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Issues: DSM Cost-Recovery and
Program operation
Witness: Adam Bickford
Sponsoring Party: Missouri Department of
Natural Resources –
Division of Energy
Type of Exhibit: Direct Testimony
Case No.: ER-2011-0004

DIRECT TESTIMONY

OF

ADAM BICKFORD

MISSOURI DEPARTMENT OF NATURAL RESOURCES

DIVISION OF ENERGY

February 23, 2011

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

EMPIRE DISTRICT ELECTRIC COMPANY

RATE CASE

CASE NO. ER-2011-0004

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1 **I. Introduction**
2

3 **Q. Please state your name and business address.**

4 A. My name is Adam Bickford. My business address is Missouri Department of
5 Natural Resources, Division of Energy, 1011 Riverside Drive, P.O. Box 176,
6 Jefferson City, Missouri 65102-0176.
7

8 **Q. Please describe your educational background and employment
9 experience.**

10 A. I began work with the Missouri Department of Natural Resources Energy
11 Center in August, 2009. In my current position I am a Research Analyst. Prior
12 to working with Missouri Department of Natural Resources I was employed as
13 a program evaluator by Optimal Solutions Group, LLC in Hyattsville, Maryland;
14 the University of Missouri Extension Office of Social and Economic Data
15 Analysis in Columbia, Missouri; and the Smithsonian Institution in Washington
16 D.C. In these positions my responsibilities included the design and execution
17 of evaluation projects in the K-12 education and arts domains.

18 I received my B.A. degree in Sociology from the University of California,
19 Berkeley. I hold a Masters of Arts degree and a Doctor of Philosophy degree
20 in Sociology from the University of Chicago.
21

22 **Q. On whose behalf are you testifying?**

23 A. I am testifying on behalf of the Missouri Department of Natural Resources
24 (“MDNR”), an intervenor in these proceedings.

25 **Q. Have you previously testified before the Commission on behalf of the
26 Missouri Department of Natural Resources?**

1 A. Yes, I have. I testified on behalf of MDNR in the following cases before the
2 Commission:
3 Union Electric Company, d/b/a AmerenUE rate case, ER-2010-0036;
4 Kansas City Power and Light rate case, ER-2010-0355; and
5 KCP&L-Greater Missouri Operations rate case, ER-2010-0356.

6
7 **II. Purpose of Testimony**
8

9 **Q. What is the purpose of your direct testimony in these proceedings?**

10 A. The purpose of my testimony is to discuss Empire District Electric Company's
11 (Empire) Demand-Side Management portfolio and its operation in the 2009 and
12 2010 program years. Additionally, I will discuss the structure of Empire's
13 Customer Program Collaborative (CPC), and Empire's current regulatory asset
14 account.

15
16 **III. Demand Side Management Portfolio**
17
18

19 **Q. When was Empire's DSM portfolio started?**

20 A. Empire began planning and implementing its Demand-Side Management
21 (DSM) portfolio as part of the experimental Regulatory Plan authorized in Case
22 No. EO-2005-0263 (the "Regulatory Plan").

23 **Q. How is the scope of Empire's DSM portfolio determined?**

24 A. Empire's DSM portfolio is limited to the resources approved by its Customer
25 Program Collaborative ("CPC") pursuant to the Stipulation and Agreement
26 approved by the Missouri Public Service Commission ("Commission") in Case
27 No. EO-2005-0263¹. In the Stipulation and Agreement, the parties agreed that

¹ Missouri Public Service Commission, Case No. EO-2005-0263, *In the Matter of The Empire District Electric Company's Application for Certificate of Public Convenience and Necessity and Approval of an Experimental Regulatory Plan Related to Generation Plant*, Order Approving Stipulation and Agreement, Issued August 12, 2005.

