

## **COLORADO DEPARTMENT OF REGULATORY AGENCIES**

### **Public Utilities Commission**

#### **4 CODE OF COLORADO REGULATIONS (CCR) 723-4**

#### **PART 4 RULES REGULATING GAS UTILITIES AND PIPELINE OPERATORS**

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[indicates omission of unaffected rules]

#### **DEMAND SIDE MANAGEMENT**

##### **4750. Overview and Purpose.**

These rules implement §§ 40-1-102, 40-3.2-101, 40-3.2-103, and 40-3.2-105, C.R.S. for gas utilities required by statute to be rate-regulated. Consistent with statutory requirements, the purpose of these Demand Side Management (DSM) rules is to reduce end-use natural gas consumption in a cost effective manner, in order to save money for consumers and utilities, and protect the environment by encouraging the reduction of emissions and air pollutants. These rules direct natural gas utilities in the design and implementation of programs that will enable sales customers to participate in DSM. The utility shall design DSM programs for its full service customers to achieve cost-effective energy savings, considering factors such as: achievable energy savings, customer benefits, cost effectiveness ratios, adoption potential, market transformation capability and ability to replicate in the utility service territory.

- (a) Each utility shall file a DSM plan and application for cost recovery, within the parameters set forth in these rules. Within the application, the utility shall propose an expenditure target, savings target, funding mechanism, and cost-recovery mechanism.
- (b) Each utility shall also file an annual DSM report and an application for bonus.
- (c) Each utility shall file a measurement and verification report that evaluates the actual implementation and performance associated with its DSM program.

##### **4751. Definitions.**

The following definitions apply to rules 4750 through 4760, unless § 40-1-102 provides otherwise.

- (a) "Amortization" means the systematic spreading of expenditures or capital costs incurred for DSM programs, through regular accounting entries over a specified period of time.
- (b) "Benefit/cost ratio" means the ratio of the net present value of benefits to the net present value of costs, as calculated using the modified TRC test.
- (c) "Cost effective" means a benefit/cost ratio of greater than one.

- (d) "Demand side management" (DSM) means the implementation of programs or measures which serve to shift or reduce the consumption of, or demand for, natural gas.
- (e) "Discount rate" means the interest rate used in determining the present value of future cash flows of DSM costs and benefits, both forecasted and actual. The forecasted DSM costs and benefits are used to determine cost effectiveness of DSM measures. The actual DSM costs and benefits are used to determine net economic benefits for the purpose of calculating the bonus. Discount rate shall be the nominal interest rate, as set forth in Appendix C of U.S. Office of Management and Budget (OMB) Circular A-94, in effect on the date that the utility files its DSM Plan with the Commission. The nominal interest rate chosen shall have a specified maturity that approximates the weighted average useful lives, forecasted or actual, of the DSM measures in the DSM portfolio.
- (ef) "DSM education" means a program, including but not limited to an energy audit, that contributes indirectly to a cost-effective DSM program by promoting customer awareness and participation..
- (fg) "DSM measure" means an individual component or technology, such as attic insulation or replacement of equipment.
- (gh) "DSM period" means the effective period of an approved DSM plan.
- (hi) "DSM plan" means the DSM programs, goals, and budgets over a specified DSM period, generally considered in one year increments, as may be proposed by the utility.
- (ij) "DSM program" means any combination of DSM measures, information and services offered to customers to reduce natural gas usage.
- (jk) "Energy efficiency program" see DSM program.
- (kl) "Gas Demand-Side Management Cost Adjustment" (G-DSMCA) means a rate adjustment mechanism designed to compensate a utility for its DSM program costs.
- (lm) "Gas Demand-Side Management bonus" (G-DSM bonus) means a bonus awarded to a utility in accordance with § 40-3.2-103(2)(d), C.R.S.
- (mn) "Market transformation" means a strategy for influencing the adoption of new techniques or technologies by consumers. The objective is to overcome barriers within a market through coordinating tactics such as education, training, product demonstration and marketing, often conducted in concert with rebates or other financial incentives.
- (on) "Modified Total Resource Cost test" or "modified TRC test" means an economic cost-effectiveness test used to compare the net present value of the benefits of a DSM program or measure over its useful life, to the net present value of costs of a DSM measure or program for the participant and the utility, consistent with § 40-1-102(5), C.R.S. In performing the modified TRC test, the benefits shall include, but are not limited to, as applicable: the utility's avoided production, distribution and energy costs; the participant's avoided operating and maintenance costs; the valuation of avoided emissions; and non-energy benefits as set forth in rule 4753. Costs shall include utility and participant costs. The utility costs shall include the net present value of costs incurred in accordance with the budget set forth in rule 4753.

