

**TO:** COMMISSIONERS AND ADVISORS  
**FROM:** DARREN KEARNEY AND KAREN CREMER  
**SUBJECT:** STAFF RECOMMENDATION FOR DOCKET GE15-001  
**DATE:** MARCH 27, 2015

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## 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. On November 27<sup>th</sup>, 2012 the Commission approved MEC's 5-year Energy Efficiency Plan<sup>1</sup> for years 2013 through 2017. In this docket, GE15-001, MEC has filed with the commission for approval of the prior year's performance results and reconciliation of actual expenses incurred. Further, MEC seeks approval of an updated Energy Efficiency Plan for years 2015 through 2017 that includes the following:

1. to continue offering rebates for high efficiency natural gas furnaces and ground source heat pumps (GSHPs) in the residential equipment programs for years 2015 through 2017;
2. a proposed budget increase to the electric residential equipment program of \$32,000 (rebates for GSHPs) for each budget year 2015 through 2017;
3. a proposed increase to the electric nonresidential equipment program of \$5,340 (rebates for lighting) for each budget year 2015 through 2017;
4. a proposed increase to the gas residential electric program of \$900,000 (to continue furnace rebates) for each budget year 2015 through 2017;
5. a proposed increase to the gas nonresidential equipment program of \$241,767 (rebates for furnaces) for each budget year 2015 through 2017;
6. a reduction of residential furnace rebates from \$600.00 to \$400.00; and
7. the authority to use 2015 budgeted dollars to pay outstanding furnace rebate applications received after December 31, 2014.

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<sup>1</sup> See Docket GE12-005, "In the Matter of the Filing by MidAmerican Energy Company for the Approval of Energy Efficiency Plan for 2013-2017."

## 2014 ENERGY EFFICIENCY PLAN RESULTS

MidAmerican did not exceed 110% of the approved budget for each customer class in both gas and electric programs during 2014. However, in the middle of the program year MEC did request, and received Commission approval, for an increase of \$550,142 to the residential equipment program's budget. Actual spending and energy savings are provided in further detail below.

### Electric Program Budgeted vs. Actuals

Results from MEC's 2014 electric programs are provided in Table 1. Looking at energy savings, MEC experienced fewer energy savings than forecasted. Rolling up all electric programs, energy savings were 215,464 kWh in 2014, or 62% below the planned energy savings.

From a spending perspective, MEC came in 33% under budget in 2014 for all electric programs. Electric program spending was 29% under budget for residential programs and 45% under budget for nonresidential programs. Actual spending levels that occurred in 2014 are properly carried through to the appropriate Energy Efficiency Cost Recovery (ECR) factors proposed for 2015. Thus, it should be noted that the 2015 ECR factors for both electric residential and electric nonresidential customer classes properly accounted for the over-recoveries in 2014.

Program	Energy Savings (kWh)			Expenditures		
	Budgeted	Actual	Variance	Budgeted	Actual	Variance
Residential Equipment	233,210	131,482	-44%	\$ 82,189	\$ 54,698	-33%
Residential Audit	3,424	5,738	68%	\$ 2,008	\$ 2,864	43%
Residential Load Management	846	158	-81%	\$ 14,929	\$ 16,073	8%
Appliance Recycling	25,650	5,066	-80%	\$ 5,942	\$ 1,091	-82%
<b>Total Residential</b>	<b>263,130</b>	<b>142,444</b>	<b>-46%</b>	<b>\$ 105,068</b>	<b>\$ 74,726</b>	<b>-29%</b>
Nonresidential Equipment	242,542	73,020	-70%	\$ 19,559	\$ 18,375	-6%
Nonresidential Custom	59,210	-	-	\$ 16,881	\$ 1,527	-91%
Small Commercial Energy Audit	1,587	-	-	\$ 2,139	\$ 1,358	-37%
<b>Total Nonresidential</b>	<b>303,339</b>	<b>73,020</b>	<b>-76%</b>	<b>\$ 38,579</b>	<b>\$ 21,260</b>	<b>-45%</b>
<b>Total All Electric Programs</b>	<b>566,469</b>	<b>215,464</b>	<b>-62%</b>	<b>\$ 143,647</b>	<b>\$ 95,986</b>	<b>-33%</b>

Gas Program Budgeted vs. Actuals

Results from MEC’s 2014 gas programs are provided in Table 2. Focusing on energy savings, the residential gas programs exceeded the budgeted savings by 48% and nonresidential gas programs experienced 33% fewer savings than budgeted. Total energy savings for all programs in 2014 was 495,260 therms, or 22% above the budgeted energy savings for the year.