1 the “Staff, Public Counsel, MDNR, Empire and any other interested non-IOU
 2 Signatory Party will serve as a collaborative (“Customer Program
 3 Collaborative” or “CPC”) that will make decisions pertaining to the
 4 development, implementation, monitoring and evaluation of Empire’s
 5 Affordability, Energy Efficiency and Demand Response Programs (Customer
 6 Programs).” Because of this agreement, Empire must seek approval of the
 7 CPC before implementing a DSM program.

8
 9 **Q. What programs are included in Empire’s DSM portfolio?**

10 A. When it started in 2005, the Empire DSM portfolio consisted of eight programs.
 11 One additional program was added in 2009. These programs are organized
 12 into two categories: (1) residential programs and (2) commercial and industrial
 13 programs. Empire’s programs are listed in the table below and in Schedule
 14 AB2011-1.

15

Program Type	Program Name	Program Approval Date
Residential	Low Income Weatherization	September 2006
Residential	Low Income New Homes	April 2007
Residential	High Efficiency Residential Central Air Conditioning Rebate Program	June 2007
Residential	Residential Lighting (CFL)	April 2010
Residential	Energy Star New Homes	April 2009
Residential	Home Performance with Energy Star	August 2009
Commercial and Industrial	Missouri Commercial and Industrial Facility Rebate Program	May 2007
Commercial and Industrial	Building Operator Certification	February 2008
Commercial and Industrial	Interruptible Tariff	February 2009

16
 17 Empire’s DSM portfolio currently includes the following programs:

18 **Low-Income Weatherization Program** is designed to provide energy
 19 education and weatherization assistance to lower income customers. This
 20 Program is intended to assist customers through conservation, education

1 and weatherization in reducing their use of energy and to reduce the level
2 of bad debts experienced by Empire.²

3
4 **Low-Income New Home Program** is designed to promote energy
5 efficiency in affordable new homes for low income customers served under
6 Empire’s Residential Service Schedule RS. This Program is intended as a
7 partnership between Empire and non-profit organizations, including Habitat
8 for Humanity, and local government community development
9 organizations.³

10
11 **High Efficiency Residential Central Air Conditioning Rebate Program**
12 is designed to encourage more effective utilization of electric energy
13 through the use of more energy efficient residential central air conditioning
14 equipment and heat pumps by providing a financial incentive to customers
15 in the form of a rebate.⁴

16
17 **Residential CFL Program** is designed to encourage the replacement of
18 less efficient energy consuming lights by providing Energy Star® compact
19 fluorescent light (CFL) bulbs to certain residential customers.⁵ Initially this
20 program was administered by the Midwest Energy Efficiency Alliance
21 (MEEA), but MEEA has since discontinued its program. In its place, in
22 2010 Empire sent packages of CFL bulbs to its residential customers in the
23 Branson area.

24
25 **Energy Star New Homes** is designed to encourage the construction of
26 homes to meet the ENERGY STAR® Homes guidelines.⁶

27
28 **Home Performance with ENERGY STAR®** is designed to increase the
29 awareness of the opportunities for benefits to existing homes through audits
30 which lead to improvements ranging from improved levels of insulation to
31 decreased air leakage.⁷

32
33 **Missouri Commercial and Industrial Facility Rebate Program** designed
34 to encourage more effective utilization of electric energy through energy
35 efficiency improvements in the building shell or through the replacement of
36 inefficient electrical equipment with efficient electrical equipment, by
37 providing a rebate for a portion of the costs of the improvements and for
38 energy audit and the related upgrades that improve efficient use of
39 electricity.⁸

² *Ibid.*, page 8c.

³ *Ibid.*, page 8d.

⁴ *Ibid.*, page 8e – 8f.

⁵ *Ibid.*, page 8b.

⁶ Empire District Electric Company P.S.C. MO No. 5, Section 4, page 8h.

⁷ *Ibid.*, page 8i – 8j.

⁸ Empire District Electric Company P.S.C. MO No. 5, Section 4, page 8a – 8a.1.

