

Exhibit No.:
Issues: Demand-Side Programs
Witness: John A. Rogers
Sponsoring Party: MO PSC Staff
Type of Exhibit: Direct Testimony
Case Nos.: EO-2015-0240 and
EO-2015-0241
Date Testimony Prepared: December 11, 2015

MISSOURI PUBLIC SERVICE COMMISSION

COMMISSION STAFF DIVISION

JOHN A. ROGERS

DIRECT TESTIMONY

KANSAS CITY POWER & LIGHT COMPANY

CASE NO. EO-2015-0240

KCP&L GREATER MISSOURI OPERATIONS COMPANY

CASE NO. EO-2015-0241

*Jefferson City, Missouri
December 2015*

Staff Exhibit No. 201
Date 1-12-16 Reporter ME
File No. EO-2015-0240
EO-2015-0241

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

In the Matter of Kansas City Power & Light Company's Filing for Approval of Demand-Side Programs and for Authority to Establish a Demand-Side Programs Investment Mechanism)
)
)
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)

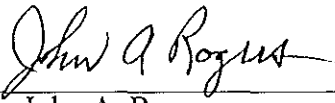
Case No. EO-2015-0240

AFFIDAVIT OF JOHN A. ROGERS

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

COMES NOW, John A. Rogers and on his oath declares that he is of sound mind and lawful age; that he contributed to the attached Direct Testimony; and that the same is true and correct according to his best knowledge and belief.

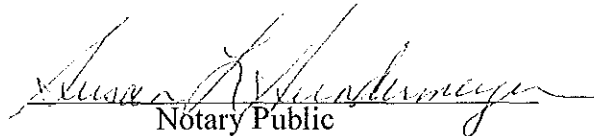
Further the Affiant sayeth not.



John A. Rogers

Subscribed and sworn to before me this 9th day of December, 2015.

SUSAN L. SUNDERMEYER
Notary Public - Notary Seal
State of Missouri
Commissioned for Callaway County
My Commission Expires: October 28, 2018
Commission Number: 14942086



Notary Public

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JOHN A. ROGERS

DIRECT TESTIMONY

KANSAS CITY POWER & LIGHT COMPANY

CASE NO. EO-2015-0240

KCP&L GREATER MISSOURI OPERATIONS COMPANY

CASE NO. EO-2015-0241

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INCLUDING CUSTOMERS WHO DO NOT PARTICIPATE IN PROGRAMS 2**

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1 JOHN A. ROGERS

2 DIRECT TESTIMONY

3 KANSAS CITY POWER & LIGHT COMPANY

4 CASE NO. EO-2015-0240

5 KCP&L GREATER MISSOURI OPERATIONS COMPANY

6 CASE NO. EO-2015-0241

7 Q. Please state your name and business address.

8 A. My name is John A. Rogers, and my business address is Missouri Public
9 Service Commission, P. O. Box 360, Jefferson City, Missouri 65102.

10 Q. What is your present position at the Missouri Public Service Commission
11 (“Commission”)?

12 A. I am the Utility Regulatory Manager in the Energy Resources Department of
13 the Commission Staff Division.

14 Q. Please state your educational background and experience.

15 A. These are contained in Schedule JAR-D-1.

16 Q. Would you please summarize the purpose of your direct testimony?

17 A. I will provide support for the following provisions within the Non-Unanimous
18 Stipulation and Agreement (“Stipulation”) filed on November 23, 2015, in Case Nos.
19 EO-2015-0240 and EO-2015-0241:

- 20 1. Each utility’s Plan¹ is expected to provide benefits to all customers, including
21 customers who do not participate in programs;²

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23
24
25
26
27

¹ Each utility’s Plan consists of its demand-side programs and its demand-side programs investment mechanisms and other terms and conditions described in the Stipulation.

² See Paragraph 3 of the Stipulation.

- 1 2. Each utility's energy and demand savings targets; and
- 2 3. Regulatory flexibility contained in paragraph 13 of the Stipulation.