Looking at spending, MEC came in slightly under budget for all gas programs in 2014. Residential programs exceeded the approved budget by 5% and nonresidential programs came in 24% under budget. It should be noted that the budget under recovery for the residential programs and the budget over recovery for the nonresidential programs were properly accounted for in the 2015 ECR factors.

Program	Energy Savings (therms)			Expenditures		
	Budgeted	Actual	Variance	Budgeted	Actual	Variance
Residential Equipment	237,227	380,809	61%	\$ 1,377,165	\$ 1,525,360	11%
Residential Audit	38,904	28,140	-28%	\$ 301,909	\$ 232,958	-23%
<b>Total Residential</b>	<b>276,131</b>	<b>408,949</b>	<b>48%</b>	<b>\$1,679,074</b>	<b>\$ 1,758,318</b>	<b>5%</b>
Nonresidential Equipment	105,195	75,998	-28%	\$ 278,913	\$ 219,391	-21%
Nonresidential Custom	10,308	6,752	-34%	\$ 31,239	\$ 19,455	-38%
Small Commercial Energy Audit	13,774	3,561	-74%	\$ 43,450	\$ 28,625	-34%
<b>Total Nonresidential</b>	<b>129,277</b>	<b>86,311</b>	<b>-33%</b>	<b>\$ 353,602</b>	<b>\$ 267,471</b>	<b>-24%</b>
<b>Total</b>	<b>405,408</b>	<b>495,260</b>	<b>22%</b>	<b>\$2,032,676</b>	<b>\$ 2,025,789</b>	<b>0%</b>

Benefit/Cost Analysis of Electric Programs

Table 3 shows the 2014 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 audit TRC test was below 1.0, however this is not atypical for energy audit programs.

Program	TRC	PAR	RIM	UTIL	SOC
Residential Equipment	1.3	1.51	0.83	2.35	1.33
Residential Audit	0.96	1.57	0.52	1.55	1.04
Residential Appliance Recycling	1.86	3.24	0.87	2.39	2.2
Nonresidential Equipment	2.47	3.15	0.95	3.59	3.49
Nonresidential Custom	-	-	-	-	-
Small Commercial Energy Audit	-	1	-	-	-
<b>Total Electric Energy</b>	<b>1.45</b>	<b>1.71</b>	<b>0.84</b>	<b>2.52</b>	<b>1.63</b>
Residential Load Management	2.45	-	1.21	1.22	2.73

Benefit/Cost Analysis of Gas Programs

Table 4 shows the 2014 benefit/cost test results for the gas programs. Again, the total resource cost (TRC) test is highlighted in the table. The only program that didn't have TRC result greater than 1.0 was the small commercial audit program.

<b>Program</b>	<b>TRC</b>	<b>PAR</b>	<b>RIM</b>	<b>UTIL</b>	<b>SOC</b>
Residential Equipment	1.22	1.79	0.67	2.4	1.69
Residential Audit	1.58	2.8	0.49	1.05	1.17
Nonresidential Equipment	1.67	2.18	0.76	3.34	2.31
Nonresidential Custom	1.65	2.05	0.86	3.87	2.43
Small Commercial Energy Audit	0.86	1.66	0.55	1.28	1.21
<b>Total Gas</b>	<b>1.3</b>	<b>1.9</b>	<b>0.67</b>	<b>2.34</b>	<b>1.73</b>

**2015-17 ENERGY EFFICIENCY PLAN CHANGES AND BUDGET INCREASE**

In 2014, the Commission re-approved the inclusion of ground source heat pumps and furnaces in MEC's energy efficiency program. MEC requests in this docket that the Commission approve the continued offering of ground source heat pump and furnace rebates for the residential program in years 2015-17. In addition, MEC requests a budget increase for the electric nonresidential equipment program and gas nonresidential equipment program. For the electric nonresidential equipment program, MEC would like to increase the budget by \$5,340 in program years 2015-17 in order to adjust for an expected increase in program participants. Similarly, MEC would like to increase the gas nonresidential equipment program budget for each program year 2015-17 by \$241,767 in order to adjust for an expected increase in participation.