1 **Building Operator Certification (“BOC”)** is designed to encourage
2 building operator certification through the Northwest Energy Efficiency
3 Council’s BOC curriculum. This curriculum consists of Level 1 and Level 2
4 programs which are geared toward the operators of institutional,
5 commercial, and industrial facilities. Empire offers this program to
6 Company’s commercial and industrial customers. This group of customers
7 excludes the Large Power (“LP”) class.⁹

8
9 **Interruptible Tariff** is a direct demand response program for all industrial
10 customers, including customers in the Large Power (“LP”) class.¹⁰
11

12 These programs tend to focus on building improvements. Two
13 programs address new construction (e.g., Low-Income New Homes and
14 Energy Star Homes), two programs address residential retrofits (Low-Income
15 Weatherization and Home Performance with Energy Star) and two of the
16 commercial-industrial programs address building operations. The other
17 programs are rebate programs for residential equipment purchases for central
18 air conditioning units and for compact florescent light bulbs (CFL), and a
19 demand response program for industrial customers. Schedule AB2011-2
20 contains the implementation schedule for each program between October,
21 2006 and April 2014. Programs were all designed to operate for five years;
22 however, Empire implemented the various programs at different times, so
23 program impact was staggered over the five year period of the Regulatory
24 Plan. As each DSM program was designed and approved by the CPC, Empire
25 submitted proposed tariff sheets to the Commission for approval to add each
26 DSM program to its tariff. Empire will fulfill the five year commitment to fund
27 the Residential Weatherization Program in September 2011. Two programs,
28 the Low Income New Home Program and the High Efficiency Central Air
29 Condition Program, will complete five years in 2012. By August 2014, all of the
30 programs will have completed the five program years.

⁹ *Ibid.*, page 8g.

¹⁰ *Ibid.*, Revised sheet 4

1 **Q. Does MDNR recommend that Empire continue its DSM Programs after the**
2 **intended five years of the Regulatory Plan?**

3 A. The programs should be evaluated and, if cost-effective, should be continued.
4 DSM program success takes time. It is generally recognized that at least a
5 year, and sometimes more, is spent ramping up a program before it begins to
6 be truly beneficial to consumers and energy savings begin in earnest. Empire
7 should make the long-term commitment to support its DSM portfolio.

8 **Q. How would you describe Empire's DSM portfolio in light of the DSM**
9 **portfolios of the other investor-owned electric utilities in the state?**

10 A. MDNR monitors the DSM portfolios of each of the four investor-owned electric
11 utilities in Missouri, KCP&L, KCP&L-Greater Missouri Operations (GMO),
12 Ameren Missouri and Empire by participating in each utility's DSM collaborative
13 or advisory group. Of these Empire's DSM portfolio has the fewest programs,
14 sponsoring nine programs compared to 14 for KCP&L and KCP&L-GMO and
15 16 for Ameren Missouri. Additionally, Empire's portfolio has been rolled out
16 more slowly than the KCP&L and the Ameren portfolios.

17 **Q. Please elaborate.**

18 A. KCP&L's DSM portfolio started in the same year as Empire's. Both Empire's
19 and KCP&L's portfolios were begun as part of Regulatory Plans approved in
20 2005 as part of the construction of the Iatan 2 coal plant.¹¹ During the
21 construction period of the plan KCP&L designed and implemented a
22 comprehensive DSM portfolio consisting of multiple programs addressing all
23 segments of its customer base, and met its energy savings goals. Ameren
24 Missouri's DSM portfolio was established in its 2007 Integrated Resource Plan
25 (IRP). In the three years of its plan Ameren has implemented a similarly

¹¹ Empire has an agreement with KCP&L to purchase a preferred capacity of 150 MW and a minimum allocation of 100 MW ownership in Iatan 2.

1 comprehensive DSM portfolio. Both KCP&L and Ameren designed and
2 implemented their programs in a relatively short period of time, and each utility
3 has had to substantially redesign individual programs to account for
4 unexpected problems with contractors and trade allies.