(ep) “Net economic benefits” means the net present value of all benefits in the modified TRC test, as applied to the utility’s portfolio of DSM programs, less the net present value of the costs in the modified TRC test associated with that same portfolio.

(pg) “Sales customer” or “full service customer” means a residential or commercial customer that purchases a bundled natural gas supply and delivery service from a utility but does not include customers served under a utility’s gas transportation service rate schedules.

**4752. Filing Schedule.**

- (a) Within 120 days of the effective date of this rule, each utility shall file its DSM plan and application for cost recovery.
  - (I) The utility shall implement its DSM plan and G-DSMCA, as approved by the Commission, by January 1, 2009.
- (b) Beginning April 1, 2010 and each April 1<sup>st</sup> thereafter, each utility shall submit its annual DSM report, application for bonus and DSMCA filing.
  - (I) The DSMCA shall take effect July 1 of each year for a period of 12 months.
- (c) The initial DSM plan filings of natural gas-only utilities shall cover a DSM period of two years. The initial DSM plan filings of natural gas and electric combination utilities shall cover a DSM period of three years. The subsequent DSM plan filings of all utilities shall cover a DSM period of three years unless otherwise specified by the Commission. Subsequent DSM plan applications are to be filed by May 1 of the final year of the current DSM plan.

**4753. Periodic DSM Plan Filing.**

On the schedule set forth in rule 4752, the utility shall file by application a prospective natural gas DSM plan for Commission approval. The plan shall detail:

- (a) The utility’s proposed expenditures by year for each DSM program, by budget category; the sum of these expenditures represents the utility’s proposed expenditure target as required by § 40-3.2-103(2)(a), C.R.S.
- (b) The utility’s estimated annual natural gas energy savings for the DSM plan years, expressed in dekatherms per dollar of expenditure, and presented for each DSM program proposed for Commission approval; this represents the utility’s proposed savings targets required by § 40-3.2-103(2)(b), C.R.S.
- (c) The anticipated annual units of energy to be saved, which equals the product of the proposed expenditure target and proposed savings target; this is referred to herein as the energy target.
- (d) The utility shall include in its DSM plan application data and information sufficient to describe the design, implementation, oversight and cost effectiveness of the DSM programs. Such data and information shall include, at a minimum, program budgets delineated by year, estimated participation rates and program savings (in therms).