Electric Program Budget Changes

Table 5, below, shows MEC's proposed electric program budget changes for 2015 relative to the 2015 budget that is currently approved by Commission order in docket GE12-005. Budget increases are proposed for the residential equipment program to include ground source heat pumps and the nonresidential equipment program to increase lighting rebates. Similar increases were approved by the Commission in docket GE14-001.

The table also shows the year over year change for the budget approved in docket GE14-001 and the proposed budget for 2015. In this case, year over year changes reflect an increase or decrease in the 2015 budget from the 2014 budget that resulted from the original plan's budget forecasts provided in docket GE12-005. Similarly, Table

6 captures the year over year budget changes for 2016 and 2017 that were forecasted in docket GE12-005 (with the inclusion of the instant filings budget increases).

Program	2015 Budget			2014/15 Budget Comparison			
	Approved <sup>3</sup>	Proposed	Difference	2014 Approved <sup>4</sup>	2015 Proposed	Difference	YOY Change
Residential Equipment <sup>1</sup>	\$ 50,185	\$ 82,185	\$ 32,000	\$ 82,189	\$ 82,185	\$ (4)	0%
Residential Audit	\$ 1,997	\$ 1,997	\$ -	\$ 2,008	\$ 1,997	\$ (11)	-1%
Residential Load Management	\$ 15,979	\$ 15,979	\$ -	\$ 14,929	\$ 15,979	\$ 1,050	7%
Appliance Recycling	\$ 6,461	\$ 6,461	\$ -	\$ 5,942	\$ 6,461	\$ 519	9%
<b>Total Residential</b>	<b>\$ 74,622</b>	<b>\$ 106,622</b>	<b>\$ 32,000</b>	<b>\$ 105,068</b>	<b>\$ 106,622</b>	<b>\$ 1,554</b>	<b>1%</b>
Nonresidential Equipment <sup>2</sup>	\$ 14,217	\$ 19,557	\$ 5,340	\$ 19,559	\$ 19,557	\$ (2)	0%
Nonresidential Custom	\$ 16,483	\$ 16,883	\$ 400	\$ 16,881	\$ 16,883	\$ 2	0%
Small Commercial Energy Audit	\$ 2,143	\$ 2,143	\$ -	\$ 2,139	\$ 2,143	\$ 4	0%
<b>Total Nonresidential</b>	<b>\$ 32,843</b>	<b>\$ 38,583</b>	<b>\$ 5,740</b>	<b>\$ 38,579</b>	<b>\$ 38,583</b>	<b>\$ 4</b>	<b>0%</b>
<b>Total All Electric Programs</b>	<b>\$ 107,465</b>	<b>\$ 145,205</b>	<b>\$ 37,740</b>	<b>\$ 143,647</b>	<b>\$ 145,205</b>	<b>\$ 1,558</b>	<b>1%</b>

