COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN ASSESSMENT OF KENTUCKY'S ELECTRIC GENERATION, TRANSMISSION AND DISTRIBUTION NEEDS	))))	ADMINISTRATIVE CASE NO. 2005-00090

O R D E R

Kentucky enjoys some of the lowest electricity rates in the nation. In a recent report entitled, "Kentucky's Energy: Opportunities for Our Future," the Commonwealth Energy Policy Task Force, established by Governor Ernie Fletcher, underscores the significant benefits of Kentucky's low electricity rates. Residential consumers, particularly those with low or fixed incomes, depend on low electricity rates in order to afford other goods and services. Kentucky-based businesses and industries rely on low-cost electricity to maintain their regional, national, and international economic competitiveness. While these low electricity rates have heretofore boosted Kentucky's economic development efforts, low electricity rates for Kentucky in the future are by no means guaranteed.

Kentucky's historically low electricity rates have primarily resulted from a combination of decisions made decades ago by utilities to invest in coal-fired, base load generating units. In recent years, state and federal laws and regulations governing the electric power industry have undergone significant changes. Modern environmental laws and increasing fuel prices are driving up the traditional costs of generating

electricity. Interstate markets for new, increasingly efficient sources of electricity continue to evolve. However, as the widespread blackouts of August 14, 2003 demonstrated, no state is immune from vulnerabilities in the interstate power grid.

If Kentucky is to maintain its competitive economic advantage and the benefits of low cost electricity for consumers, then the Commonwealth must take a critical and comprehensive look at our electricity usage, available resources, and infrastructure. Moreover, to the extent that future electricity infrastructure investments are affected by state, regional, and national economic and regulatory factors, decision makers in the Commonwealth must remain fully informed of such developments. Only by planning today can Kentucky ensure reliable, affordable, and environmentally sustainable supplies of electricity for future generations.

Recognizing the critical role that electricity plays in Kentucky's economy, Governor Ernie Fletcher recently signed Executive Order 2005-121, which directs the Public Service Commission, in conjunction with the Commerce Cabinet and the Environmental and Public Protection Cabinet, to develop a Strategic Blueprint for the continued use and development of electric energy.[1] This Strategic Blueprint will be designed to promote future investment in electric infrastructure for the Commonwealth of Kentucky, to protect Kentucky's low-cost electric advantage, to maintain affordable rates for all Kentuckians, and to preserve Kentucky's commitment to environmental protection. Pursuant to this Executive Order, the Commission hereby establishes this administrative case to collect information, receive input from interested parties, and

[1] Executive Order 2005-121, signed February 7, 2005, is attached hereto as Appendix A.

issue a report on Kentucky's current and future electric generation, transmission, and distribution needs.

The Commission previously addressed similar issues in Administrative Case No. 387,[2] which was established in 2001 in part to prevent events such as those that occurred in California from occurring in Kentucky. There, the Commission reviewed (1) the decisions by some utilities to rely on purchased power, rather than investing in generating assets; (2) the appropriate reserve margins to meet existing and future electric demand; (3) the impact of spikes in natural gas prices on electric utility planning strategies; and (4) the adequacy of Kentucky's electric transmission facilities. The Commission issued a report in that case on December 20, 2001.

Subsequently, following the multi-state electric blackout of August 14, 2003, the Commission initiated an assessment of the vulnerability of Kentucky's electric transmission system to electrical disturbances. The findings of that assessment, soon to be released by the Commission, demonstrate that Kentucky is not immune from the impacts of regional electric power flows and utility actions in other states. While greater regionalization of power markets may present new risks, there may also be additional reliability and economic benefits, as well as economic benefits for Kentucky-based electricity and fuel producers. The risks and benefits of greater regionalization and participation in markets must be carefully weighed to ensure that the interests of the Commonwealth are protected.

The information previously compiled by the Commission in these and other proceedings will now be supplemented with updated and additional information obtained

[2] Administrative Case No. 387, A Review of the Adequacy of Kentucky's Generation Capacity and Transmission System.

from interested parties in this case. That body of information will serve as the foundation for the Commission's 2005 report in response to the Governor's Executive Order. As directed in the Governor's Order, the Commission will periodically update the 2005 report to reflect changes in infrastructure and future electricity requirements.

