

**THE
PUBLIC UTILITIES COMMISSION
OF THE
STATE OF COLORADO**

ELECTRIC LEAST-COST RESOURCE PLANNING RULES

4 Code of Colorado Regulations 723-3¹, Rules 3600 Through 3615

3006. Reports. Each utility shall provide reports to the Commission as follows:²

- (e) Reports relating to least-cost resource planning as required by rules 3605, 3610(e), and 3614.

LEAST-COST RESOURCE PLANNING

3600. Special Definitions. The following definitions apply only to rules 3600 - 3615:

- (a) "Availability factor" means the ratio of the time a generating facility is available to produce energy at its rated capacity, to the total amount of time in the period being measured.
- (b) "Annual capacity factor" means the ratio of the net energy produced by a generating facility in a year, to the amount of energy that could have been produced if the facility operated continuously at full capacity year-round.
- (c) "End-use" means the light, heat, cooling, refrigeration, motor drive, or other useful work produced by equipment that uses electricity or its substitutes.
- (d) "Energy conservation" means the decrease in electricity requirements of specific customers during any selected time period, with end-use services of such customers held constant.
- (e) "Energy efficiency" means increases in energy conservation, reduced demand or improved load factors resulting from hardware, equipment, devices, or practices that are installed or instituted at a customer facility. Energy efficiency measures can include fuel switching.
- (f) "Heat Rate" means the ratio of energy inputs used by a generating facility expressed in BTUs (British Thermal Units), to the energy output of that facility expressed in kilowatt-hours.

¹ These rules are intended to eventually become a part of the electric rules as proposed in the Commission's Notice of Proposed Rulemaking in Docket No. 02R-279E. See Decision No. C02-575. When the proposed electric rules are finalized, these Least Cost Planning rules will be incorporated therein.

² Material including 3006(a)-(d) is omitted, as it was published in the Commission's Notice of Proposed Rulemaking in Docket No. 02R-279E. See Decision No. C02-575.

- (g) "Least-cost resource plan" or "plan" means a utility plan consisting of the elements set forth in rule 3604.
- (h) "Net present value of revenue requirements" means the current worth of the expected stream of future revenue requirements associated with a particular resource portfolio, expressed in dollars in the year the plan is filed. The net present value of revenue requirements for a particular resource portfolio is obtained by applying a discount rate to the expected stream of future revenue requirements.
- (i) "Planning period" means the future period for which a utility develops its plan, and the period, over which net present value of revenue requirements for resources are calculated. For purposes of this rule, the planning period is twenty to forty years and begins from the date the utility files its plan with the Commission.
- (j) "Renewable resource" means any facility, technology, measure, plan or action utilizing a renewable "fuel" source such as wind; solar; biomass; geothermal; municipal, animal, waste-tire or other waste; or hydroelectric generation of twenty megawatts or less.
- (k) "Resource acquisition period" means the first six to ten years of the planning period, in which the utility acquires specific resources to meet projected electric system demand. The resource acquisition period begins from the date the utility files its plan with the Commission.
- (l) "Resources" means supply-side resources, energy efficiency, or renewable resources used to meet electric system requirements.
- (m) "Supply-side resource" means a resource that can provide electrical energy or capacity to the utility. Supply-side resources include utility-owned generating facilities, and energy or capacity purchased from other utilities and non-utilities.
- (n) "Typical day load pattern" means the electric demand placed on the utility's system for each hour of the day.

3601. Overview. The purpose of these rules is to establish a process to determine the need for additional electric resources by Commission jurisdictional electric utilities, pursuant to the power to regulate public utilities delegated to the Commission by Article XXV of the Colorado Constitution and by §§ 40-2-123, 40-3-102, 40-3-111, and 40-4-101, C.R.S. It is the Commission's policy that a competitive acquisition process will normally be used to acquire new utility resources. This process is intended to result in least-cost resource portfolios, taking into consideration projected system needs, reliability of proposed resources, expected generation loading characteristics, and various risk factors. The rules are intended to be neutral with respect to fuel type or resource technology.