1) Proposed budget includes \$32,000 for ground source heat pumps

2) Proposed budget includes \$5,340 for lighting

3) As currently approved in docket GE12-005

4) As updated and approved in docket GE14-001

Program	2015/16 Budget Comparison				2016/17 Budget Comparison			
	2015 Proposed	2016 Proposed	Difference	YOY Change	2016 Proposed	2017 Proposed	Difference	YOY Change
Residential Equipment <sup>1</sup>	\$ 82,185	\$ 82,179	\$ (6)	0%	\$ 82,179	\$ 82,181	\$ 2	0%
Residential Audit	\$ 1,997	\$ 1,997	\$ -	0%	\$ 1,997	\$ 2,019	\$ 22	1%
Residential Load Management	\$ 15,979	\$ 17,241	\$ 1,262	8%	\$ 17,241	\$ 18,191	\$ 950	6%
Appliance Recycling	\$ 6,461	\$ 7,133	\$ 672	10%	\$ 7,133	\$ 7,632	\$ 499	7%
<b>Total Residential</b>	<b>\$ 106,622</b>	<b>\$ 108,550</b>	<b>\$ 1,928</b>	<b>2%</b>	<b>\$ 108,550</b>	<b>\$ 110,023</b>	<b>\$ 1,473</b>	<b>1%</b>
Nonresidential Equipment <sup>2</sup>	\$ 19,557	\$ 19,553	\$ (4)	0%	\$ 19,553	\$ 19,554	\$ 1	0%
Nonresidential Custom	\$ 16,883	\$ 16,487	\$ (396)	-2%	\$ 16,487	\$ 16,501	\$ 14	0%
Small Commercial Energy Audit	\$ 2,143	\$ 2,174	\$ 31	1%	\$ 2,174	\$ 2,206	\$ 32	1%
<b>Total Nonresidential</b>	<b>\$ 38,583</b>	<b>\$ 38,214</b>	<b>\$ (369)</b>	<b>-1%</b>	<b>\$ 38,214</b>	<b>\$ 38,261</b>	<b>\$ 47</b>	<b>0%</b>
<b>Total All Electric Programs</b>	<b>\$ 145,205</b>	<b>\$ 146,764</b>	<b>\$ 1,559</b>	<b>1%</b>	<b>\$ 146,764</b>	<b>\$ 148,284</b>	<b>\$ 1,520</b>	<b>1%</b>

1) Budgets are \$32,000 larger than amounts currently approved in docket GE12-005 for inclusion of ground source heat pumps

2) Budgets are \$5,340 larger than amounts currently approved in docket GE12-005 for lighting

Staff agrees with MEC's proposed changes to the electric programs shown in Tables 5 and 6 above. The \$32,000 increase for ground source heat pumps results from a 2015 forecast of 16 individuals obtaining a \$2,000 rebate. Staff believes MEC's estimate for participants is reasonable based on historical participation levels in the program.<sup>2</sup> Further, the 2014 residential equipment program had a TRC test of 1.3 and shows that the program is cost effective with the inclusion of ground source heat pumps. Turning to the nonresidential equipment program, Staff believes the additional \$5,340 will help meet demand for the lighting measures in 2015.<sup>3</sup> In addition, the 2014 TRC test for the nonresidential equipment program was 2.47, showing the program is cost effective at the higher budget.

<sup>2</sup> Historic GSHP participation levels: 2011 - 14 units, 2012 - 6 units, 2013 - 12 units, and 2014 - 6 units.

<sup>3</sup> Historic Lighting participation levels: 2011 - 97 units, 2012 - 36 units, 2013 - 593 units, and 2014 - 196 units.

## Gas Program Budget Changes

Table 7, below, shows MEC's proposed gas program budget changes for 2015 relative to the 2015 budget that is currently approved by Commission order in docket GE12-005. Budget increases are proposed for the residential equipment program to include furnaces and the nonresidential equipment program to increase the amount of furnace rebates issued. Similar increases were approved by the Commission in docket GE14-001; however, in that docket the initial residential furnace budget request was smaller (\$780,000) and later increased in mid-year (by \$550,142).

The table also shows the year of year change from the budget approved in docket GE14-001 and the proposed budget for 2015. Year over year changes reflect increases or decreases in the 2015 budget when compared to the 2014 budget. A 30% reduction is proposed in the residential equipment program due to a decrease in the amount of each furnace rebate (changed from \$600.00 per rebate to \$400.00 per rebate). Similarly, Table 8 captures the year over year budget changes for 2016 and 2017 (with the inclusion of the instant filings budget increases).