3 **PLAN IS EXPECTED TO PROVIDE BENEFITS TO ALL CUSTOMERS,**
4 **INCLUDING CUSTOMERS WHO DO NOT PARTICIPATE IN PROGRAMS**

5 Q. Has Staff performed an analysis of customers' benefits and customers' costs -
6 including the costs for the throughput disincentives and earnings opportunity - which are
7 expected from implementation of the MEEIA³ Programs and demand-side programs
8 investment mechanism ("DSIM") described in the Stipulation?

9 A. Yes. Schedule JAR-D-2 contains the results of Staff's analysis for Kansas City
10 Power & Light Company ("KCP&L") and for KCP&L Greater Missouri Operations Company
11 ("GMO"). Please note that all dollars in Schedule JAR-D-2 are discounted dollars using the
12 Company's weighted average cost of capital of 6.584% except for participant incentives and
13 net participant costs which are discounted using an assumed customer cost of borrowing
14 money of 10%.

15 Q. Please discuss the process you used to perform the analysis contained in
16 Schedule JAR-D-2.

17 A. Schedule JAR-D-2 has four separate sections which present the energy
18 savings, demand savings, costs and benefits for the entire portfolio, residential programs and
19 business programs for the Cycle 2 Applications, and the Stipulation, including:

- 20 1. "Benefits and Costs Summary" contains data Staff obtained from the Company
21 and the Company's work papers;⁴

³ MEEIA is the Missouri Energy Efficiency Investment Act of 2009 contained in § 393.1075.

⁴ DSMore® batch files.

- 1 2. "Customers as a Whole" represents all customers, i.e., participating customers
2 and non-participating customers combined, which is normally the only way the
3 portfolio residential and business market segments are analyzed;
- 4 3. "Non-Participating Customers" represents all customers who do not participate
5 directly in one or more programs; and
- 6 4. "Participating Customers" represents all customers who participate directly in
7 one or more programs.

8 Q. Referring to the analyses that you performed in Schedule JAR-D-2, please
9 explain the meaning of the letters and equations in the left column of Schedule JAR-D-2.

10 A. Rows with only one letter contain values Staff obtained from the Company.⁵
11 Rows with equations provide calculations used to determine the amounts related to
12 customers' benefits and costs for the Staff's analysis.

13 Q. In your opinion, what is the most significant data from Staff's analysis in
14 Schedule JAR-D-2?

15 A. The most significant data from Schedule JAR-D-2 is included in the charts at
16 the bottom of each page of Schedule JAR-D-2, specifically concerning the non-participating
17 customers' benefits per costs ratios for the Stipulation of 1.58, 1.98, 1.64 and 1.95⁶ for
18 KCP&L residential customers, KCP&L business customers, GMO residential customers and
19 GMO business customers, respectively.

20 Q. How do the non-participating customers' ratios support compliance with the
21 MEEIA statutory requirement that programs provide benefits to all customers?

⁵ Values are also contained in the DSMore[®] batch files for each program.

⁶ These values are represented by the fourth bar in each chart.

1 A. MEEIA states, in part:

2 The commission shall permit electric corporations to implement
3 commission-approved demand-side programs proposed pursuant to this
4 section with a goal of achieving all cost-effective demand-side savings.
5 Recovery for such programs shall not be permitted unless the programs
6 are approved by the commission, *result in energy or demand savings*
7 *and are beneficial to all customers in the customer class in which the*
8 *programs are proposed, regardless of whether the programs are*
9 *utilized by all customers.* § 393.1075.4

10 [Emphasis added]

11
12
13 Benefits per costs ratios greater than 1.00 indicate that there is an expectation that the present
14 value of customer benefits will exceed the present value of customer costs. However, there is
15 uncertainty and risk associated with expected customer benefits. Because expected benefits
16 occur over the expected life of each measure (up to 20 years) and are based upon "deemed"
17 energy and demand savings, which is a static baseline for determination of annual energy and
18 demand savings from each energy efficiency measure, and "deemed" avoided costs for each
19 energy efficiency measure, there are no guarantees on the realization of net benefits. On the
20 other hand, customers will certainly pay all program costs and throughput disincentive costs
21 "contemporaneously" in years 1, 2 and 3 and will certainly pay any Company earnings
22 opportunity in years 5 and 6.

