807 KAR 5:058. Integrated resource planning by electric utilities.

RELATES TO: KRS Chapter 278

STATUTORY AUTHORITY: KRS 278.040(3), 278.230(3)

CERTIFICATION STATEMENT:

NECESSITY, FUNCTION, AND CONFORMITY: KRS 278.040(3) provides that the commission may adopt reasonable administrative regulations to implement the provisions of KRS Chapter 278. This administrative regulation prescribes rules for regular reporting and commission review of load forecasts and resource plans of the state's electric utilities to meet future demand with an adequate and reliable supply of electricity at the lowest possible cost for all customers within their service areas, and satisfy all related state and federal laws and regulations.

Section 1. General Provisions.

(1) This administrative regulation shall apply to electric utilities under commission jurisdiction except a distribution company with less than $10,000,000 annual revenue or a distribution cooperative organized under KRS Chapter 279.

(2) Each electric utility shall file triennially with the commission an integrated resource plan. The plan shall include historical and projected demand, resource, and financial data, and other operating performance and system information, and shall discuss the facts, assumptions, and conclusions, upon which the plan is based and the actions it proposes.

(3) Each electric utility shall file ten (10) bound copies and one (1) unbound, reproducible copy of its integrated resource plan with the commission.

Section 2. Filing Schedule.

(1) Each electric utility shall file its integrated resource plan according to a staggered schedule which provides for the filing of integrated resource plans one (1) every six (6) months beginning nine (9) months from the effective date of this administrative regulation.

(a) The integrated resource plans shall be filed at the specified times following the effective date of this administrative regulation:

1. Kentucky Utilities Company shall file nine (9) months from the effective date;

2. Kentucky Power Company shall file fifteen (15) months from the effective date;

3. East Kentucky Power Cooperative, Inc. shall file twenty-one (21) months from the effective date;

4. The Union Light, Heat & Power Company shall file twenty-seven (27) months from the effective date;

5. Big Rivers Electric Corporation shall file thirty-three (33) months from the effective date; and

6. Louisville Gas & Electric Company shall file thirty-nine (39) months from the effective date.

(b) The schedule shall provide at such time as all electric utilities have filed integrated resource plans, the sequence shall repeat.

(c) The schedule shall remain in effect until changed by the commission on its own motion or on motion of one (1) or more electric utilities for good cause shown. Good cause may include a change in a utility's financial or resource conditions.

(d) If any filing date falls on a weekend or holiday, the plan shall be submitted on the first business day following the scheduled filing date.

(2) Immediately upon filing of an integrated resource plan, each utility shall provide notice to intervenors in its last integrated resource plan review proceeding, that its plan has been filed and is available from the utility upon request.

(3) Upon receipt of a utility's integrated resource plan, the commission shall establish a review schedule which may include interrogatories, comments, informal conferences, and

staff reports.

Section 3. Waiver. A utility may file a motion requesting a waiver of specific provisions of this administrative regulation. Any request shall be made no later than ninety (90) days prior to the date established for filing the integrated resource plan. The commission shall rule on the request within thirty (30) days. The motion shall clearly identify the provision from which the utility seeks a waiver and provide justification for the requested relief which shall include an estimate of costs and benefits of compliance with the specific provision. Notice shall be given in the manner provided in Section 2(2) of this administrative regulation.

Section 4. Format.

(1) The integrated resource plan shall be clearly and concisely organized so that it is evident to the commission that the utility has complied with reporting requirements described in subsequent sections.

(2) Each plan filed shall identify the individuals responsible for its preparation, who shall be available to respond to inquiries during the commission's review of the plan.

Section 5. Plan Summary. The plan shall contain a summary which discusses the utility's projected load growth and the resources planned to meet that growth. The summary shall include at a minimum:

(1) Description of the utility, its customers, service territory, current facilities, and planning objectives;

(2) Description of models, methods, data, and key assumptions used to develop the results contained in the plan;

(3) Summary of forecasts of energy and peak demand, and key economic and demographic assumptions or projections underlying these forecasts;

(4) Summary of the utility's planned resource acquisitions including improvements in operating efficiency of existing facilities, demand-side programs, nonutility sources of generation, new power plants, transmission improvements, bulk power purchases and sales, and interconnections with other utilities;

(5) Steps to be taken during the next three (3) years to implement the plan;

(6) Discussion of key issues or uncertainties that could affect successful implementation of the plan.