All of Kentucky's jurisdictional electric utilities will be made parties to this proceeding. Although the Commission has no jurisdiction over city-owned electric systems, the Tennessee Valley Authority ("TVA"), the TVA distribution cooperatives serving Kentucky, or independent power producers, representatives from those entities and other interested parties are invited and encouraged to intervene and participate. Each jurisdictional utility may subsequently be required to file testimony or comments on the issues set forth in this Order and the attached data request. To ensure that the record is as comprehensive as possible, non-jurisdictional utilities and all other stakeholders will also be provided an opportunity to file testimony or comments. In addition, the Commission intends to consult with the Environmental and Public Protection Cabinet and Commerce Cabinet, and to seek input from experts on relevant issues including, but not limited to, Kentucky's economic and population growth.

Attached to this Order as Appendix B is an initial data request to which all the jurisdictional electric utilities are to respond by March 31, 2005. The Commission will establish a procedural schedule at a later date.

IT IS THEREFORE ORDERED that:

1. An analysis of the projected needs for new electricity generation, transmission, and distribution going forward is hereby instituted. All jurisdictional

electric utilities shall be parties to this proceeding. Other interested parties, including city-owned electric systems, TVA, the TVA distribution cooperatives serving Kentucky, independent power producers, and consumer groups, may intervene.

2. All investor-owned jurisdictional electric utilities shall file responses to each item in the information request contained in Appendix B. The generating and transmission cooperatives shall file responses to Item Nos. 1—25 and 30—33 in Appendix B, while all distribution cooperatives shall file responses to Item Nos. 1, 2, 5, and 17—33 of Appendix B. The original and 10 copies of the responses shall be filed with the Commission by March 31, 2005. Other parties are encouraged to respond to Appendix B to the extent the information is available.

3. All requests for intervention shall be made within 30 days of the date of this Order. Any party that chooses not to intervene will be given the opportunity to file written comments or to offer comments at any future public hearing.

Done at Frankfort, Kentucky, this 10th day of March, 2005.

By the Commission

ATTEST:

Executive Director

APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN ADMINISTRATIVE CASE NO. 2005-00090
DATED MARCH 10, 2005

ERNIE FLETCHER
GOVERNOR

EXECUTIVE ORDER

2005 - 121

Secretary of State
Frankfort
Kentucky

February 7, 2005

RELATING TO THE PUBLIC SERVICE COMMISSION TO REPORT ON THE FUTURE NEEDS FOR ELECTRICITY IN THE COMMONWEALTH

WHEREAS, the Commonwealth Energy Policy Task Force issued a comprehensive energy strategy to guide energy policy decisions for the Commonwealth of Kentucky; and

WHEREAS, protection of Kentucky's air, land, and water resources is necessary to achieve environmental, economic development, and human health goals; and

WHEREAS, the Commonwealth of Kentucky enjoys some of the lowest electricity rates in the nation; and

WHEREAS, Kentucky's low-cost advantage in electricity is an important catalyst for economic growth and business development in Kentucky; and

WHEREAS, maintaining low electricity rates is critical to improving the lives of Kentucky's low-income families and protecting those with fixed incomes; and

WHEREAS, the laws and regulations governing the electric power industry have undergone significant changes at the state and federal levels over the past decade with implications for Kentucky; and

WHEREAS, the blackout of August 14, 2003, demonstrated vulnerabilities in regional electric power grids, which can affect the lives and livelihoods of all Kentuckians; and

WHEREAS, future investment in Kentucky's electricity infrastructure will be needed to ensure abundant and affordable supplies of electricity for all Kentuckians and to maintain Kentucky's low-cost advantage in electricity; and

WHEREAS, the Commonwealth Energy Policy Task Force's report, *Kentucky's Energy – Opportunities for our Future,* recommended, "The Commonwealth of Kentucky should develop a comprehensive statewide assessment of Kentucky's electricity infrastructure—generation, transmission and distribution—which includes reasonable projections of future electricity requirements."; and

WHEREAS, the Commonwealth Energy Policy Task Force's report, *Kentucky's Energy – Opportunities for our Future,* recommended, "The Commonwealth of Kentucky assessment should serve as a 'strategic blueprint' for policy-makers to determine future investment requirements in Kentucky's electricity generation, transmission, and distribution infrastructure."; and

ERNIE FLETCHER
GOVERNOR

EXECUTIVE ORDER

2005 - 121

Secretary of State
Frankfort
Kentucky

February 7, 2005

WHEREAS, the Commonwealth Energy Policy Task Force's report, *Kentucky's Energy – Opportunities for our Future,* recommended, "The Commonwealth of Kentucky should utilize the 'strategic blueprint' to develop policies to ensure sufficient investment in electricity infrastructure—generation, transmission and distribution—to sustain Kentucky's low cost electricity into the future."; and