3602. Applicability. This rule shall apply to all jurisdictional electric utilities in the state of Colorado that are subject to the Commission's regulatory authority. Cooperative electric associations engaged in the distribution of electricity (*i.e.* rural electric associations) are exempt from these rules. Cooperative electric generation and transmission associations are subject only to reporting requirements as specified in rule 3605.

3603. Least-Cost Resource Plan Filing Requirements. Jurisdictional electric utilities, as described in rule 3602, shall file a least-cost resource plan ("plan") pursuant to these rules on or before March 31, 2003, and every four years thereafter. In addition to the required four-year cycle, a utility may file an interim plan, pursuant to rule 3604. If a utility chooses to file an interim plan more frequently than the required four-year cycle, its application must state the reasons and changed circumstances that justify the interim filing. Each utility shall file an original and fifteen copies of the plan with the Commission.

3604. Contents of the Least-Cost Resource Plan. The utility shall file a plan with the Commission that contains the information specified below. When required by the Commission, the utility shall provide work-papers to support the information contained in the plan. The plan shall include:

- (a) A statement of the utility-specified resource acquisition period, and planning period. The utility shall consistently use the specified resource acquisition and planning periods throughout the entire least-cost plan and resource acquisition process. The utility shall include a detailed explanation as to why the specific period lengths were chosen in light of the assessment of base-load, intermediate and peaking needs of the utility system;
- (b) An annual electric demand and energy forecast developed pursuant to rule 3606;
- (c) An evaluation of existing resources developed pursuant to rule 3607;
- (d) An assessment of planning reserve margins and contingency plans for the acquisition of additional resources developed pursuant to rule 3608;
- (e) An assessment of need for additional resources developed pursuant to rule 3609;
- (f) A description of the utility's plan for acquiring these resources pursuant to rule 3610;
- (g) The proposed RFP(s) the utility intends to use to solicit bids for the resources to be acquired through a competitive acquisition process, pursuant to rule 3612; and
- (h) An explanation stating whether current rate designs for each major customer class are consistent with the contents of its plan. The utility shall also explain whether possible future changes in rate design will facilitate its proposed resource planning and resource acquisition goals.

3605. Cooperative Electric Generation and Transmission Association Reporting Requirements. Pursuant to the schedule established in rule 3603, each cooperative electric generation and transmission association shall report its forecasts, existing resource assessment, planning reserves, and needs assessment, consistent with the requirements specified in rules 3606, 3607, 3608(a) and 3609.

3606. Electric Energy and Demand Forecasts.

- (a) Forecast Requirements. The utility shall prepare the following energy and demand forecasts for each year within the planning period:
 - (I) Annual sales of energy and coincident summer and winter peak demand in total and disaggregated among Commission jurisdictional sales, FERC jurisdictional sales, and sales subject to the jurisdiction of other states;
 - (II) Annual sales of energy and coincident summer and winter peak demand on a system-wide basis for each major customer class;
 - (III) Annual energy and capacity sales to other utilities; and capacity sales to other utilities at the time of coincident summer and winter peak demand;
 - (IV) Annual intra-utility energy and capacity use at the time of coincident summer and winter peak demand;
 - (V) Annual system losses and the allocation of such losses to the transmission and distribution components of the system. Coincident summer and winter peak system losses and the allocation of such losses to the transmission and distribution components of the systems; and
 - (VI) Typical day load patterns on a system-wide basis for each major customer class. This information shall be provided for peak-day, average-day, and representative off-peak days for each calendar month.
- (b) Range of forecasts. The utility shall develop and justify a range of forecasts of coincident summer and winter peak demand and energy sales that its system may reasonably be required to serve during the planning period. The range shall include base case, high, and low forecast scenarios of coincident summer and winter peak demand and energy sales, based on alternative assumptions about the determinants of coincident summer and winter peak demand and energy sales during the planning period.
- (c) Required Detail.
 - (I) In preparing forecasts, the utility shall develop forecasts of energy sales and coincident summer and winter peak demand for each major customer class. The utility shall use end-use, econometric or other supportable methodology as the basis for these forecasts. If the utility determines not to use end-use analysis, it shall explain the reason for its determination as well as the rationale for its chosen alternative methodology.
 - (II) The utility shall explain the effect on its energy and coincident peak demand forecast of all existing energy efficiency and energy conservation programs for each major customer class, as well as any such measures that have been approved by the Commission but are not included in the forecasts.