Program	2015 Budget			2014/15 Budget Comparison			
	Approved <sup>3</sup>	Proposed	Difference	2014 Approved <sup>4</sup>	2015 Proposed	Difference	YOY Change
Residential Equipment <sup>1</sup>	\$ 47,077	\$ 947,077	\$ 900,000	\$ 1,377,165	\$ 947,077	\$ (430,088)	-31.2%
Residential Audit	\$ 302,151	\$ 302,151	\$ -	\$ 301,909	\$ 302,151	\$ 242	0.1%
<b>Total Residential</b>	<b>\$ 349,228</b>	<b>\$ 1,249,228</b>	<b>\$ 900,000</b>	<b>\$ 1,679,074</b>	<b>\$ 1,249,228</b>	<b>\$ (429,846)</b>	<b>-25.6%</b>
Nonresidential Equipment <sup>2</sup>	\$ 37,148	\$ 278,915	\$ 241,767	\$ 278,913	\$ 278,915	\$ 2	0.0%
Nonresidential Custom	\$ 31,236	\$ 31,236	-	\$ 31,239	\$ 31,236	\$ (3)	0.0%
Small Commercial Energy Audit	\$ 44,068	\$ 44,068	-	\$ 43,450	\$ 44,068	\$ 618	1.4%
<b>Total Nonresidential</b>	<b>\$ 112,452</b>	<b>\$ 354,219</b>	<b>\$ 241,767</b>	<b>\$ 353,602</b>	<b>\$ 354,219</b>	<b>\$ 617</b>	<b>0.2%</b>
<b>Total All Gas Programs</b>	<b>\$ 461,680</b>	<b>\$ 1,603,447</b>	<b>\$ 1,141,767</b>	<b>\$ 2,032,676</b>	<b>\$ 1,603,447</b>	<b>\$ (429,229)</b>	<b>-21.1%</b>

1) Proposed budget includes \$900,000 for continuing furnace rebates

2) Proposed budget includes a \$241,767 increase for furnaces

3) As approved in docket GE12-005

4) As approved in docket GE14-001 and the approved mid-year increase of \$550,142

Program	2015/16 Budget Comparison				2016/17 Budget Comparison			
	2015 Proposed	2016 Proposed	Difference	YOY Change	2016 Proposed	2017 Proposed	Difference	YOY Change
Residential Equipment <sup>1</sup>	\$ 947,077	\$ 947,158	\$ 81	0.0%	\$ 947,158	\$ 947,206	\$ 48	0.0%
Residential Audit	\$ 302,151	\$ 304,700	\$ 2,549	0.8%	\$ 304,700	\$ 307,289	\$ 2,589	0.8%
<b>Total Residential</b>	<b>\$ 1,249,228</b>	<b>\$ 1,251,858</b>	<b>\$ 2,630</b>	<b>0.2%</b>	<b>\$ 1,251,858</b>	<b>\$ 1,254,495</b>	<b>\$ 2,637</b>	<b>0.2%</b>
Nonresidential Equipment <sup>2</sup>	\$ 278,915	\$ 278,919	\$ 4	0.0%	\$ 278,919	\$ 278,918	\$ (1)	0.0%
Nonresidential Custom	\$ 31,236	\$ 31,632	\$ 396	1.3%	\$ 31,632	\$ 31,619	\$ (13)	0.0%
Small Commercial Energy Audit	\$ 44,068	\$ 44,865	\$ 797	1.8%	\$ 44,865	\$ 45,683	\$ 818	1.8%
<b>Total Nonresidential</b>	<b>\$ 354,219</b>	<b>\$ 355,416</b>	<b>\$ 1,197</b>	<b>0.3%</b>	<b>\$ 355,416</b>	<b>\$ 356,220</b>	<b>\$ 804</b>	<b>0.2%</b>
<b>Total All Gas Programs</b>	<b>\$ 1,603,447</b>	<b>\$ 1,607,274</b>	<b>\$ 3,827</b>	<b>0.2%</b>	<b>\$ 1,607,274</b>	<b>\$ 1,610,715</b>	<b>\$ 3,441</b>	<b>0.2%</b>

1) Budgets are \$900,000 larger than amounts currently approved in docket GE12-005 for inclusion of furnaces