WHEREAS, the Commonwealth Energy Policy Task Force's report, *Kentucky's Energy – Opportunities for our Future,* recommended, "The Commonwealth of Kentucky should identify impediments to investment in electricity generation, transmission and distribution and develop policies to promote investment while ensuring that appropriate environmental protections are maintained and local voices are heard."; and

WHEREAS, the Commonwealth Energy Policy Task Force's report, *Kentucky's Energy – Opportunities for our Future,* recommended, "The Commonwealth of Kentucky should design and implement policies that promote, but do not mandate, the use of renewable energy resources in Kentucky's electricity generation portfolio.":

NOW, THEREFORE, I, Ernie Fletcher, Governor of the Commonwealth of Kentucky, by virtue of the authority vested in me by the Kentucky Constitution and in particular Sections 69 and 81, and Chapter 278 of the Kentucky Revised Statutes, and as further invested in me by the laws of the Commonwealth, do hereby FIND, DECLARE, ORDER and DIRECT the following:

1. The Kentucky Public Service Commission shall develop, in conjunction with the Commerce Cabinet and the Environmental and Public Protection Cabinet, a Strategic Blueprint to promote future investment in electric infrastructure for the Commonwealth of Kentucky, to protect Kentucky's low-cost electric advantage, to maintain affordable electricity rates for all Kentuckians and to preserve Kentucky's commitment to environmental protection.
2. The Strategic Blueprint referenced herein shall analyze the projected needs for new electricity generation, transmission, and distribution in Kentucky going forward and include the following information: the status of electricity generation, transmission, and distribution in Kentucky; available sources of electricity supply for Kentucky ratepayers; projected demands for electricity in Kentucky through 2025; the existence of any barriers to investment in generation, transmission, and distribution infrastructure in Kentucky; the existence of any barriers to the utilization of technologies in generation, transmission and distribution of electricity that will minimize impacts to the environment; strategies directed at the utilization of technologies to improve the efficiency of electricity service in Kentucky; opportunities to promote the utilization of renewable energy resources in Kentucky's electricity portfolio; and such other information as the Public Service Commission determines may help to ensure future investment in electricity infrastructure to meet Kentucky's needs.

ERNIE FLETCHER
GOVERNOR

EXECUTIVE ORDER

2005 - 121

Secretary of State
Frankfort
Kentucky

February 7, 2005

3. The Public Service Commission shall issue a report to the Governor containing the Strategic Blueprint no later than six (6) months from the effective date of this Order and shall periodically update the report to reflect changes in infrastructure and future electricity requirements.

ERNIE FLETCHER, Governor
Commonwealth of Kentucky

TREY GRAYSON
Secretary of State

APPENDIX B

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN ADMINISTRATIVE CASE NO. 2005-00090 DATED MARCH 10, 2005

1. Provide a summary description of your utility's resource planning process. This should include a discussion of generation, transmission, demand-side, and distribution resource planning.

2. Are new technologies for improving reliability, efficiency and safety investigated and considered for implementation in your power generation, transmission and distribution system?

a. If yes, discuss the new technologies that were considered in the last 5 years and indicate which, if any, were implemented.

b. If no, explain in detail why new technologies are not considered.

3. Is your utility researching any renewable fuels for generating electricity?

a. If so, what fuels are being researched?

b. What obstacles need to be overcome to implement the new fuels?

4. Provide actual and weather-normalized annual native load energy sales for calendar years 2000 through 2004. Provide actual annual off-system energy sales for this same period disaggregated into full requirements sales, firm capacity sales, and non-firm or economy energy sales. Off-system sales should be further disaggregated to show separately those sales in which your utility acts as a reseller, or transporter, in a power transaction between two or more other parties.

5. Provide actual and weather-normalized annual coincident peak demands for calendar years 2000 through 2004 disaggregated into (a) native load demand, firm and non-firm; and (b) off-system demand, firm and non-firm.

6. Provide a summary of monthly power purchases for calendar years 2000 through 2004 disaggregated into firm capacity purchases required to serve native load, economy energy purchases, and purchases in which your utility acts as a reseller, or transporter, in a power transaction between two or more other parties. Include the average cost per megawatt-hour for each purchase category.

7. Provide the most current base case and high case demand and energy forecasts for the period 2005 through 2025, if available. If the current forecast does not extend to 2025, provide forecast data for the longest forecast period available. The information should be disaggregated into (a) native load, firm and non-firm demand; and (b) off-system load, both firm and non-firm demand.