Section 6. Significant Changes. All integrated resource plans, shall have a summary of significant changes since the plan most recently filed. This summary shall describe, in narrative and tabular form, changes in load forecasts, resource plans, assumptions, or methodologies from the previous plan. Where appropriate, the utility may also use graphic displays to illustrate changes.

Section 7. Load Forecasts. The plan shall include historical and forecasted information regarding loads.

(1) The information shall be provided for the total system and, where available, disaggregated by the following customer classes:

(a) Residential heating;

(b) Residential nonheating;

(c) Total residential (total of paragraphs (a) and (b) of this subsection);

(d) Commercial;

(e) Industrial;

(f) Sales for resale;

(g) Utility use and other. The utility shall also provide data at any greater level of disaggregation available.

(2) The utility shall provide the following historical information for the base year, which shall be the most recent calendar year for which actual energy sales and system peak demand data are available, and the four (4) years preceding the base year:

(a) Average annual number of customers by class as defined in subsection (1) of this section;

(b) Recorded and weather-normalized annual energy sales and generation for the system, and sales disaggregated by class as defined in subsection (1) of this section;

(c) Recorded and weather-normalized coincident peak demand in summer and winter for the system;

(d) Total energy sales and coincident peak demand to retail and wholesale customers for which the utility has firm, contractual commitments;

(e) Total energy sales and coincident peak demand to retail and wholesale customers for which service is provided under an interruptible or curtailable contract or tariff or under some other nonfirm basis;

(f) Annual energy losses for the system;

(g) Identification and description of existing demand-side programs and an estimate of their impact on utility sales and coincident peak demands including utility or government sponsored conservation and load management programs;

(h) Any other data or exhibits, such as load duration curves or average energy usage per customer, which illustrate historical changes in load or load characteristics.

(3) For each of the fifteen (15) years succeeding the base year, the utility shall provide a base load forecast it considers most likely to occur and, to the extent available, alternate forecasts representing lower and upper ranges of expected future growth of the load on its system. Forecasts shall not include load impacts of additional, future demand-side programs or customer generation included as part of planned resource acquisitions estimated separately and reported in Section 8(4) of this administrative regulation. Forecasts shall include the utility's estimates of existing and continuing demand-side programs as described in subsection (5) of this section.

(4) The following information shall be filed for each forecast:

(a) Annual energy sales and generation for the system and sales disaggregated by class as defined in subsection (1) of this section;

(b) Summer and winter coincident peak demand for the system;

(c) If available for the first two (2) years of the forecast, monthly forecasts of energy sales and generation for the system and disaggregated by class as defined in subsection (1) of this section and system peak demand;

(d) The impact of existing and continuing demand-side programs on both energy sales and system peak demands, including utility and government sponsored conservation and load management programs;

(e) Any other data or exhibits which illustrate projected changes in load or load characteristics.

(5) The additional following data shall be provided for the integrated system, when the utility is part of a multistate integrated utility system, and for the selling company, when the utility purchases fifty (50) percent of its energy from another company:

(a) For the base year and the four (4) years preceding the base year:

1. Recorded and weather normalized annual energy sales and generation;
2. Recorded and weather-normalized coincident peak demand in summer and winter.

(b) For each of the fifteen (15) years succeeding the base year:

1. Forecasted annual energy sales and generation;
2. Forecasted summer and winter coincident peak demand.

(6) A utility shall file all updates of load forecasts with the commission when they are adopted by the utility.

