

TO: COMMISSIONERS AND ADVISORS
FROM: DARREN KEARNEY, LORENA REICHERT, AND AMANDA REISS
SUBJECT: STAFF RECOMMENDATION FOR DOCKET GE17-005
DATE: MARCH 24, 2017

STAFF MEMORANDUM

OVERVIEW

Since 2009, MidAmerican Energy Company (MEC) offered energy efficiency programs to both electric and natural gas customers located within their service territory. In this docket, MEC submitted its 2016 annual report, 2016 reconciliation of expenses and revenues, and proposed 2017 Energy Efficiency Cost Recovery (ECR) rates for Commission review and approval. It should be noted that the 2017 Energy Efficiency Plan budgets were approved by the Commission in docket GE16-004.

This memo provides a brief summary of MEC's 2016 plan performance and Staff's recommendation.

2016 ENERGY EFFICIENCY PLAN RESULTS

In 2016, MEC came in under budget for both gas and electric programs. Actual spending and energy savings are provided in further detail below.

Electric Program Budgeted vs. Actuals

Results from MEC's 2016 electric programs are provided in Table 1. Looking at energy savings, MEC experienced more energy savings than forecasted. Rolling up all electric programs, energy savings were 1,479,394 kWh in 2016, or 158% more than the energy savings goal for the year. The large majority of energy savings came from the Nonresidential Equipment program, where two variable speed drive projects accounted for 74.2% of total electric program energy savings. Those two projects produced 1,098,121 kWh in energy savings.

From a spending perspective, MEC came in 2% below the budget in 2016 for all electric programs. Electric program spending was 6% over the budget for residential programs and 22% below the budget for nonresidential programs.

Program	Energy Savings (kWh)			Expenditures		
	Budgeted	Actual	Variance	Budgeted	Actual	Variance
Residential Equipment	233,210	280,742	20%	\$ 82,179	\$ 92,827	13%
Residential Audit	3,424	2,428	-29%	\$ 1,997	\$ 2,340	17%
Residential Load Management	1,083	625	-42%	\$ 17,241	\$ 17,022	-1%
Appliance Recycling	33,080	14,195	-57%	\$ 7,133	\$ 2,465	-65%
Total Residential	270,797	297,990	10%	\$ 108,550	\$ 114,654	6%
Nonresidential Equipment ¹	242,542	1,180,068	387%	\$ 19,553	\$ 16,924	-13%
Nonresidential Custom	59,210	0	-100%	\$ 16,487	\$ 11,160	-32%
Small Commercial Energy Audit	1,587	1,336	-16%	\$ 2,174	\$ 1,542	-29%
Total Nonresidential	303,339	1,181,404	289%	\$ 38,214	\$ 29,626	-22%
Total All Electric Programs	574,136	1,479,394	158%	\$ 146,764	\$ 144,280	-2%

1) Two variable speed drive projects generated 1,098,121 kWh of energy savings

Gas Program Budgeted vs. Actuals

Results from MEC's 2016 gas programs are provided in Table 2. Focusing on energy savings, the residential gas programs had 14% fewer energy savings than the goal and nonresidential gas programs had 36% fewer energy savings than the goal. Total energy savings for all programs in 2016 was 396,886 therms, or 20% fewer energy savings than the overall goal for the year.

Looking at spending, MEC came in under budget for both residential and nonresidential gas programs in 2016. Residential program spending was 10% below the budget and nonresidential program spending was 49% below the budget. In 2016, a total of \$919,173 was spent out of the approved \$1,121,007 budget.

Program	Energy Savings (therms)			Expenditures		
	Budgeted	Actual	Variance	Budgeted	Actual	Variance
Residential Equipment	324,950	293,660	-10%	\$ 587,158	\$ 610,143	4%
Residential Audit	38,904	19,883	-49%	\$ 304,700	\$ 191,963	-37%
Total Residential	363,854	313,543	-14%	\$ 891,858	\$ 802,106	-10%
Nonresidential Equipment	105,195	67,727	-36%	\$ 152,652	\$ 84,705	-45%
Nonresidential Custom	13,774	9,685	-30%	\$ 31,632	\$ 20,708	-35%
Small Commercial Energy Audit	10,308	5,931	-42%	\$ 44,865	\$ 11,654	-74%
Total Nonresidential	129,277	83,343	-36%	\$ 229,149	\$ 117,067	-49%
Total All Gas Programs	493,131	396,886	-20%	\$1,121,007	\$ 919,173	-18%