- (III) The utility shall maintain, as confidential, information reflecting historical and forecasted demand and energy use for individual customers in those cases when an individual customer is responsible for the majority of the demand and energy used by a particular rate class. However, when necessary in the least-cost resource plan proceedings, such information may be disclosed to parties who intervene in accordance with the terms of non-disclosure agreements approved by the Commission and executed by the parties seeking disclosure.
- (d) **Historical Data.** The utility shall compare the annual forecast of coincident summer and winter peak demand and energy sales made by the utility to the actual coincident peak demand and energy sales experienced by the utility for the five years preceding the year in which the plan under consideration is filed. In addition, the utility shall compare the annual forecasts in its most recently filed resource plan to the annual forecasts in the current resource plan.
- (e) **Description and Justification.** The utility shall fully explain, justify, and document the data, assumptions, methodologies, models, determinants, and any other inputs upon which it relied to develop its coincident peak demand and energy sales forecasts pursuant to this rule, as well as the forecasts themselves.
- (f) **Format and Graphical Presentation of Data.** The utility shall include graphical presentation of the data to make the data more understandable to the public, and shall make the data available to requesting parties in such electronic formats as the Commission shall reasonably require.

3607. Evaluation of Existing Generation Resources.

- (a) **Existing Generation Resource Assessment.** The utility shall describe its existing generation resources, all utility-owned generating facilities for which the utility has obtained a CPCN from the Commission pursuant to C.R.S. § 40-5-101 at the time the plan is filed, and existing or future purchases from other utilities or non-utilities pursuant to agreements effective at the time the plan is filed. The description shall include when applicable:
- (I) Name(s) and location(s) of utility-owned generation facilities;
- (II) Rated capacity and net dependable capacity of utility-owned generation facilities;
- (III) Fuel type, heat rates, annual capacity factors and availability factors projected for utility-owned generation facilities over the planning period;
- (IV) Estimated in-service dates for utility-owned generation facilities for which a CPCN has been granted but which are not in-service at the time the plan under consideration is filed;
- (V) Estimated remaining useful lives of existing generation facilities without significant new investment or maintenance expense;

- (VI) The amount of capacity and/or energy purchased from utilities and non-utilities, the duration of such purchase contracts and a description of any contract provisions that allow for modification of the amount of capacity and energy purchased pursuant to such contracts; and
 - (VII) The amount of capacity and energy provided pursuant to wheeling or coordination agreements, the duration of such wheeling or coordination agreements, and a description of any contract provisions that allow for modification of the amount of capacity and energy provided pursuant to such wheeling or coordination agreements.
- (b) Utilities required to comply with these rules shall coordinate their plan filings such that the amount of electricity purchases and sales between utilities during the planning period is reflected uniformly in their respective plans. Disputes regarding the amount, timing, price, or other terms and conditions of such purchases and sales shall be fully explained in each utility's plan. If a utility files an interim plan as specified in rule 3603, the utility is not required to coordinate that filing with other utilities.
- (c) Existing Transmission Capabilities and Future Needs.
- (I) The utility shall report its existing transmission capabilities, and future needs during the planning period, for facilities of 115 kilovolts and above, including associated substations and terminal facilities. The utility shall specifically identify the location and extent of transfer capability limitations on its transmission network that may affect the future siting of resources. With respect to future needs, the utility shall explain the need for facilities based upon future load projections (including reserves) and proposed generation additions during the resource acquisition period. To the extent reasonably available, the utility shall include a description of the length and location of any additional facilities needed, their estimated costs, terminal points, voltage and megawatt rating, alternatives considered or under consideration, and other relevant information.
 - (II) In order to equitably compare possible resource alternatives, the utility shall consider all transmission costs required by, or imposed on the system by, a particular resource as part of the bid evaluation criteria.