- (e) In the information and data provided in a proposed DSM plan, the utility shall reflect consideration of the factors set forth in the Overview and Purpose, rule 4750. At a minimum the utility shall provide the following information detailing how it developed its proposed DSM program:
  - (I) Descriptions of identifiable market segments, with respect to gas usage and unique characteristics.
  - (II) A comprehensive list of DSM measures that the utility is proposing for inclusion in its DSM plan
  - (III) A detailed analysis of proposed DSM programs for a utility's service territory in terms of markets, customer classes, anticipated participation rates (as a number and a percent of the market), estimated energy savings and cost effectiveness.
  - (IV) A ranking of proposed DSM programs, from greatest value and potential to least, based upon the data required in subparagraph (III), above.
  - (V) Proposed marketing strategies to promote participation based on industry best practices.
  - (VI) Calculation of cost effectiveness of the proposed DSM programs using a modified TRC test. Each proposed DSM program is to have a projected value greater than or equal to 1.0 using a modified TRC test, except as provided for in paragraph (f), below.
  - (VII) An analysis of the impact of the proposed DSM program expenditures on utility rates, assuming a 12-month cost recovery period.
- (f) In its DSM plan, the utility shall address how it proposes to target DSM services to low-income customers. The utility shall also address whether it proposes to provide DSM services directly or indirectly through financial support of conservation programs for low-income households administered by the State of Colorado, as authorized by § 40-3.2-103(3)(a), C.R.S. The utility may propose one or more low-income DSM programs that yield a modified TRC test value below 1.0.
- (g) In proposing an expenditure target for Commission approval, pursuant to § 40-3.2-103(2)(a), C.R.S., the utility shall comply with the following:
  - (I) The utility's annual expenditure target for DSM programs shall be, at a minimum, two percent of a natural gas utility's base rate revenues, (exclusive of commodity costs), from its sales customers in the 12-month calendar period prior to setting the targets, or one-half of one percent of total revenues from its sales customers in the 12-month calendar period prior to setting the targets, whichever is greater.
  - (II) The utility may propose an expenditure target in excess of two percent of base rate revenues.
  - (III) The utility may propose an expenditure target lower than the amount required in sub-paragraph (I), above, during an initial phase-in period. The utility must achieve at least the minimum expenditure target within three years of implementing the initial DSM plan.

- (IV) Funds spent for education programs, market transformation programs and impact and process evaluations and program planning related to natural gas DSM programs may be recovered without having to show that such expenditures, on an independent basis, are cost-effective; such costs shall be included in the overall benefit/cost ratio analysis.
- (h) The utility shall propose a budget to achieve the expenditure target proposed in paragraph (a), above. The budget shall be detailed for the overall DSM plan and for each program for each year and shall be categorized into:
  - (I) Planning and design costs;
  - (II) Administrative and DSM program delivery costs;
  - (III) Advertising and promotional costs, including DSM education;
  - (IV) Customer incentive costs;
  - (V) Equipment and installation costs;
  - (VI) Measurement and verification costs; and
  - (VII) Miscellaneous costs.
- (i) The budget shall explain anticipated increases/decreases in financial resources and human resources from year to year.
- (j) A utility may spend more than the annual expenditure target established by the Commission up to twenty-five percent over the target, without being required to submit a proposed DSM plan amendment. Expenditures in excess of twenty-five percent over the expenditure target shall require submittal of a proposed DSM plan amendment.
- (k) As a part of its DSM plan each utility shall propose a DSM plan with a benefit/cost value of unity (1) or greater, using a modified TRC test.
- (l) For the purposes of calculating a modified TRC, the non-energy benefits of avoided emissions and societal impacts shall be incorporated as follows.
  - (I) The initial TRC ratio, which excludes consideration of avoided emissions and other societal benefits, shall be multiplied by 1.05 to reflect the value of the avoided emissions and other societal benefits. The result shall be the modified TRC. A utility may propose a different factor for avoided emissions and societal impacts, but must submit documentation substantiating the proposed value.
- (m) Measurement and verification (M & V) plan. The utility shall describe in complete detail how it proposes to monitor and evaluate the implementation of its proposed programs. The utility shall explain how it will accumulate and validate the information needed to measure the plan's performance against the standards, pursuant to rule 4755. The utility shall propose measurement and verification reporting sufficient to communicate results to the commission in a detailed, accurate and timely basis.

**4754. Annual DSM Report and Application for Bonus and Bonus Calculation.**

On the schedule set forth in rule 4752, the utility shall provide the Commission a detailed DSM report and application for bonus.