23 While benefits per costs ratios close to 1.00 represent a very risky proposition for
24 customers, the higher the benefits per costs ratios, the less risky the programs are expected to
25 be for customers. For instance, for KCP&L non-participating residential customers, the
26 benefits per costs ratio of 1.58 results from expected benefits of \$55 million divided by
27 expected costs of \$35 million, and expected net benefits are \$20 million. Similarly, for GMO
28 non-participating residential customers, the benefits per costs ratio of 1.64 results from

1 expected benefits of \$64 million divided by expected costs of \$39 million, and expected net
2 benefits are \$25 million.

3 Q. Are the programs and DSIMs in the Stipulation expected to increase overall
4 net benefits for non-participating customers relative to the programs and DSIMs in the
5 Company's Applications? Please explain.

6 A. Yes. Table 1 contains the benefits, costs, and benefits per costs ratios for non-
7 participating customers in the Company's Applications and in the Stipulation and the relative
8 increase in the benefits per costs ratios:

Table 1

KCPL Non-Participating Customers	Residential		Business	
	Application	Stipulation	Application	Stipulation
Expected Benefits	\$ 46	\$ 55	\$ 83	\$ 83
Customers' Costs	\$ 41	\$ 35	\$ 47	\$ 42
Customers' Net Benefits	\$ 5	\$ 20	\$ 36	\$ 41
Benefits / Costs	1.13	1.58	1.75	1.98
% Increase Benefits / Costs	40%		13%	

GMO Non-Participating Customers	Residential		Business	
	Application	Stipulation	Application	Stipulation
Expected Benefits	\$ 59	\$ 64	\$ 75	\$ 75
Customers' Costs	\$ 45	\$ 39	\$ 44	\$ 39
Customers' Net Benefits	\$ 15	\$ 25	\$ 31	\$ 37
Benefits / Costs	1.33	1.64	1.72	1.95
% Increase Benefits / Costs	24%		13%	

9
10 The data in Table 1 is evidence that the Stipulation provides an expectation of
11 increased net benefits for non-participating customers of KCP&L and GMO.

12 Q. What is the most noteworthy part of Table 1 and why?

13 A. The 40% increase in the benefits per costs ratio for KCP&L's non-participating
14 residential customers is most noteworthy, because the 1.13 benefits per costs ratio in the
15 Application for this customer class is a very low ratio and would still be a serious concern if

1 changes to the demand-side programs and DSIM for KCP&L had not been agreed to in the
2 Stipulation.

3 Q. What conclusion do you make as a result of Staff's analysis of customers'
4 benefits and customers' costs - including the costs for the throughput disincentives and the
5 Company's earnings opportunities?

6 A. The benefits per costs ratios in Table 1 and in Schedule JAR-D-2 demonstrate
7 that the Stipulation's demand-side programs and DSIMs have materially improved as a result
8 of the agreements in the Stipulation. The Stipulation's demand-side programs and DSIMs are
9 clearly expected to provide benefits for all KCP&L and GMO customers, even those
10 customers who do not participate directly in one or more programs.

11 **ENERGY AND DEMAND SAVINGS TARGETS**

12 Q. Have you compared the energy and demand savings targets in the Stipulation
13 with the energy and demand savings targets in the Applications of KCP&L and GMO?

14 A. Yes. Schedule JAR-D-3 contains Staff's comparison.

15 Q. Why have some of the energy and demand savings targets in Schedule
16 JAR-D-3 significantly changed in the Stipulation from the energy and demand savings targets
17 in the Applications?

18 A. Schedule JAR-D-3 highlights in blue the savings targets for the Demand
19 Response Incentive programs and for the Home Energy Reports programs and includes a
20 footnote explaining that all changes to these programs are due to the Stipulation's proper
21 accounting of the energy and demand savings "persistence" from one year to the next for
22 program measures with a one year measure life. Thus, there is actually no change in the
23 annual energy and demand savings for the Demand Response programs and for the Home

1 Energy Reports programs in the Application and the Stipulation, but only a change in the way
2 the cumulative annual energy and demand savings are accounted for in the energy and
3 demand savings targets in the Applications and the Stipulation.