3608. Planning Reserve Margins.

- (a) The utility shall provide a description of, and justification for, the means by which it assesses the desired level of reliability on its system throughout the planning period (e.g., probabilistic or deterministic reliability indices).
- (b) The utility shall develop and justify planning reserve margins for each year of the resource acquisition period for the base case, high, and low forecast scenarios established under rule 3606, to include risks associated with: 1) the development of generation, 2) losses of generation capacity, 3) purchase of power, 4) losses of transmission capability, 5) resource costs

likely changing in the future due to environmental regulatory requirements, and 6) other risks. The utility shall develop planning reserve margins for its system for each year of the planning period outside of the resource acquisition period for the base case forecast scenario. The utility shall also quantify the recommended or required reliability performance criteria for reserve groups and power pools to which the utility is a party.

- (c) Since actual circumstances may differ from the most likely estimate of future resource needs, the utility shall develop contingency plans for each year of the resource acquisition period. The utility shall describe and justify its contingency plans for the acquisition of additional resources if actual circumstances deviate from the most likely estimate of future resource needs developed pursuant to rule 3609. The provisions of rule 3613(d), Effect of the Commission Decision, shall not apply to the contingency plans unless explicitly ordered by the Commission.

3609. Assessment of Need for Additional Resources. By comparing the electric energy and demand forecasts developed pursuant to rule 3606 with the existing level of resources developed pursuant to rule 3607, and planning reserve margins developed pursuant to rule 3608, the utility shall assess the need to acquire additional resources during the resource acquisition period.

3610. Utility Plan for Meeting the Resource Need.

- (a) The utility shall describe its least-cost resource plan for acquiring the resources to meet the need identified in rule 3609. The utility shall specify the portion of the resource need that it intends to meet as a part of a stand-alone voluntary tariff service, where all costs are separate from standard tariff services, if any. The utility shall specify the portion of the resource need that it intends to meet through a competitive acquisition process and the portion that it intends to meet through an alternative method of resource acquisition.
- (b) The utility shall meet the resource need identified in the plan through a competitive acquisition process, unless the Commission approves an alternative method of resource acquisition. If the utility proposes that a portion of the resource need be met through an alternative method of resource acquisition, the utility shall identify the specific resource(s) that it wishes to acquire, and the reason the specific resource(s) should not be acquired through a competitive acquisition process. In addition, the utility shall provide a cost-benefit analysis to demonstrate the reason why the public interest would be served by acquiring the specific resource(s) through an alternative method of resource acquisition. The least-cost resource plan shall describe and estimate the cost of all new transmission facilities associated with any specific resources proposed for acquisition other than through a competitive acquisition process. The utility shall also explain and justify how the alternative method of resource acquisition complies with the requirements of the Public Utility Regulatory Policy Act and Commission rules implementing such act. The utility may not acquire more than the lesser of 250 megawatts, or 10% of the highest base case forecast peak requirement identified for the

resource acquisition period, through such alternative method of resource acquisition.

