**Title 4 – DEPARTMENT OF ECONOMIC DEVELOPMENT**
**Division 240 – Public Service Commission**
**Chapter 3 – Filing and Reporting Requirements**

## 4 CSR 240-3.164 Electric Utility Demand-Side Programs Filing and Submission Requirements

*PURPOSE: This rule sets forth the information that an electric utility must provide when it seeks approval, modification or discontinuance of demand-side programs.*

(1) As used in this rule, the following terms mean:

(A) Average rate means the revenue billed over twelve (12) billing months divided by the kilowatt hours billed for the same twelve billing months.

(B) Avoided cost means the cost savings obtained by substituting demand-side resources for existing and new supply-side resources. Avoided costs include: avoided utility costs resulting from energy savings and demand savings associated with generation, transmission and distribution facilities and avoided probable environmental costs.

(C) Baseline energy forecast or demand forecast means a reference end-use forecast of energy or demand in the absence of any new demand-side programs but including the affects of naturally occurring energy efficiency and any codes and standards that were in place on a defined date. The baseline energy forecasts and demand forecasts are the most recent twenty (20) year or greater of the electric utility.

(D) Demand means the rate of electric power use over an hour measured in kilowatts (kW).

(E) Demand-side program means any program conducted by the utility to modify the net consumption of electricity on the retail customer's side of the meter including, but not limited to, energy efficiency measures, load management, demand response, and interruptible or curtailable load.

(F) Demand-side program plan means all of a utility's proposed demand-side programs.

(G) Economic potential means energy savings and demand savings relative to a utility's baseline energy forecast and baseline demand forecast respectively resulting from customer adoption of all cost-effective measures, regardless of customer preferences as determined in a market potential study.

(H) Electric utility or utility means any electric corporation as defined in section 386.020, RSMo which is subject to the jurisdiction of the commission.

(I) Energy means the total amount of electric power that is used over a specified interval of time measured in kilowatt-hours (kWh).

(J) Evaluation, measurement and verification or (EM&V) means the performance of studies and activities intended to evaluate the process of and to estimate the energy and demand savings and other effects from demand-side programs.

(K) Maximum achievable potential means energy savings and demand savings relative to a utility's baseline energy forecast and baseline demand forecast respectively resulting from expected program participation and ideal implementation conditions. Maximum achievable potential establishes a maximum target for demand-side savings

that a utility can expect to achieve through its demand-side programs and involves incentives that represent a very high portion of total programs costs and very short customer payback periods. Maximum achievable potential is considered the hypothetical upper-boundary of achievable demand-side savings potential, because it presumes conditions that are ideal and not typically observed.

(L) Measure means any device, technology or operating procedure that makes it possible to deliver an adequate level and quality of energy service while:

1. Using less energy than would otherwise be required; or
2. Altering the time pattern of electricity so as to require less generating capacity or to allow the electric power to be supplied from more fuel-efficient units.

(M) Participant test means the test of the cost-effectiveness of demand-side programs that measures the economics of a demand-side program from the perspective of the customers participating in the program.

(N) Portfolio or portfolio of programs means all of a utility's demand-side programs.

(O) Realistic achievable potential means energy savings and demand savings relative to a utility's baseline energy forecast and baseline demand forecast respectively resulting from expected program participation and realistic implementation conditions. Realistic achievable potential establishes a realistic target for demand-side savings that a utility can expect to achieve through its demand-side programs and involves incentives that represent a moderate portion of total program costs and longer customer payback periods when compared to those associated with maximum achievable potential.

(P) Societal cost test means the total resource cost test but adds societal benefits (externalities) to the total benefits.

(Q) Technical potential means energy savings and demand savings relative to a utility's baseline energy forecast and baseline demand forecast respectively resulting from a theoretical construct that assumes all feasible measures are adopted by customers of the utility regardless of cost or customer preference.

(R) Total resource cost test means the test of the cost-effectiveness of demand-side programs that measures~~compares~~ the net~~sum of~~ avoided utility cost plus net avoided probable environmental costs to the net~~sum of all~~ incremental costs of end-use measures that are implemented due to the program (including both utility and participant contributions), plus net utility costs to administer, deliver and evaluate each demand-side program to quantify the net savings obtained by substituting the demand-side programs for supply-side resources.

(S) Utility cost test means the test that measures~~compares~~ the net avoided utility costs to the net sum of all utility incentive payments, plus net utility costs to administer, deliver and evaluate each demand-side program to quantify the net savings obtained by substituting the demand-side program for supply-side resources.