Benefit/Cost Analysis of Electric Programs

Table 3 shows the 2016 benefit/cost test results for the electric programs. The total resource cost (TRC) test is highlighted in the table. This test is used by Staff to determine whether or not the program is cost effective. Overall, MEC’s energy efficiency programs were demonstrated to be cost effective. It should be noted that the residential load management TRC test was below 1.0 because air conditioners were not cycled as many days as the plan forecasted.¹

Table 3. 2016 Electric Program Benefit/Cost Test Results					
Program	TRC	PART	RIM	UTILITY	SOCIETAL
Residential Equipment	1.58	1.69	0.91	3.2	1.54
Residential Audit	1.4	1.97	0.7	1.4	1.51
Residential Appliance Recycling	4.58	4.61	1.73	5.82	5.41
Nonresidential Equipment	10.4	8.62	1.22	78.3	15.67
Nonresidential Custom	-	-	-	-	-
Small Commercial Energy Audit	1.89	2.28	0.9	1.44	1.81
Total Electric Energy	4.18	3.84	1.14	12.91	5.73
Residential Load Management	0.83	1.01	0.22	0.22	0.81

Benefit/Cost Analysis of Gas Programs

Table 4 shows the 2016 benefit/cost test results for the gas programs. Again, the total TRC test is highlighted in the table. The only program that did not have TRC result greater than 1.0 was the nonresidential custom program. In response to Staff Data request 1-9, MidAmerican identified that the company reviews custom programs for cost effectiveness as measured by the societal cost test. The one boiler project rebated in 2016 nonresidential customer program passed the societal test, but not the TRC.

Table 4. 2016 Gas Program Benefit/Cost Test Results					
Program	TRC	PAR	RIM	UTILITY	SOCIETAL
Residential Equipment	1.22	1.48	0.82	4.88	1.69
Residential Audit	1.19	2.13	0.49	0.99	1.08
Nonresidential Equipment	2.09	2.28	0.91	8.02	2.79
Nonresidential Custom	0.83	0.82	1.01	5.8	1.22
Small Commercial Energy Audit	6.41	10.14	0.7	2.85	3.6
Total Gas	1.31	1.6	0.81	4.35	1.74

¹ See MEC’s response to Staff Data Request 1-3

2016 PERFORMANCE INCENTIVE

Recovery of the 2016 performance incentive is included in the proposed ECR rates for 2017. Since both the gas and electric programs came in under budget in 2016, the performance incentives were calculated using actual program costs. An electric program incentive of \$9,984 and gas program incentive of \$63,607 is included in the ECR factors for recovery in 2017.

2017 ENERGY EFFICIENCY COST RECOVERY FACTORS

Staff reviewed MEC’s calculations for the 2017 ECR factors and found the factors to be properly calculated. Table 5, below, provides the proposed 2017 ECR factors and the estimated annual bill impact for a typical customer’s utility bill from the current ECR rates.

Table 5. 2017 Proposed ECR Factors and Estimated Annual Bill Increase (Decrease) from Current Rates

Program	Class	2016 ECR Factor	Proposed ECR Factor	Difference	Average 2017 Usage ¹	Estimated Bill Impact
Electric	Residential	\$ 0.00167	\$ 0.00261	\$ 0.00094	12,651	\$ 11.89
	Nonresidential	\$ 0.00026	\$ 0.00018	\$ (0.00008)	185,204	\$ (14.82)
Gas	Residential	\$ (0.01321)	\$ 0.04222	\$ 0.05543	614	\$ 34.03
	Nonresidential	\$ 0.01113	\$ (0.00440)	\$ (0.01553)	4,430	\$ (68.80)

1) Average 2017 Usage was calculated based on January-December 2016 actual sales and customers

STAFF RECOMMENDATION

Staff makes the following recommends to the Commission:

- 1) That the Commission approve the 2016 reconciliation amounts;
- 2) That the Commission approve the 2016 performance incentive;
- 3) That the Commission approves the electric Energy Efficiency Cost Recovery Factors and tariff sheet filed on February 17, 2017, with an effective date of April 3, 2017; and
- 4) That the Commission approves the natural gas Energy Efficiency Cost Recovery Factors and tariff sheet filed on February 17, 2017, with an effective date of April 3, 2017.