- (c) The utility shall have the flexibility to propose multiple acquisitions at various times over the resource acquisition period. However, the limits specified in paragraph (b) of this rule shall apply to the total resources acquired through an alternative method during an entire four-year least cost planning cycle.
- (d) Each utility shall establish, and include as a part of its filing, a written bidding policy to ensure that bids are solicited and evaluated in a fair and reasonable manner. The utility shall specify such competitive acquisition procedures that it intends to use to obtain resources under the utility's plan.
- (e) If the utility intends to accept proposals from the utility or from an affiliate of the utility, the utility shall include as part of its filing a written separation policy and the naming of an independent auditor whom the utility proposes to hire to review and report to the Commission on the fairness of the competitive acquisition process. The independent auditor shall have at least five years' experience conducting and/or reviewing the conduct of competitive electric utility resource acquisition, including computerized portfolio costing analysis. The independent auditor shall be unaffiliated with the utility; and shall not, directly or indirectly, have benefited from employment or contracts with the utility in the preceding five years, except as an independent auditor under these rules. The independent auditor shall not participate in, or advise the utility with respect to, any decisions in the bid-solicitation or bid-evaluation process. The independent auditor shall conduct an audit of the utility's bid solicitation and evaluation process to determine whether it was conducted fairly. For purposes of such audit, the utility shall provide the independent auditor immediate and continuing access to all documents and data reviewed, used or produced by the utility in its bid solicitation and evaluation process. The utility shall make all its personnel, agents and contractors involved in the bid solicitation and evaluation available for interview by the auditor. The utility shall conduct any additional modeling requested by the independent auditor to test the assumptions and results of the bid evaluation analyses. Within sixty days of the utility's selection of final resources, the independent auditor shall file a report with the Commission containing the auditor's views on whether the utility conducted a fair bid solicitation and bid evaluation process, with any deficiencies specifically reported. After the filing of the independent auditor's report, the utility, other bidders in the resource acquisition process and other interested parties shall be given the opportunity to review and comment on the independent auditor's report.
- (f) In selecting its final resource plan, the utility shall minimize the net present value of revenue requirement. The utility shall consider renewable resources; resources that produce minimal emissions or minimal environmental impact; energy-efficient technologies; and resources that provide beneficial contributions to Colorado's energy security, economic prosperity, environmental protection, and insulation from fuel price increases; as a part of its bid solicitation

and evaluation process. Further, the utility shall grant a preference to such resources where cost and reliability considerations are equal.

3611. Exemptions from competitive acquisition. The following resources need not be acquired through a competitive acquisition process and need not be included in an approved Least-Cost Plan prior to acquisition:

- (a) Emergency maintenance or repairs made to utility-owned generation facilities;
- (b) Capacity and/or energy from newly-constructed, utility-owned, supply-side resources with a nameplate rating of not more than thirty megawatts;
- (c) Capacity and/or energy from the generation facilities of other utilities or from non-utility generators pursuant to agreements for not more than a two year term (including renewal terms) or for not more than thirty megawatts of capacity;
- (d) Improvements or modifications to existing utility generation facilities that change the production capability of the generation facility site in question, by not more than thirty megawatts, based on the utility's share of the total generation facility site output, and that have an estimated cost of not more than \$30 million;
- (e) Interruptible service provided to the utility's electric customers;
- (f) Modifications to, or amendments of, existing power purchase agreements, which do not extend the agreement more than four years, that add not more than thirty MW of capacity to the utility's system, and that are cost effective in comparison to other supply-side alternatives available to the utility; and
- (g) Utility investments in emission control equipment at existing generation plants.

3612. Request(s) For Proposals.

- (a) Purpose of the Request(s) for Proposals. The proposed RFP(s) filed by the utility shall be designed to solicit competitive bids to acquire additional resources pursuant to rule 3610.
- (b) Contents of the Request(s) for Proposals. The proposed RFP(s) shall include the bid evaluation criteria, including the weight to be assigned to each criterion the utility plans to use in ranking the bids received. The utility shall also include in its proposed RFP(s): 1) base-load, intermediate and/or peaking needs, and preferred fuel type; 2) reasonable estimates of transmission costs for resources located in different areas; 3) the extent and degree to which resources must be dispatchable, including the requirement, if any, that resources be able to operate under automatic dispatch control; 4) the utility's proposed standard contract(s) for the acquisition of resources; 5) proposed contract term lengths; 6) discount rate and 7) general planning assumptions, and any other information necessary to implement a fair and reasonable bidding program.