4 Schedule JAR-D-3 highlights in yellow the savings for the Home Lighting Rebate
5 program and includes a footnote explaining that all CFLs have been removed from the
6 program as a result of the negotiated Stipulation. CFLs provide very low benefits in Cycle 2
7 due to the changes in the EISA lighting standards beginning in 2016. By shifting program
8 spending away from CFLs to more beneficial HVAC measures in the Whole House
9 Efficiency program, the Stipulation has improved the net benefits for residential customers of
10 both KCP&L and GMO.

11 Finally, Schedule JAR-D-3 highlights in green the savings targets for the Income-
12 Eligible Multifamily program, which was enhanced as a result of the negotiated Stipulation.

13 Q. Are the Stipulation's demand-side programs expected to achieve the goals of
14 MEEIA? Please explain.

15 A. Yes. The Stipulation's demand-side programs are cost-effective as a result of
16 the total resource cost ("TRC") test values of 1.68⁷ and 1.81⁸ at the portfolio level for
17 KCP&L and GMO, respectively. The Stipulation's demand-side programs and DSIMs are
18 expected to provide benefits to all customers, even those customers who do not participate
19 directly in the programs. Finally, the Stipulation's demand-side programs approximate the
20 demand-side resources for the first three years of the 20-year adopted preferred resource plans
21 of KCP&L and GMO in File Nos. EO-2015-0254 and EO-2015-0252, respectively.

⁷ Stipulation's Appendix E, Page 2 of 2.

⁸ Stipulation's Appendix E, Page 1 of 2.

1 **REGULATORY FLEXIBILITY**

2 Q. Please explain why, in Staff's opinion, Commission approval of the regulatory
3 flexibility in paragraph 13 of the Stipulation is just and reasonable for the Company and for
4 customers.

5 A. In Staff's opinion, paragraph 13 is just and reasonable for the Company
6 because paragraph 13 allows the Company to terminate all programs – and not selected
7 program(s) – after the Company makes a demonstration that changed factors or circumstances
8 have materially negatively impacted the economic viability of such programs. Also, most
9 significantly, under MEEIA an electric utility's offering of demand-side programs is
10 voluntary.

11 In Staff's opinion, paragraph 13 is just and reasonable for the customer because the
12 Company will notify customers⁹ of discontinuance by publication no less than thirty (30) days
13 prior to the effective date of such discontinuance in newspaper(s) and will honor
14 commitments made to MEEIA Cycle 2 program participants prior to the effective date of the
15 discontinuance. Further, the Company will forfeit any recovery of its earnings opportunity in
16 connection with such programs but will continue to collect through the DSIM mechanism:
17 (1) Program Costs incurred in delivering programs for commitments made by the Company to
18 program participants prior to the effective date of the discontinuance, and (2) Throughput
19 Disincentive related to energy savings delivered through the discontinued MEEIA Cycle 2
20 programs through the date such savings have been "rebased" in a general rate case. The
21 Company will take action as soon as reasonably practicable to adjust rates consistent with the

⁹ In its notice, KCP&L/GMO shall (1) explain the reason(s) (e.g., changed circumstances) for the discontinuance of all MEEIA Cycle 2 programs in the portfolio; and (2) provide detailed work papers that support its determination that continued implementation of the MEEIA Cycle 2 portfolio is unreasonable.

1 discontinuance of the portfolio to ensure that the Company neither over- nor under-recovers
2 actual Program Costs and actual Throughput Disincentive.

3 Q. The Stipulation requests a variance of 4 CSR 240-20.094(5). What is the
4 good cause in this case for recommending the Commission grant a variance of
5 4 CSR 240-20.094(5)?

