



EAST KENTUCKY POWER COOPERATIVE

February 22, 2006

Ms. Elizabeth O'Donnell
Executive Director
Public Service Commission
211 Sower Boulevard
Frankfort, KY 40602

Re: PSC Case No. 2006-00033

Dear Ms. O'Donnell:

Please find enclosed for filing with the Commission in the above-referenced case an original and five copies of the responses of East Kentucky Power Cooperative, Inc., to the Commission Staff Data Requests in this case dated February 15, 2006.

Very truly yours,

Charles A. Lile
Senior Corporate Counsel

Enclosures

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COMMISSION**

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

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PUBLIC SERVICE
COMMISSION

In the Matter of:

APPLICATION OF EAST KENTUCKY)
POWER COOPERATIVE, INC. FOR AN)
ORDER DECLARING THE PENDLETON)
COUNTY LANDFILL GAS TO ENERGY)
PROJECT TO BE AN ORDINARY)
EXTENSION OF EXISTING SYSTEMS)
IN THE USUAL COURSE OF BUSINESS)

CASE NO. 2006-00033

COMMISSION STAFF'S FIRST DATA REQUEST
TO EAST KENTUCKY POWER COOPERATIVE, INC.

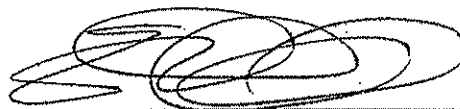
Pursuant to 807 KAR 5:001, Commission Staff requests that East Kentucky Power Cooperative, Inc. ("East Kentucky") file the original and 5 copies of the following information with the Commission on or before February 28, 2006, with a copy to all parties of record. When a number of sheets are required for an item, each sheet should be appropriately indexed, for example, Item 1(a), Sheet 2 of 6. Include with each response the name of the witness who will be responsible for responding to questions relating to the information provided. Careful attention should be given to copied material to ensure its legibility. When the requested information has been previously provided in this proceeding in the requested format, reference may be made to the specific location of that information in responding to this request.

1. In response to Item 5 of the Commission's December 27, 2005 Order in Case No. 2005-00495,¹ East Kentucky provided outage reports for its generating units,

¹ Case No. 2005-00495, An Examination of the Fuel Adjustment Clause of East Kentucky Power Cooperative, Inc. From May 1, 2005 Through October 31, 2005.

including its landfill generating units. For the 6 months ended October 31, 2005, Green Valley Landfill Unit One experienced over 1,325 hours of forced outages due to lack of fuel. Green Valley Landfill Units Two and Three also experienced prolonged outages due to lack of fuel. Provide a detailed description of East Kentucky's experience regarding pre-construction forecasts of fuel availability versus actual operational fuel availability at its existing landfill gas generation units. In the explanation, state whether East Kentucky has revised its pre-construction estimate of available fuel supply at the Green Valley Landfill or revised its estimate of the useful lifespan of the Green Valley site.

2. Refer to Exhibit 1–3.0 of East Kentucky's January 23, 2006 application. The cost of the Pendleton County Landfill Gas To Energy Project's electrical energy is projected to be less than \$35 per MWh, based on a 95 percent availability factor. Provide all calculations performed to arrive at the projected energy cost. Include with the calculation an explanation of any assumptions made in arriving at the projected energy cost.



Beth O'Donnell
Executive Director
Public Service Commission
P. O. Box 615
Frankfort, KY 40602

DATED: February 15, 2006

cc: Parties of Record

EAST KENTUCKY POWER COOPERATIVE, INC.

PSC CASE NO. 2006-00033

PUBLIC SERVICE COMMISSION DATA REQUEST DATED

FEBRUARY 15, 2006

REQUEST NO. 1

RESPONSIBLE PERSON: RALPH TYREE

Request 1.

In response to Item 5 of the Commission's December 27, 2005 Order in Case No. 2005-00495, East Kentucky provided outage reports for its generating units, including its landfill generating units. For the 6 months ended October 31, 2005, Green Valley Landfill Unit One experienced over 1,325 hours of forced outages due to lack of fuel. Green Valley Landfill Units Two and Three also experienced prolonged outages due to lack of fuel. Provide a detailed description of East Kentucky's experience regarding pre-construction forecasts of fuel availability versus actual operational fuel availability at its existing landfill gas generation plants. In the explanation, state whether East Kentucky has revised its pre-construction estimate of available fuel supply at the Green Valley landfill or revised its estimate of the useful lifespan of the Green Valley site.

Response 1.

East Kentucky utilizes SCS Engineers (“SCS”) as its consultant for providing long-term fuel forecasts for each potential landfill gas to electric generation project. SCS is an environmental engineering firm, with extensive experience in landfill gas design, collection system installation and landfill gas modeling. SCS is widely recognized nationwide for its expertise and has assisted in more than 2,000 landfill gas projects, many with gas to energy components.

SCS’s first task in landfill gas modeling is to meet with representatives of the landfill and obtain background information about the landfill and the gas collection system (if existing). This information primarily consists of the landfill’s opening year of operation, remaining landfill air space, annual waste receipts, estimated future waste receipts, as-built information of the collection system design (if existing) or collection system design for a new system, any proposed expansion information, compaction rates and annual rainfall. SCS then develops a gas collection curve for the landfill. The curve is derived from the standard modeling process used by SCS Engineers, taking into consideration the site-specific information.