5 In contrast, Empire has implemented its portfolio more slowly. Despite
6 being at the end of a five-year Regulatory Plan, the majority of the programs
7 have been fully operational for fewer than three years.

8 **Q. How would you characterize the level of participation and spending in**
9 **Empire's DSM portfolio budget?**

10 A. The information about program participation, budget, and spending levels has
11 been taken from Empire's Customer Program Collaborative (CPC) December
12 3, 2010 report. As seen in Schedule AB2011-1, in 2009, the last full year that
13 participation levels and budget amounts were available, Empire's level of
14 program spending was 67.5% of its 2009 program budget. During 2009,
15 Empire budgeted \$1,316,466 for its DSM portfolio, but spent \$888,525. The
16 YTD expenditures for 2010 were about the same magnitude, 63.6%. The
17 company budgeted \$574,217 and spent \$365,301.

18 Calculating the number of participants in 2009 and 2010 is complicated
19 by the participation information from the Residential CFL program. In the 2009
20 accounting of participants, Empire has presented the number of CFL light bulbs
21 distributed, rather than the number of people receiving light bulbs. Because of
22 this, the participation data described here does not include the Residential CFL
23 data. In 2009, Empire expected 1,060 participants, while 641 customers
24 actually participated in the various programs, for a participation rate of 60.5%.
25 For the YTD information from 2010, the participation rate was 58.3%.

26 Empire shares many of the program designs with other utilities, but does
27 not show comparable levels of spending or customer participation. MDNR's

1 review of other utilities' experiences implementing their DSM portfolios, in
2 cases ER-2010-0355 (KCP&L), ER-2010-0356 (KCP&L--GMO) and ER-2011-
3 0028 (Ameren Missouri), suggests that these utilities have been able to
4 encourage customers to participate in their energy efficiency programs.

5 **Q. How would you characterize the level of energy savings attributed to**
6 **Empire's DSM portfolio?**

7 A. It is very difficult to assess the level of savings due to Empire's DSM portfolio.
8 Empire does not regularly present energy or demand savings estimates in its
9 collaborative meetings. As of December, 2010 only the Low Income
10 Weatherization, the Central Air Conditioner and the Building Operator
11 Certification programs have produced process or impact evaluations.

12 **Q. Has Empire met the projected savings goals for its DSM portfolio?**

13 A. It appears that Empire is not approaching the level of program participation or
14 spending that Empire has proposed in its document provided by the CPC.
15 Empire is in a unique service territory, and it is the smallest of the four investor-
16 owned utilities in the state. Nevertheless, it does not appear that Empire has
17 made much progress with the DSM portfolio over the five years of its
18 Regulatory Plan.

19 In the five years since the establishment of Empire's Regulatory Plan,
20 the policy context surrounding energy efficiency in Missouri has developed
21 quite a bit. There are state policy goals embodied in legislation such as the
22 MEEIA, and a developing consensus that pursuing savings goals through
23 demand side management and energy efficiency programs are worthwhile
24 endeavors. This developing consensus includes considerations for cost
25 recovery, performance incentives, and an understanding of the need for a
26 sustained program effort to guarantee that the public realizes the benefits of
27 energy savings.

1

2 **Q. Does MDNR believe Empire’s DSM portfolio is adequate?**

3 A. No. Empire should meet the savings goal established in the Missouri Energy
4 Efficiency Investment Act (MEEIA)¹², i.e., “to implement commission-approved
5 demand-side programs proposed pursuant to this section with a goal of
6 achieving all cost-effective demand-side savings.” The proposed MEEIA rules
7 present a series of interim savings goals that utilities should use, as well as
8 potential studies, to demonstrate progress towards achieving the intent of
9 MEEIA (see 4 CSR 240-20.094(2)(A), and 4 CSR 240-20.094(2)(B)). Empire
10 is still required to satisfy the law, regardless of whether final rules have been
11 approved, and should be directed by the Commission to design and implement
12 a portfolio of programs that meet its primary policy goal.