(7) The plan shall include a complete description and discussion of:

(a) All data sets used in producing the forecasts;

(b) Key assumptions and judgments used in producing forecasts and determining their reasonableness;

(c) The general methodological approach taken to load forecasting (for example, econometric, or structural) and the model design, model specification, and estimation of key model parameters (for example, price elasticities of demand or average energy usage per type of appliance);

(d) The utility's treatment and assessment of load forecast uncertainty;

(e) The extent to which the utility's load forecasting methods and models explicitly address and incorporate the following factors:

1. Changes in prices of electricity and prices of competing fuels;

2. Changes in population and economic conditions in the utility's service territory and general region;

3. Development and potential market penetration of new appliances, equipment, and technologies that use electricity or competing fuels; and

4. Continuation of existing company and government sponsored conservation and load management or other demand-side programs.

(f) Research and development efforts underway or planned to improve performance, efficiency, or capabilities of the utility's load forecasting methods; and

(g) Description of and schedule for efforts underway or planned to develop end-use load and market data for analyzing demand-side resource options including load research and market research studies, customer appliance saturation studies, and conservation and load management program pilot or demonstration projects. Technical discussions, descriptions, and supporting documentation shall be contained in a technical appendix.

Section 8. Resource Assessment and Acquisition Plan.

(1) The plan shall include the utility's resource assessment and acquisition plan for providing an adequate and reliable supply of electricity to meet forecasted electricity requirements at the lowest possible cost. The plan shall consider the potential impacts of selected, key uncertainties and shall include assessment of potentially cost-effective resource options available to the utility.

(2) The utility shall describe and discuss all options considered for inclusion in the plan including:

(a) Improvements to and more efficient utilization of existing utility generation, transmission, and distribution facilities;

(b) Conservation and load management or other demand-side programs not already in place;

(c) Expansion of generating facilities, including assessment of economic opportunities for coordination with other utilities in constructing and operating new units; and

(d) Assessment of nonutility generation, including generating capacity provided by cogeneration, technologies relying on renewable resources, and other nonutility sources.

(3) The following information regarding the utility's existing and planned resources shall be provided. A utility which operates as part of a multistate integrated system shall submit the following information for its operations within Kentucky and for the multistate utility system of which it is a part. A utility which purchases fifty (50) percent or more of its energy needs from another company shall submit the following information for its operations within Kentucky and for the company from which it purchases its energy needs.

(a) A map of existing and planned generating facilities, transmission facilities with a voltage rating of sixty-nine (69) kilovolts or greater, indicating their type and capacity, and locations and capacities of all interconnections with other utilities. The utility shall discuss any known, significant conditions which restrict transfer capabilities with other utilities.

(b) A list of all existing and planned electric generating facilities which the utility plans to have in service in the base year or during any of the fifteen (15) years of the forecast period, including for each facility:

1. Plant name;
2. Unit number(s);
3. Existing or proposed location;
4. Status (existing, planned, under construction, etc.);
5. Actual or projected commercial operation date;
6. Type of facility;
7. Net dependable capability, summer and winter;
8. Entitlement if jointly owned or unit purchase;
9. Primary and secondary fuel types, by unit;
10. Fuel storage capacity;
11. Scheduled upgrades, deratings, and retirement dates;
12. Actual and projected cost and operating information for the base year (for existing units) or first full year of operations (for new units) and the basis for projecting the information to each of the fifteen (15) forecast years (for example, cost escalation rates). All cost data shall be expressed in nominal and real base year dollars.
    a. Capacity and availability factors;
    b. Anticipated annual average heat rate;
    c. Costs of fuel(s) per millions of British thermal units (MMBtu);
    d. Estimate of capital costs for planned units (total and per kilowatt of rated capacity);
    e. Variable and fixed operating and maintenance costs;
    f. Capital and operating and maintenance cost escalation factors;
    g. Projected average variable and total electricity production costs (in cents per kilowatt-hour).

(c) Description of purchases, sales, or exchanges of electricity during the base year or which the utility expects to enter during any of the fifteen (15) forecast years of the plan.

(d) Description of existing and projected amounts of electric energy and generating capacity from cogeneration, self-generation, technologies relying on renewable resources, and other nonutility sources available for purchase by the utility during the base year or during any of the fifteen (15) forecast years of the plan.

(e) For each existing and new conservation and load management or other demand-side programs included in the plan:

1. Targeted classes and end-uses;
2. Expected duration of the program;
3. Projected energy changes by season, and summer and winter peak demand changes;
4. Projected cost, including any incentive payments and program administrative costs; and
5. Projected cost savings, including savings in utility's generation, transmission and distribution costs.