2) Budgets are \$241,767 larger than amounts currently approved in docket GE12-005 for increase in number of furnace rebates issued

Staff agrees with MEC that furnaces should be included in both the residential and nonresidential equipment program. For the residential equipment program, Staff believes that the budget reduction (over last year's approved budget) is reasonable since MEC proposes to decrease the rebate amount for furnaces. Further, at the higher spending level in 2014 the residential equipment program proved to be cost-effective

with a TRC test at 1.22. Turning to the nonresidential equipment program, Staff believes the proposed budget is reasonable since that program was 21% under budget in 2014. In addition, the program proved to be cost-effective at the 2014 funding level with a TRC test result of 1.65.

**2015 ENERGY EFFICIENCY COST RECOVERY FACTORS**

Staff reviewed MEC’s calculations for the 2015 ECR factors and found the factors to be properly calculated. Further, MEC used the proper performance incentive amounts in the ECR factor calculations. Table 9 below provides the proposed 2015 ECR factors and the estimated annual change in a typical customer’s utility bill from the current ECR rates. Table 10 shows the estimated bill impact for a typical customer due to the ECR factors without taking into account 2014’s rates. Due to the large proposed increase for the 2015 residential gas ECR factor, staff provides a breakdown of the factor in Table 11.

Program	Class	2014 ECR Factor	Proposed ECR Factor	Difference	Average 2015 Usage	Estimated Bill Impact
<b>Electric</b>	Residential	\$ 0.00291	\$ 0.00120	\$ (0.00171)	13,607	\$ (23.27)
	Nonresidential	\$ 0.00047	\$ 0.00009	\$ (0.00038)	193,923	\$ (73.69)
<b>Gas</b>	Residential	\$ 0.00677	\$ 0.04942	\$ 0.04265	803	\$ 34.25
	Nonresidential	\$ 0.01387	\$ (0.00131)	\$ (0.01518)	5,174	\$ (78.54)

Program	Class	Proposed ECR Factor	Average 2015 Usage	Estimated Bill Impact
<b>Electric</b>	Residential	\$ 0.00120	13,607	\$ 16.33
	Nonresidential	\$ 0.00009	193,923	\$ 17.45
<b>Gas</b>	Residential	\$ 0.04942	803	\$ 39.68
	Nonresidential	\$ (0.00131)	5,174	\$ (6.78)

<b>Item</b>	<b>Rate</b>
2015 Proposed Budget	\$ 0.03453
Under Recovery in 2014 <sup>1</sup>	\$ 0.01414
2014 Incentive Over Recovery	\$ (0.00265)
2015 Proposed Incentive	\$ 0.00339
<b>Total ECR Factor</b>	<b>\$ 0.04942</b>

1) Under Recovery of \$436,101 in 2014 due to mid-year increase in budget of \$550,142 without a coincidental rate increase.

## **STAFF RECOMMENDATION**

Based on the discussion above, Staff makes the following recommendations to the Commission:

- 1) That the Commission approves MEC's proposed reduction in furnace rebates from \$600.00 to \$400.00;
- 2) That the Commission approves MEC's 2014 performance incentives in the amounts of \$8,041 for the electric program and \$124,207 for the gas program;
- 3) That the Commission approves MEC's proposed gas and electric budgets for years 2015 through 2017;
- 4) That the Commission approves MEC's true-up of 2014 actual expenditures and the proposed ECR factors for 2015;
- 5) That the Commission approves MEC's request to use 2015 budget dollars to pay outstanding furnace rebate applications received after December 31, 2014, which will provide continuity in the program for those customers who are expecting a rebate; and
- 6) Should the Commission decide to cap spending, then Staff recommends that the Commission consider requiring MEC to add a statement on its rebate application similar to either of the following:

"Rebates may not be available if all funding is spent for the year."

"Rebates are only accepted through November 1, 2015."

The purpose of including one (or both) of these statements on the rebate form is to prevent customer confusion. Staff has received a handful of calls from MEC customers over the past few years wanting to know if their rebate would be paid.