13 **Q. How has the policy context surrounding energy efficiency changed since**
14 **the beginning of Empire’s Regulatory Plan?**

15 A. The Missouri Legislature passed MEEIA in 2009. The language of the law
16 establishes a policy goal for electric utilities “to implement commission-
17 approved demand-side programs proposed pursuant to this section with a goal
18 of achieving all cost-effective demand-side savings”. This law also allows
19 utilities to propose a methodology to achieve timely cost recovery for program
20 expenses and to receive a performance incentive for sustained program
21 performance.

22 The Commission is promulgating rules that will provide a process for
23 seeking approval of a DSM portfolio and an accompanying demand-side
24 programs investment mechanism (“DSIM”). The DSIM will be a utility’s plan to
25 recover program costs, receive incentives for high performance, and possibly
26 recover lost revenues. These rules, however, may not be in effect for several

¹² Section 393.1124, RSMo, Paragraph 4.

1 months. Empire should not wait for final rules to be adopted before
2 implementing a more comprehensive and aggressive DSM portfolio and
3 savings goals.

4
5 **IV. Recommended Changes to Empire’s Collaborative Structure and DSM**
6 **Portfolio**

7
8 **Q. Empire’s Customer Program Collaborative (CPC) is a “voting**
9 **collaborative.” Does MDNR have any recommendations for revising the**
10 **structure of this collaborative?**

11 A. Empire’s Customer Program Collaborative (CPC) was established by Case No.
12 EO-2005-0263. The CPC is scheduled to end with the conclusion of its
13 Regulatory Plan. MDNR recommends that the CPC continue beyond the
14 completion of Empire’s Regulatory Plan, but that its structure change from a
15 voting collaborative to an advisory collaborative. MDNR’s experience with
16 DSM collaborative groups over the past five years supports the value of
17 advisory groups over voting groups. MDNR’s experience shows that Advisory
18 collaborative groups facilitate better communication between a utility and the
19 members of the non-utility stakeholder groups.

20 **Q. Addressing issues of cost recovery, how does Empire currently recover**
21 **the costs of its DSM portfolio?**

22 A. Under the terms of its Regulatory Plan, Empire books its program costs into a
23 regulatory asset account. The regulatory asset account is amortized over ten
24 (10) years.

25 **Q. Does MDNR have a preferred method of cost recovery?**

26 A. MDNR has been an advocate for expensing of DSM program costs as a
27 method for encouraging DSM program investments and achieving savings from

1 such investments. In recent rate cases, MDNR has recommended expensing
2 program costs and supported utilities' requests to shorten the term of their
3 regulatory asset accounts for program expenses incurred after the conclusion
4 of their current rate cases.

5 **Q. Does MDNR have any recommendations about individual programs in**
6 **Empire's DSM portfolio?**

7 A. Yes. According to Schedule AB2011-2, the tariffs authorizing Empire's Low-
8 income Weatherization program are scheduled to expire in 2011. Empire
9 should re-file the tariff authorizing this program to continue without a disruption
10 in services at least at the current levels of funding and in collaboration with the
11 CPC, determine whether additional funding is needed.

12 The State of Missouri received additional funding in 2009 for the Federal
13 Low-Income Weatherization Assistance Program via the American Recovery
14 and Reinvestment Act ("ARRA"). Missouri was awarded \$128 million dollars
15 for low income weatherization to be used by the end of March 2012. This
16 additional funding is allowing the weatherization efforts for low income citizens
17 to provide much needed improvements to many more residences.

18 Despite this funding large increase in funding for low-income
19 weatherization, Schedule AB2011-1 shows that, for 2010, Empire spent 70.4%
20 of its budgeted funds, indicating that the Community Action Agencies
21 implementing Empire's Weatherization program are relying on both utility and
22 federal funds. Low income weatherization funds provided through utility
23 programs like Empire's continue to be essential and will be even more
24 important once the ARRA funding ends in March, 2012.