6 A. There are three primary considerations in this case which together support the
7 finding of good cause for a Commission variance of 4 CSR 240-20.094(5). First, through
8 paragraph 13 of the Stipulation, the Company has agreed – with one exception - to meet or
9 exceed all of the requirements of 4 CSR 240-20.094(5) prior to discontinuing all of its
10 programs. The one exception is the opportunity for a formal hearing and a Commission order
11 approving discontinuance of all programs. Second, Appendix H – *Other* of the Stipulation
12 states:

13 The Signatories respectfully request a variance from these provisions in light
14 of future uncertainties and in recognition of the fact that offering MEEIA
15 programs is voluntary at the election of the Utility. The Utility will not
16 commit to implement a MEEIA Cycle 2 portfolio for a three-year period
17 without the ability to discontinue all programs in the MEEIA Cycle 2 portfolio
18 under appropriate conditions as defined by the Utility. Any discontinuance of
19 individual programs within the portfolio would still be required to comply with
20 the Commission's rules.

21
22 Third, the Commission has recognized that demand-side programs are a voluntary offering of
23 the utility when it stated in its Report and Order issued on October 22, 2015 in Case No.
24 EO-2015-0055: "MEEIA is permissive in nature and, by its express language, does not
25 require utilities to offer demand-side programs."

26 Q. Does this conclude your testimony?

27 A. Yes.

Educational Background and Work Experience of John A. Rogers

I have a Master of Business Administration degree from the University of San Diego and a Bachelor of Science degree in Engineering Science from the University of Notre Dame. My work experience includes 34 years in energy utility engineering, system operations, strategic planning, regulatory affairs, general management and management consulting. From 1974 to 1985, I was employed by San Diego Gas & Electric with responsibilities in gas engineering, gas system planning and gas operations. From 1985 to 2000, I was employed by Citizens Utilities primarily in leadership roles for gas operations in Arizona, Colorado and Louisiana. From 2000 to 2003, I was an executive consultant for Convergent Group (a division of Schlumberger) providing management consulting services to energy utilities. From 2004 to 2008, I was employed by Arkansas Western Gas and was responsible for strategic planning and resource planning. I have provided expert testimony before the California Public Utilities Commission, Arizona Corporation Commission, Arkansas Public Service Commission and Missouri Public Service Commission in general rate cases, applications for special projects, gas resource plan filings, electric resource plan filings, demand-side management programs and demand-side programs investment mechanism cases. I have been employed by the Missouri Public Service Commission since December 2008 and am responsible for the Commission Staff's review of and recommendations concerning electric utility resource planning, demand-side management programs, demand-side programs investment mechanisms, and fuel adjustment clauses.

John A. Rogers
Testimony, Reports and Rulemakings

BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION

<u>File Number</u>	<u>Company</u>	<u>Issues</u>
ER-2010-0036	Ameren Missouri	Fuel Adjustment Clause Demand-Side Programs (DSM) DSM Cost Recovery
EX-2010-0368 EW-2010-0254	Missouri Public Service Commission	Missouri Energy Efficiency Investment Act Rulemaking
EX-2010-0254 EW-2009-0412	Missouri Public Service Commission	Electric Utility Resource Planning Rulemaking
EO-2009-0237	KCP&L Greater Missouri Operations Company	Electric Utility Resource Planning Compliance Filing
ER-2009-0090	KCP&L Greater Missouri Operations Company	Fuel Adjustment Clause
ER-2010-0355	Kansas City Power and Light	DSM Cost Recovery Fuel Switching
ER-2010-0356	KCP&L Greater Missouri Operations Company	Fuel Adjustment Clause DSM Cost Recovery Fuel Switching
AO-2011-0035	All Electric Utilities	DSM Status Report
EO-2011-0066	Empire District Electric Company	Electric Utility Resource Planning Compliance Filing
ER-2011-0028	Ameren Missouri	DSM Cost Recovery
EO-2011-0271	Ameren Missouri	Electric Utility Resource Planning Compliance Filing
EO-2012-0009	KCP&L Greater Missouri Operations Company	Demand-side Programs Investment Mechanism
EO-2012-0142	Ameren Missouri	Demand-side Programs Investment Mechanism

John A. Rogers
Testimony, Reports and Rulemakings

BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION (cont.)

