program to evaluate growing switchgrass for use as a renewable, low-emission fuel in EKPC's power plants.

EKPC has also burned wood waste in its plants and will continue to search for feasible fuel alternatives. EKPC has conducted studies to assess the potential for wind power in Kentucky.

a. EKPC will need to evaluate and establish additional DSM programs to meet the long-term goals but near-term (1-3 years) impacts on energy consumption will be negligible above what is already included in EKPC's long-term plans as filed in its 2006 IRP. The same is true of the renewable resources. EKPC will need to continue to evaluate and implement the most cost effective resources, but the additional amount realized in the near term will be small.

b. DSM programs established in the next few years will start to show measurable impacts in the mid-term (4-7 years) with energy reductions in the 50,000 to 100,000 MWh range per year. The renewable resources could be replacing 50,000-100,000 MWh of fossil fueled generation as well.

c. DSM programs in the long-term (beyond 7 years) will have to be aggressive and cross all customer segments including commercial and industrial. These programs could potentially reduce projected energy requirements by 500,000 MWh per year within 10 years. EKPC will still need to find additional resources amounting to 1 million MWh per year or more to meet the 16% energy reduction goal by 2025. EKPC can fire up to 10% of the heat input into its Circulating Fluidized Bed ("CFB") units with alternative fuels. In the long term, EKPC could secure feasible alternative fuel supplies for its three (two units at Spurlock Station and one proposed unit at Smith Station) CFB units resulting in almost 250 MW of capacity that could be fired by biomass. Additionally, EKPC would seek to expand its landfill gas to energy fleet and develop additional forms of renewable resources.