25 Additionally, Empire does not currently have a Residential CFL Lighting
26 program. Empire and the CPC should investigate program designs to facilitate
27 the distribution of CFLs or other efficient lighting improvements.

1 **Q. Please summarize MDNR's recommendations in this case.**

2 A. MDNR makes five recommendations in this case:

- 3 1. The Commission should direct Empire to continue and expand the
4 programs in its DSM portfolio. At the very least, Empire should fully
5 implement programs and budgeted funds in its current portfolio. Then
6 Empire should be directed to work towards implementation of programs to
7 achieve all cost-effective savings.
- 8 2. Empire's Customer Programs Collaborative should be reauthorized to
9 continue after the completion of the Regulatory Plan. The structure of the
10 collaborative should change from a voting collaborative to an advisory
11 collaborative.
- 12 3. MDNR supports expensing of DSM program costs.
- 13 4. Empire's Low-Income Weatherization program should be continued beyond
14 the expiration date of its current tariff at least at current levels of funding and
15 in collaboration with the CPC, determine whether additional funding is
16 needed.
- 17 5. Empire's CPC should redesign its Residential CFL Lighting program,
18 develop tariffs that will implement a redesigned efficient lighting program as
19 soon as possible and expand the program to achieve cost-effective savings.

20 **Q. Does this complete your testimony?**

21 A. Yes. Thank you.

22

Schedule AB2011-1: Participants and Expenditures: Empire DSM Portfolio
2009 Program Year Participants

Program Name	Program Approval Date	Start Date	End Date	Units	Expected Participants	Actual Participants	Difference (Actual - Expected)	Percent of Participation Realized
Residential Programs								
Low income Weatherization	September 2006	October 2009	September 2010	Homes	125	193	68	
Low income New Homes	April 2007	April 2009	March 2010	Homes	10	2	-8	
High Efficiency Residential Central Air Conditioning Rebate Program	June 2007	June 2009	May 2010	CAC Units	780	344	-436	
Residential Lighting (CFL)	April 2010	October 2009	December 2010	Light bulbs	30,981	46,374	15,393	
Energy Star Homes	April 2009	April 2009	March 2010	Homes	0	15	15	
Home Performance with Energy Star	August 2009	September 2009	August 2010	Homes	0	19	19	
Commercial and Industrial								
C&I Rebate	May 2007	May 2009	April 2010	Rebates	125	57	-68	
Building Operator Certification	February 2008	February 2009	January 2010	Operators	20	9	-11	
Interruptible Tariff	February 2009	2009	2010	Contracts	0	2	2	
Total					32,041	47,015	14,974	146.7%
Total without lighting					1,060	641	-419	60.5%

Source: "Progress Report for Empire District Electric DSM Programs", Customer Program Collaborative, December 3, 2010

2009 Program Year Expenditures

Program Name	Program Approval Date	Start Date	End Date	Units	Total Budgeted Amount	Actual Amount	Difference (Actual - Expected)	% of Budget Spent
Residential								
Low income Weatherization	September 2006	October 2009	September 2010	Homes	\$218,510	\$167,770	(\$50,740)	76.8%
Low income New Homes	April 2007	April 2009	March 2010	Homes	\$10,500	\$864	(\$9,636)	8.2%
High Efficiency Residential Central Air Conditioning Rebate Program	June 2007	June 2009	May 2010	CAC Units	\$377,000	\$157,513	(\$219,487)	41.8%
Residential Lighting (CFL)	April 2010	October 2009	December 2010	Light bulbs	\$131,956	\$145,022	\$13,066	109.9%
Energy Star Homes	April 2009	April 2009	March 2010	Homes	\$80,000	\$18,000	(\$62,000)	22.5%
Home Performance with Energy Star	August 2009	September 2009	August 2010	Homes	\$54,500	\$16,922	(\$37,578)	31.0%
Commercial and Industrial								
C&I Rebate	May 2007	May 2009	April 2010	Rebates	\$411,000	\$355,387	(\$55,613)	86.5%
Building Operator Certification	February 2008	February 2009	January 2010	Operators	\$33,000	\$14,903	(\$18,097)	45.2%
Interruptible Tariff	February 2009	2009	2010	Contracts	\$0	\$12,144	\$12,144	
Total					\$1,316,466	\$888,525	(\$427,941)	67.5%