<u>File Number</u>	<u>Company</u>	<u>Issues</u>
ER-2012-0166	Ameren Missouri	DSM Cost Recovery Demand-side Programs Investment Mechanism
ER-2012-0174	Kansas City Power & Light	DSM Cost Recovery
ER-2012-0175	KCP&L Greater Missouri Operations Company	DSM Cost Recovery Demand-side Programs Investment Mechanism
ER-2012-0345	Empire District Electric Co.	DSM Cost Recovery
EO-2012-0323	Kansas City Power & Light	Electric Utility Resource Planning Compliance Filing
EO-2012-0324	KCP&L Greater Missouri Operations Company	Electric Utility Resource Planning Compliance Filing
EO-2013-0537	Kansas City Power & Light	Electric Utility Resource Planning Annual Update
EO-2013-0538	KCP&L Greater Missouri Operations Company	Electric Utility Resource Planning Annual Update
EO-2013-0547	Empire District Electric Co.	Electric Utility Resource Planning Compliance Filing
EX-2014-0205	Dogwood Energy, LLC	Rulemaking Petition
EO-2014-0095	Kansas City Power & Light	Demand-side Programs Investment Mechanism
EO-2015-0084	Ameren Missouri	Electric Utility Resource Planning Compliance Filing
EO-2015-0254	Kansas City Power & Light	Electric Utility Resource Planning Compliance Filing
EO-2015-0252	KCP&L Greater Missouri Operations Company	Electric Utility Resource Planning Compliance Filing

John A. Rogers
Testimony, Reports and Rulemakings

BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION (cont.)

EO-2015-0055	Ameren Missouri	Demand-side Programs Investment Mechanism
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BEFORE THE ARKANSAS PUBLIC SERVICE COMMISSION

<u>Docket Number</u>	<u>Company</u>	<u>Issues</u>
07-079-TF	Arkansas Western Gas	Arkansas Weatherization Program
07-078-TF	Arkansas Western Gas	Initial Energy Efficiency Programs
07-041-P	Arkansas Western Gas	Special Contract
06-028-R	Arkansas Western Gas	Resource Planning Guidelines for Electric Utilities
05-111-P	Arkansas Western Gas	Gas Conservation Home Weatherization Program

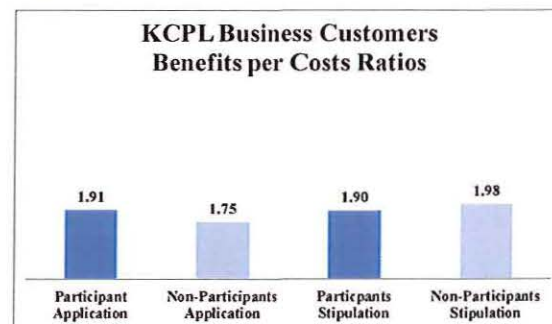
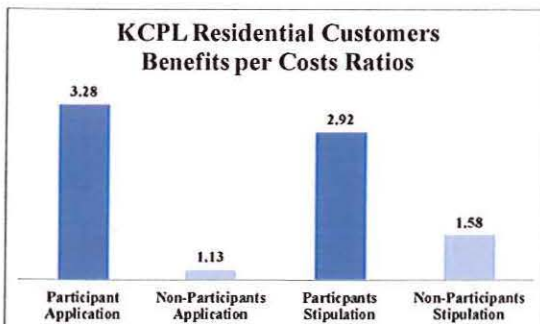
Summary Analysis of Customer Net Benefits for KCPL MEEIA Application and Stipulation & Agreement (Millions of Discounted Dollars)