8. Provide the target reserve margin currently used for planning purposes, stated as a percentage of demand, and a summary of your utility's most recent reserve margin study. If this target reserve margin has changed since 2002, provide the prior target reserve margin and explain the reasons for the change. If the target reserve margin is expected to be reevaluated in the next 3 years, explain the reasons for the reevaluation.

9. For the period 2005 through 2025, provide projected reserve margins stated in megawatts ("MW") and as a percentage of demand. Identify projected deficits and current plans for addressing these deficits.

10. Provide the following information for every generation station operated in Kentucky.

a. Name.

b. Location (including county).

c. Number of units.

d. Date in service for each unit.

e. Type of fuel for each unit.

f. Net rating (MW) for each unit.

g. Emission control equipment in service (list by type).

h. Date emission control equipment in service.

11. Provide a summary of any planned base load or peaking capacity additions to meet native load requirements in the years 2005 through 2025. Include capacity additions by the utility, and those by affiliates, if constructed in Kentucky or intended to meet load in Kentucky.

12. What is the estimated capital cost per KW and energy cost per kWh for new generation by technology?

13. If current plans for addressing projected capacity deficits include the addition of gas-fired generation, describe the extent to which fluctuations in natural gas prices have been incorporated into these plans. Explain how fluctuations in natural gas prices may have altered the results of previous plans.

14. Provide a summary of any permanent reductions in utilization of generation capacity due to Clean Air Act compliance from 2000 through 2004. Identify and describe any forecasted reductions during the 2005 through 2025 period.

15. Provide a summary of all forced outages and generating capacity retirements occurring during the years 2000 through 2004.

16. Provide a summary of the utility's plans for the retirement of existing generating capacity during the 2005 through 2025 period.

17. Provide a summary description of your utility's existing demand-side management ("DSM") programs, which includes:

a. Annual DSM budget,

b. Demand and energy impacts.

c. The currently scheduled termination dates for the programs.

18. Provide your utility's definition of "transmission" and "distribution."

19. Identify all utilities with which your utility is interconnected and the transmission capacity at all points of interconnection.

20. Provide the peak hourly MW transfers into and out of each interconnection for each month of the last 5 years. Provide the date and time of each peak.

21. Identify any areas on your utility's system where capacity constraints, bottlenecks, or other transmission problems have been experienced from January 1, 2003 until the present date. Identify all incidents of transmission problems by date and hour, with a brief narrative description of the nature of the problem. Provide the MW transfers for each of your utility's interconnections for these times.

22. Provide details of any planned transmission capacity additions for the 2005 through 2025 period. If the transmission capacity additions are for existing or expected constraints, bottlenecks, or other transmission problems, identify the problem the addition is intended to address.

23. Is your utility researching or considering methods of increasing transmission capacity of existing transmission routes? If yes, discuss those methods.

24. Provide copies of any reports prepared by your utility or for your utility that analyze the capabilities of the transmission system to meet present and future needs for import and export of capacity.

25. Provide the following transmission energy data forecast for the years 2005 through 2025.

a. Total energy received from all interconnections and generation sources connected to your transmission system.

b. Total energy delivered to all interconnections on your transmission system.

c. Peak demand for summer and winter seasons on your transmission system.

26. Provide the yearly System Average Interruption Duration Index ("SAIDI") and the System Average Interruption Frequency Index ("SAIFI"), excluding major outages, by feeder for each distribution substation on your system for the last 5 years.

27. Provide the yearly SAIDI and SAIFI, including major outages, by feeder for each distribution substation on your system for the last 5 years. Explain how you define major outages.

28. What is an acceptable value for SAIDI and SAIFI? Explain how it was derived.

29. Provide the yearly Customer Average Interruption Duration Index ("CAIDI") and the Customer Average Interruption Frequency Index ("CAIFI"), including

and excluding major outages, on your system for the last five years. What is an acceptable value for CAIDI and CAIFI? Explain how it was derived.

30. Identify and describe all reportable distribution outages from January 1, 2003 until the present date. Categorize the causes and provide the frequency of occurrence for each cause category.

31. Does your utility have a distribution and/or transmission reliability improvement program?

a. How does your utility measure reliability?

b. How is the program monitored?

c. What are the results of the system?

d. How are proposed improvements for reliability approved and implemented?

32. Provide a summary description of your utility's:

a. Right-of-way management program. Provide the budget for the last 5 years.

b. Vegetation management program. Provide the budget for the last 5 years.

c. Transmission and distribution inspection program. Provide the budget for the last 5 years.

33. Explain the criteria your utility uses to determine if pole or conductor replacement is necessary. Provide costs/budgets for transmission and distribution facilities replacement for the years 2000 through 2025.