COMMONWEALTH OF KENTUCKY

BEFORE THE KENTUCKY STATE BOARD ON
ELECTRIC GENERATION AND TRANSMISSION SITING

In the Matter of:

THE APPLICATION OF KENTUCKY PIONEER ENERGY, LLC FOR A CONSTRUCTION CERTIFICATE PURSUANT TO KRS 278.704(1) TO CONSTRUCT A MERCHANT ELECTRIC GENERATING FACILITY	))))))	CASE NO. 2002-00312

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

Board Staff hereby requests East Kentucky Power Cooperative, Inc. (EKPC) to file with the Board the original and six copies of the following information, with a copy to all parties of record. If a requested document consists of 20 or more pages, EKPC may file two copies. The information requested herein is due no later than February 17, 2003. Each copy of the data requested should be placed in a bound volume with each item tabbed. 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 person who will be responsible for responding to questions relating to the information provided. Careful attention should be given to copied material to ensure that it is legible.

1. Provide the short-circuit study for the Kentucky Pioneer Energy, LLC (KPE) project. Do the circuit breakers and equipment at J.K. Smith and other substations in the vicinity have sufficient capability for the higher fault currents that will

exist with the addition of the new generation and transmission facilities? Discuss any improvements necessary to the facilities listed above to accommodate the proposed generation.

2. Provide the transient stability study for the KPE project. Will new and existing power plants remain in synchronism for normal and back-up clearing of faults on the transmission system? Discuss any improvements or operational changes necessary to maintain synchronization in the system.

3. The KPE application lists the plant output at 540 MW. EKPC studied the plant at 500 MW. What is the summer-rated output of the power plant?

4. To evaluate the impact of the KPE generator on the reliability of the transmission grid, CAI prepared power flow studies using the 2002 Series, NERC/MMWG Base Case Library for 2004 Summer.[1] The model already included J.K. Smith CT s 4 and 5. This case was labeled as Case 101. In Case 200 CAI added the KPE plant and associated transmission and dispatched 540 MW from KPE to EKPC loads by reducing Spurlock 2 and Dale 1 an equivalent 540 MW. In Case 210, we kept the original EKPC generation as dispatched in the base case and exported the 540 MW KPE generation. The preliminary power flow studies showed that some transmission lines (mostly 69 kV) were overloaded for normal and/or contingency conditions (refer to Appendix A attached hereto). Does EKPC have plans or mitigation strategies to deal with these overloads?

5. Will EKPC seek financial assistance from the Rural Utilities Service to construct the transmission facilities from the J.K. Smith Substation to Kentucky Utilities

[1] See Appendix A.

Company s Spencer Road Substation? If yes, will EKPC prepare an Environmental Report pursuant to 7 CFR 1794.22? If no, what are EKPC s plans for obtaining public input on the proposed routing?

Thomas M. Dorman
Executive Director
Public Service Commission
on behalf of The Kentucky State Board on
Electric Generation and Transmission Siting
Post Office Box 615
Frankfort, KY 40602

DATED: __February 11, 2003_____

cc: Parties of Record

APPENDIX A

APPENDIX TO BOARD STAFF S FIRST DATA REQUEST TO EAST KENTUCKY POWER COOPERATIVE, INC. IN CASE NO. 2002-00312 DATED February 11, 2003

Commonwealth Associates, Inc. Preliminary Power Flow Results
February 7, 2003

Assumptions

Base Case: 2002 Series, NERC/MMWG Base Case Library for 2004 Summer
Case 101: Base Case before KPE (includes JK Smith CT s 4 and 5)
Case 200: Includes KPE at 540 MW (reduced Spurlock 2 and Dale 1 by 540 MW)
Case 210: Includes KPE at 540 MW (all EKPC generation same as Case 101, exported KPE generation)

The following table lists the overloaded facilities under normal system conditions, (i.e., all transmission lines in service). There are no normal system overloads in Cases 101 or 200.

Overloaded Facilities Under Normal System Conditions

Location	Normal Rating (MVA)	Phase I Case 101 Max (%)	Phase II Case 200 Max (%)	Phase II Case 210 Max (%)
Morehead to Rodburn 69 kV	33	---	---	102
AO Smith to Spencer Road 69 Kv	48	---	---	101
Rodburn 138-69 kV Transformer	33	---	---	101

Note: Facility was loaded to less than 85 percent of the normal rating.

A comparison of the transmission system overloads, between Cases 101, 200, and 210, under single contingency conditions, is shown in the table below.

Overloaded Facilities Under Single Contingency Conditions

Location	Emergency Rating (MVA)	Phase I Case 101 Max (%)	Phase II Case 200 Max (%)	Phase II Case 210 Max (%)
Fawkes Tap to Lake Reba Tap 138 kV	163	95	102	115
Lake Reba to Lake Reba Tap 138 kV	252	---	102	113
Boonesboro North Tap to Dale 138 kV	171	97	97	108
AO Smith to Spencer Road 69 kV	72	140	140	140
Cave Run to Salt Lick 69 kV	56	129	128	129
Farmers to Morehead West 69 kV	56	106	114	121
Salt Lick to Spencer Road 69 kV	69	101	101	101
Farmers 138-69 kV Transformer	40	116	120	147
Berea to Lake Reba 69 kV	72	---	138	138
Clark County to Sylvania 69 kV	90	91	116	122
Fawkes to North Madison 69 kV	48	86	99	120
Fawkes to Richmond South 69 kV	22	---	122	114
Lake Reba to Richmond 69 kV	59	---	106	111
Parker Seal to Winchester 69 kV	79	---	97	104
Rockwell to Winchester 69 kV	63	---	---	104
Baker Lane Substation to Holloway Junction 69 kV	22	---	100	93
Fawkes 138-69 kV Transformer	171	98	103	109
Lake Reba 138-69 kV Transformer	171	97	102	107
Loudon Avenue 138-69 kV Transformer	48	92	86	105
Rodburn 138-69 kV Transformer	129	99	94	105
Spencer Road 138-69 kV Transformer	79	---	101	103

Note: Facility was loaded to less than 85 percent of the emergency rating.