Source: "Progress Report for Empire District Electric DSM Programs", Customer Program Collaborative, December 3, 2010

2010 YTD Participants

Program Name	Start Date	End Date	Months	Units	Expected Participants	Actual Participants	Difference (Actual - Expected)	Percent of Participation Realized
Residential								
Low income Weatherization	October 2010	December 2011	1	Homes	8	21	13	
Low income New Homes	April 2010	March 2011	7	Homes	6	0	-6	
High Efficiency Residential Central Air Conditioning Rebate Program	June 2010	May 2011	5	CAC Units	325	257	-68	
Energy Star Homes	April 2010	March 2011	7	Homes	127	20	-107	
Home Performance with Energy Star	September 2010	August 2011	2	Homes	29	2	-27	
Commercial and Industrial								
C&I Rebate	May 2010	April 2011	6	Rebates	63	31	-32	
Building Operator Certification	February 2010	January 2011	9	Operators	15	0	-15	
Interruptible Tariff	2010	2011	5	Contracts	0	3	3	
Total					573	334	-239	58.3%

Source: "Progress Report for Empire District Electric DSM Programs", Customer Program Collaborative, December 3, 2010

2010 YTD Expenditures

Program Name	Start Date	End Date	Months	Units	Total Budgeted Amount	Actual Amount	Difference (Actual - Expected)	% of Budget Spent
Residential								
Low income Weatherization	October 2010	December 2011	1	Homes	\$14,567	\$10,255	(\$4,312)	70.4%
Low income New Homes	April 2010	March 2011	7	Homes	\$10,500	\$0	(\$10,500)	0.0%
High Efficiency Residential Central Air Conditioning Rebate Program	June 2010	May 2011	5	CAC Units	\$158,125	\$135,737	(\$22,388)	85.8%
Energy Star Homes	April 2010	March 2011	7	Homes	\$143,733	\$30,819	(\$112,914)	21.4%
Home Performance with Energy Star	September 2010	August 2011	2	Homes	\$15,917	\$800	(\$15,117)	5.0%
Commercial and Industrial								
C&I Rebate	May 2010	April 2011	6	Rebates	\$206,250	\$158,210	(\$48,040)	76.7%
Building Operator Certification	February 2010	January 2011	9	Operators	\$25,125	\$1,190	(\$23,935)	4.7%
Interruptible Tariff	2010	2011	5	Contracts	\$0	\$28,290	\$28,290	
Total					\$574,217	\$365,301	(\$208,916)	63.6%

Source: "Progress Report for Empire District Electric DSM Programs", Customer Program Collaborative, December 3, 2010

Schedule AB2011-2: Implementation Schedule: Empire DSM Portfolio

	Tariff Effective Date	Start Date	End Date	Year									
				2006	2007	2008	2009	2010	2011	2012	2013	2014	
Low Income Weatherization	9/5/2006	October, 2006	September, 2011										
Low Income New Homes	4/4/2007	April, 2007	March, 2012										
High Efficiency Residential Central Air Conditioning Rebate Program	6/4/2007	May, 2007	April, 2012										
Residential Lighting (CFL)	9/5/2006	October, 2009	September, 2010										
Energy Star New Homes	4/20/2009	May, 2009	April, 2014										
Home Performance with Energy Star	8/8/2009	September, 2009	August, 2014										
Missouri Commercial and Industrial Facility Rebate Program	5/7/2007	June, 2007	May, 2012										
Building Operator Certification	2/21/2008	February, 2008	January, 2013										
Interruptible Tariff	2/19/2009	March, 2009	February, 2014										