(4) The utility shall describe and discuss its resource assessment and acquisition plan which shall consist of resource options which produce adequate and reliable means to meet annual and seasonal peak demands and total energy requirements identified in the

base load forecast at the lowest possible cost. The utility shall provide the following information for the base year and for each year covered by the forecast:

(a) On total resource capacity available at the winter and summer peak:

1. Forecast peak load;
2. Capacity from existing resources before consideration of retirements;
3. Capacity from planned utility-owned generating plant capacity additions;
4. Capacity available from firm purchases from other utilities;
5. Capacity available from firm purchases from nonutility sources of generation;
6. Reductions or increases in peak demand from new conservation and load management or other demand-side programs;
7. Committed capacity sales to wholesale customers coincident with peak;
8. Planned retirements;
9. Reserve requirements;
10. Capacity excess or deficit;
11. Capacity or reserve margin.

(b) On planned annual generation:

1. Total forecast firm energy requirements;
2. Energy from existing and planned utility generating resources disaggregated by primary fuel type;
3. Energy from firm purchases from other utilities;
4. Energy from firm purchases from nonutility sources of generation; and
5. Reductions or increases in energy from new conservation and load management or other demand-side programs;

(c) For each of the fifteen (15) years covered by the plan, the utility shall provide estimates of total energy input in primary fuels by fuel type and total generation by primary fuel type required to meet load. Primary fuels shall be organized by standard categories (coal, gas, etc.) and quantified on the basis of physical units (for example, barrels or tons) as well as in MMBtu.

(5) The resource assessment and acquisition plan shall include a description and discussion of:

(a) General methodological approach, models, data sets, and information used by the company;

(b) Key assumption and judgments used in the assessment and how uncertainties in those assumptions and judgments were incorporated into analyses;

(c) Criteria (for example, present value of revenue requirements, capital requirements, environmental impacts, flexibility, diversity) used to screen each resource alternative including demand-side programs, and criteria used to select the final mix of resources presented in the acquisition plan;

(d) Criteria used in determining the appropriate level of reliability and the required reserve or capacity margin, and discussion of how these determinations have influenced selection of options;

(e) Existing and projected research efforts and programs which are directed at developing data for future assessments and refinements of analyses;

(f) Actions to be undertaken during the fifteen (15) years covered by the plan to meet the requirements of the Clean Air Act amendments of 1990, and how these actions affect the utility's resource assessment; and

(g) Consideration given by the utility to market forces and competition in the development of the plan. Technical discussion, descriptions and supporting documentation shall be contained in a technical appendix.

Section 9. Financial Information. The integrated resource plan shall, at a minimum, include and discuss the following financial information:

(1) Present (base year) value of revenue requirements stated in dollar terms;
(2) Discount rate used in present value calculations;
(3) Nominal and real revenue requirements by year; and
(4) Average system rates (revenues per kilowatt hour) by year.

Section 10. Notice. Each utility which files an integrated resource plan shall publish, in a form prescribed by the commission, notice of its filing in a newspaper of general circulation in the utility's service area. The notice shall be published not more than thirty (30) days after the filing date of the report.

Section 11. Procedures for Review of the Integrated Resource Plan.

(1) Upon receipt of a utility's integrated resource plan, the commission shall develop a procedural schedule which allows for submission of written interrogatories to the utility by staff and intervenors, written comments by staff and intervenors, and responses to interrogatories and comments by the utility.

(2) The commission may convene conferences to discuss the filed plan and all other matters relative to review of the plan.

(3) Based upon its review of a utility's plan and all related information, the commission staff shall issue a report summarizing its review and offering suggestions and recommendations to the utility for subsequent filings.

(4) A utility shall respond to the staff's comments and recommendations in its next integrated resource plan filing.

(17 Ky.R. 1289; 1720; eff. 12-18-1990; 21 Ky.R. 2799; 22 Ky.R. 287; eff. 7-21-1995; Crt eff. 3-27-2019; Crt eff. 3-23-2026.)