3613. Commission Review and Approval of Least-Cost Resource Plans.

- (a) Review on the Merits. The utility's plan, as developed pursuant to rule 3604 will be filed in the form of an application administered pursuant to the Commission's Rules of Practice and Procedure. The Commission may hold a hearing for the purpose of reviewing and rendering a decision regarding the contents of the utility's plan upon its filing.
- (b) Basis for Commission Decision. Based upon the evidence of record, the Commission shall issue a written decision approving, disapproving, or ordering modifications, in whole or in part to the utility's plan. If the Commission declines to approve a plan, either in whole or in part, the utility shall make changes to the plan in response to the Commission's decision. Within 60 days of the Commission's rejection of a plan, the utility shall file an amended plan with the Commission, and provide copies to all parties who participated in the application docket concerning the utility's plan. All such parties may participate in any hearings regarding the amended plan.
- (c) Contents of the Commission Decision. The Commission decision approving or denying the plan shall address the contents of the utility's plan filed in accordance with rule 3604. If the record contains sufficient evidence, the Commission shall specifically approve or modify: (1) the utility's assessment of need for additional resources in the resource acquisition period, (2) the utility's plans for acquiring additional resources through the competitive acquisition process, or through an alternative acquisition process, and (3) components of the utility's proposed RFP, such as the proposed evaluation criteria.
- (d) Effect of the Commission Decision. A Commission decision specifically approving the components of a utility's plan creates a presumption that utility actions consistent with that approval are prudent. Because the Commission will not approve a utility's selection of specific resources, the Commission's approval of a plan creates no presumptions regarding those resources.
 - (I) In a proceeding concerning the utility's request to recover the investments or expenses associated with new resources:
 - (A) The utility must present *prima facie* evidence that its actions were consistent with Commission decisions specifically approving or modifying components of the plan.

- (B) To support a Commission decision to disallow investments or expenses associated with new resources on the grounds that the utility's actions were not consistent with a Commission approved plan, an intervenor must present evidence to overcome the utility's *prima facie* evidence that its actions were consistent with Commission decisions approving or modifying components of the plan. Alternatively, an intervenor may present evidence that, due to changed circumstance timely known to the utility or that should have been known to a prudent person, the utility's actions were not proper.

- (II) In a proceeding concerning the utility's request for a certificate of public convenience and necessity to meet customer need specifically approved by the Commission in its decision on the least-cost resource plan, the Commission shall take administrative notice of its decision on the plan. Any party challenging the Commission's decision regarding need for additional resources has the burden of proving that due to a change in circumstances the Commission's decision on need is no longer valid.

3614. Reports

- (a) Annual Progress Reports. The utility shall file with the Commission, and provide copies to all parties to the most recent least-cost planning docket, annual progress reports after submission of its plan application. The annual progress reports will inform the Commission of the utility's efforts under the approved plan. Annual progress reports shall also contain:
 - (I) An updated annual electric demand and energy forecast developed pursuant to rule 3606;
 - (II) An updated evaluation of existing resources developed pursuant to rule 3607;
 - (III) An updated evaluation of planning reserve margins and contingency plans developed pursuant to rule 3608;
 - (IV) An updated assessment of need for additional resources developed pursuant to rule 3609;
 - (V) An updated report of the utility's plan to meet the resource need developed pursuant to rule 3610 and the resources the utility has acquired to date in implementation of the plan; and

- (b) Reports of the competitive acquisition process. The utility shall provide reports to the Commission concerning the progress and results of the competitive acquisition of resources. The following reports shall be filed:

- (I) Within 30 days after bids are received in response to the RFP(s), the utility shall report: (1) the number of bids received, (2) the quantity of MW offered by bidders, (3) a breakdown of the number of bids and MW received by resource type, and (4) a description of the prices of the resources offered.
- (II) Within 45 days after the utility has selected the winning bidders, the utility shall report: (1) the number of winning bids, (2) the quantity of MW offered by the winning bidders, (3) a breakdown of the number and MW of winning bids by resource type, name and location, and (4) a description of the prices of the winning bids.

3615. Amendment of an Approved plan. The utility may, at any time, file an application to amend the contents of a plan approved pursuant to rule 3613. Such an application shall be administered pursuant to the Commission's rules of Practice and Procedure.