EKPC’s confidence in SCS’s ability to forecast the amount of landfill gas produced at a specific site remains very high. The issue at the Green Valley site is one of

not how much gas is being produced, but how much gas is being collected by the landfill and delivered to the Green Valley landfill gas to electric generating plant.

Initially, gas delivery at this site was more than adequate to meet the full load requirements of the plant. However, shortly thereafter, gas quantities began to lessen. At first, dry weather conditions were suspected as the primary cause. Since then, it has been discovered that many of the collection wells are either partially or completely full of leachate, which reduces the efficiency of the collecting well and overall fuel delivery of the system.

By mid summer of 2005, Allied Waste (“Allied”), the landfill owner, recognized and agreed that changes were needed to the site’s gas collection system. Allied contracted with Shaw Emcon/OWT, Inc. to review the status of the landfill and provide an improved system design and construction oversight. In the fall of 2005, contractors were mobilized to add approximately eight (8) gas recovery wells and install two (2) leachate pumps. During this time, about half of the gas collection system was disconnected, which further reduced gas deliveries to the Green Valley generation plant. Even though viewed as a temporary setback compared to the overall life of the project, this had a large negative effect on the operation of the plant during calendar year 2005.

At present, Allied is completing the well-field modifications at the site as recommended by Shaw. In spite of the difficulties encountered in 2005, EKPC remains optimistic about the project’s future and is confident in meeting initial expectations regarding the 20 year levelized cost of electricity produced at the facility.

At the Bavarian site, the amount gas being collected is sufficient to operate the plant at full capacity, unless the collection system is in need of repairs. These repairs are generally made in short order, once the problem area has been properly diagnosed. As a result, our plant capacity factor through November 30, 2005 (December figures are not available yet) is 95.38% as compared to our estimate of 95%.

Operationally, the Laurel Ridge site is somewhere between the Bavarian and Green Valley sites. Many of the gas collecting wells at this site have also begun to fill with leachate. EKPC and Waste Management ("WM") performed a test in the summer of 2005, installing a temporary air compressor and pump, operating 24 hrs/day for about two weeks to remove the leachate from the wells. The gas field responded favorably and the plant was able to again operate at full capacity. Once the testing was discontinued, the leachate levels again rose inside the wells. WM responded by installing eight additional wells and plans to add approximately 20 leachate pumps to address this problem. WM estimates that these modifications will be completed by the end of February 2006. The plant capacity factor at this site, though November 2005, is 82% compared to our estimated 95% capacity factor. Similar to the Green Valley site, the difference in the capacity factor is the result of deficiencies with the landfill gas collection leachate removal system and not the amount of landfill gas being produced at the site.

As such, we have not revised our pre-construction estimate of the fuel supply at Green Valley or the estimate of the useful lifespan of the Green Valley site or any of our

other sites. Instead, we are trying to work more diligently with the individual landfills to address collection system operational issues as they arise.

EAST KENTUCKY POWER COOPERATIVE, INC.

PSC CASE NO. 2006-00033

PUBLIC SERVICE COMMISSION DATA REQUEST DATED

FEBRUARY 15, 2006

REQUEST NO. 2

RESPONSIBLE PERSON: RALPH TYREE

Request 2.

Refer to Exhibit 1-3.0 of East Kentucky's January 23, 2006 application. The cost of the Pendleton County Landfill Gas to Energy Project's electrical energy is projected to be less than \$35 per MWh, based upon a 95 percent availability factor. Provide calculations performed to arrive at the projected energy cost. Include with the calculation an explanation of any assumption made in arriving at the projected energy cost.

Response 2.

Enclosed herein, is the pro-forma (5-06-04) used to calculate the projected cost of electrical energy from the Pendleton County Landfill Gas to Electric Energy Project. As you will note, the initial plant was planned for commercial operation in 2006. Due to lengthy contract negotiations with Rumpke, this has since changed to the current schedule of beginning commercial operation in 2007, not 2006 as indicated on the spreadsheet.

Initially, the project plans called for the installation of four Caterpillar 3516LE engine/gensets each rated at 800 kW. As you will note, a similar 5th engine is planned for commercial operation in 2011. This will raise the hourly plant capacity from 3200 kW to 4000 kW, as shown on the spreadsheet. The fifth engine's cost, estimated at \$450,000, is not in the initial plant cost, but the interest, depreciation, fuel, operation and maintenance costs were added to the calculations beginning in 2011, as well as the estimated additional generation for that unit. A request for the approval of the 5th engine will be taken to the East Kentucky Board at the appropriate time.

The pro-forma calculations were also based upon a methane gas concentration of 500 Btu's per cubic feet. Based upon our experience, this typically averages between about 530 to 560 Btus per cubic feet. As clarification, the units will have the same MMBtu requirements, but may have less gas flow (cfm) requirements than used in the spreadsheet.

In addition, interest was computed at 6%. As you will note in Exhibit 1-7.0, EKPC is currently pursuing the option of interest free financing with Clean Renewable Energy Bonds. This option did not exist when the pro-forma calculations were made for the project.