- (a) In the annual DSM report the utility shall describe its actual DSM programs as implemented. For each DSM program, the utility shall document actual program expenditures, energy savings, participation levels and cost-effectiveness.
- (b) Annual program expenditures shall be separated into cost categories contained in the approved DSM plan.
- (c) For each DSM program, the utility shall compare the program's proposed and actual expenditures, savings, participation rate, and cost-effectiveness; in addition, the utility shall prepare an assessment of the success of the program, and list any suggestions for improvement and greater customer involvement.
- (d) The utility shall provide actual benefit/cost results for the overall DSM plan and individual DSM programs implemented during the plan year. The benefit/cost analysis shall be based on the costs incurred and benefits achieved, as identified in the modified TRC test. Benefit values are to be based upon the results of M & V evaluation, when such has been conducted as set forth in rule 4755. Otherwise, the benefit values of the currently approved DSM plan are to be used.
- (e) If the annual report covers a year within which an M & V evaluation was completed, the complete M & V results are to be included as part of the annual report.
- (f) The utility may file an application for bonus, pursuant to rule 4760. The application for bonus shall include the utility's calculation of estimated bonus applying the methodology set forth in this rule to the utility's actual performance.
- (g) The Commission shall determine the level of bonus, if any, that the utility is eligible to collect on the basis of the information included in the report, pursuant to the bonus criteria and process set forth, below.
  - (I) The primary objective of the bonus is to encourage cost-effective energy savings. The amount of bonus earned, if any, will correlate with the utility's performance relative to the approved savings target (dekatherms saved per dollar expended) and the energy target. All else being equal, effective DSM programs will reduce per customer commodity consumption which may lead to revenue reductions for the utility. Many factors may cause a change to the utility's revenue, including but not limited to DSM. If a utility wants to further address the issue of possible revenue reductions resulting from the implementation of DSM before its next rate case, the utility is encouraged to propose, in a separate application to the Commission, a rate adjustment mechanism that accounts for possible lost revenue resulting from the implementation of DSM.
  - (II) As a threshold matter, the utility must expend at least the minimum amount set forth in rule 4753 (g)(I), except during a phase-in period as set forth in rule 4753 (g)(III), in order to earn a bonus.

(III) The bonus amount is a percentage of the net economic benefits resulting from the DSM plan over the period under review. The percentage value is the product of the two-three factors:

(A) The Energy Factor is determined by the percentage of the energy target achieved by the utility. The energy factor is zero plus 0.5 percent for each one percent above 80 percent of the energy target achieved by the utility.

(B) The Savings Factor is the actual savings achieved divided by the approved savings target. Each of these quantities is expressed in dekatherms saved per dollar expended.

(C) Bonus Factor: 50%

(IV) The following is provided as an example of the bonus calculation, using these illustrative numbers: utility achieves 106 percent of its energy target; the utility's savings target is 15,000 dekatherms per \$1 million expended, and the utility's actual savings is 18,000 dekatherms per \$1 million.

The energy factor would be:  $0.5\% \times (106 - 80)$ , or 13 percent

The savings factor would be:  $18,000/15,000$  or 1.2

The bonus percentage would be:  $13\% \times 1.2$ , or 15.6 percent. Thus, 15.6 percent of net economic benefits would be the bonus amount.

(h) For the purposes of calculating the bonus, the costs and benefits associated with DSM programs targeted to low-income customers may be excluded as follows:

(I) The costs and benefits associated with a low-income DSM program may be excluded from the calculation of the net economic benefits for the entire DSM portfolio if the modified TRC value for the low-income program is below 1.0

(II) The expenditures and therms saved associated with a low-income DSM program may be excluded from the calculation of the Savings Factor if the therms saved per dollar expended for the low-income program is below the planned savings target for the overall DSM portfolio.

(i) The maximum bonus is twenty percent of net economic benefits or twenty-five percent of expenditures, whichever is less.

(j) Any awarded bonus shall be authorized as a supplement to a utility and not count against its authorized rate of return or be considered in rate proceedings. The awarded bonus shall be recovered through the G-DSMCA over a twelve-month period after approval of the bonus.

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[indicates omission of unaffected rules]