(2) When an electric utility files for approval of demand-side programs or demand-side program plans as described in 4 CSR 240-20.094(3), the electric utility shall file or provide a reference to which commission case contains the following information. All models and spreadsheets shall be provided as executable versions in native format with all formulas intact:

(A) A current market potential study. The current market potential study shall use primary data and analysis for each utility service territory The determination of whether

to conduct a market potential study for each utility service territory or for all statewide investor-owned electric utilities shall be at the discretion of the electric utilities. If the current market potential study of the electric utility that is filing for approval of a demand-side program or demand-side program plan is part of a statewide investor-owned electric utilities market potential study, the sampling methodology shall reflect each utility's service territory and shall provide statistically significant results for each utility. The current market potential study shall be updated with primary data and analysis no less frequently than every four (4) years. For instances in which primary data cannot be obtained, the market potential study may contain data from a secondary source. [mw1]The current market potential study shall be prepared by an independent third party and shall include at least the following:

1. Complete documentation of all assumptions, definitions, methodologies, sampling techniques, and other aspects of the current market potential study;

2. Clear description of the process used to identify the broadest possible list of measures and groups of measures for consideration;

3. Clear description of the process used to determine technical potential, economic potential, maximum achievable potential and realistic achievable potential for a 20-year planning horizon for major end-use groups (e.g., lighting, space heating, space cooling, refrigeration, motor drives, etc. ) for each customer market segment (e. g., residential, commercial and industrial); and

4. Identification and discussion of the 20-year baseline energy and demand forecasts. If the baseline energy and demand forecasts in the current market potential study differ from the baseline forecasts in the utility's most recent 4 CSR 240-22 triennial compliance filing, the current market potential study shall provide a comparison of the two sets of forecasts and a discussion of the reasons for any differences between the two sets of forecasts. The 20-year baseline energy and demand forecasts shall account for the following:

A. Discussion of the treatment of all of the utility's customers who have received an acceptance to opt-out;

B. Changes in building codes and/or appliance efficiency standards

C. Changes in customer combined heat and power applications; and

D. Third party and other naturally occurring demand-side savings.

(B) Demonstration of cost-effectiveness for each demand-side program and for the total of all demand-side programs of the utility. At a minimum, the electric utility shall include:

1. The total resource cost test and a detailed description of the utility's avoided cost calculations and all assumptions used in the calculation. To the extent that the portfolio of programs fails to meet the TRC test, the utility shall examine whether the failure persists if it considers a reasonable range of uncertainty in the assumptions used to calculate avoided costs.

2. In instances where the calculation of the total resource cost test does not demonstrate cost effectiveness, the utility shall include calculations for the utility cost test, the participant test and the societal cost test;

3. Results of the integration modeling of the demand-side program or demand-side program plans into the utility's most recent preferred~~preffered~~ plan. These results shall include:

A. Impact on average rates over the preferred plan time horizon;
B. Change in expected utility costs with and without the demand-side program or demand-side program plans; and
C. Impact on the utilities financial metrics for over the preferred plan time horizon.

(C) Detailed description of each proposed demand-side program to include at least:
1. Customers targeted;
2. Measures included;
3. Customer incentives;
4. Proposed promotional techniques;
5. Proposed program administrator;
6. Projected gross and net annual energy savings;
7. Projected gross and net annual demand savings;
8. Net-to-gross factors;
9. Size of the potential market and projected penetration rates;
10. EM&V plan including at least the proposed evaluation schedule and the proposed approach to achieving the evaluation goals pursuant to 4 CSR 240-3.164(7) and 4 CSR 240-20.093(7);
11. Budget information in the following categories:
A. Administrative costs;
B. Program incentive costs;
C. Estimated equipment costs;
D. Estimated installation costs; and
E. Evaluation costs;
12. Description of any strategies used to minimize free riders;
13. Description of any strategies used to maximize spillover; and
14. For demand-side program plans, the proposed implementation schedule of individual demand-side programs.

(D) Demonstration and explanation in quantitative and qualitative terms of how proposed demand-side programs are expected to achieve all cost-effective demand-side savings over the life of the programs. Should the expected demand-side savings fall short of the following incremental annual demand-side savings goals specified in 4 CSR 240-20.094(2), the utility shall provide detailed explanation of why the incremental annual demand-side savings goals cannot be expected to be achieved, and the utility shall bear the burden of proof.

(E) Designation of joint demand-side programs which are demand-side program supported by the electric utility and at least one other electric utility.

(3) Designation of program pilots. For program pilot, the utility shall provide as much of the information required under section (2) subsections (C), (D) and (E) as is practical and shall include explicit questions that the pilot will address, the means and methods by which the utility proposes to address the pilot's questions, a provisional cost-effectiveness evaluation, a proposed geographic area and duration for the pilot.

(4) When an electric utility files to modify demand-side programs as described in 4 CSR 240-20.094(4), the electric utility shall file a complete explanation for and documentation of the proposed modifications to each of the filing requirements in section (2). All models and spreadsheets shall be provided as executable versions in native format with all formulas intact.

(5) When an electric utility files to discontinue a demand-side program as described in 4 CSR 240-20.094(5), the electric utility shall file the following information. All models and spreadsheets shall be provided as executable versions in native format with all formulas intact:

(A) Complete explanation for the utility's decision to request to discontinue demand-side program;

(B) EM&V reports for the demand-side program in question; and

(C) Date by which a final EM&V report for the demand-side program in question will be filed.

(6) Variances. Upon request and for good cause shown, the commission may grant a variance from any provision of this rule.

(7) Rule review. The commission shall complete a review of the effectiveness of this rule no later than four (4) years after the effective date, and may, if it deems necessary, initiate rulemaking proceedings to revise this rule.