		Portfolio		Residential		Business	
		Application	Stipulation	Application	Stipulation	Application	Stipulation
Energy Savings Target (GWh)		234	198	109	73	125	125
Demand Savings Target (MW)		92	66	26	24	66	43
<i>a</i>	Expected Benefits	\$ 128.9	\$ 137.6	\$ 46.0	\$ 54.6	\$ 82.9	\$ 83.0
<i>b</i>	Program Administration	\$ 28.8	\$ 30.2	\$ 14.4	\$ 15.5	\$ 14.4	\$ 14.7
<i>c</i>	Customer Incentives	\$ 20.9	\$ 20.0	\$ 6.6	\$ 6.0	\$ 14.3	\$ 14.0
<i>d</i>	Net Participant Cost	\$ 25.2	\$ 28.4	\$ 8.8	\$ 11.7	\$ 16.4	\$ 16.7
<i>e</i>	Participant Bill Reduction	\$ 88.5	\$ 90.1	\$ 44.1	\$ 45.7	\$ 44.4	\$ 44.4
$f = b + c$	Total UCT Cost	\$ 51.3	\$ 51.6	\$ 21.6	\$ 22.1	\$ 29.6	\$ 29.6
$g = b + c + d$	Total TRC Cost	\$ 78.0	\$ 81.8	\$ 30.9	\$ 34.4	\$ 47.1	\$ 47.4
$h = a / f$	UCT	2.51	2.66	2.12	2.47	2.80	2.81
$i = a / g$	TRC	1.65	1.68	1.49	1.59	1.76	1.75
$j = (c+e) / (c+d)$	PCT	2.37	2.27	3.28	2.92	1.91	1.90
$k = a - f$	UCT Net Benefits	\$ 77.6	\$ 85.9	\$ 24.3	\$ 32.5	\$ 53.3	\$ 53.4
<i>l</i>	Throughput Disincentive	\$ 28.3	\$ 18.8	\$ 15.0	\$ 10.3	\$ 13.3	\$ 8.4
<i>m</i>	Earnings Opportunity	\$ 10.0	\$ 7.4	\$ 4.6	\$ 2.7	\$ 5.4	\$ 4.7

		Portfolio		Residential		Business	
		Application	Stipulation	Application	Stipulation	Application	Stipulation
<i>a</i>	Expected Benefits	\$ 129	\$ 138	\$ 46	\$ 55	\$ 83	\$ 83
<i>b</i>	Program Administration	\$ 29	\$ 30	\$ 14	\$ 15	\$ 14	\$ 15
<i>c</i>	Customer Incentives	\$ 21	\$ 20	\$ 7	\$ 6	\$ 14	\$ 14
<i>m</i>	Earnings Opportunity	\$ 10	\$ 7	\$ 5	\$ 3	\$ 5	\$ 5
$n = b + c + m$	Customers' Costs	\$ 60	\$ 58	\$ 26	\$ 24	\$ 34	\$ 33
$o = a - n$	Customers' Net Benefits	\$ 69	\$ 80	\$ 20	\$ 30	\$ 49	\$ 50
$p = a / n$	Benefits / Costs	2.16	2.39	1.79	2.26	2.43	2.49

		Portfolio		Residential		Business	
		Application	Stipulation	Application	Stipulation	Application	Stipulation
<i>a</i>	Expected Benefits	\$ 129	\$ 138	\$ 46	\$ 55	\$ 83	\$ 83
<i>b</i>	Program Administration	\$ 29	\$ 30	\$ 14	\$ 15	\$ 14	\$ 15
<i>c</i>	Customer Incentives	\$ 21	\$ 20	\$ 7	\$ 6	\$ 14	\$ 14
<i>l</i>	Throughput Disincentive	\$ 28	\$ 19	\$ 15	\$ 10	\$ 13	\$ 8
<i>m</i>	Earnings Opportunity	\$ 10	\$ 7	\$ 5	\$ 3	\$ 5	\$ 5
$q = b + c + l + m$	Customers' Costs	\$ 88	\$ 76	\$ 41	\$ 35	\$ 47	\$ 42
$r = a - q$	Customers' Net Benefits	\$ 41	\$ 61	\$ 5	\$ 20	\$ 36	\$ 41
$s = a / q$	Benefits / Costs	1.46	1.80	1.13	1.58	1.75	1.98

		Portfolio		Residential		Business	
		Application	Stipulation	Application	Stipulation	Application	Stipulation
<i>d</i>	Net Participant Cost	\$ 25	\$ 28	\$ 9	\$ 12	\$ 16	\$ 17
<i>c</i>	Customer Incentives	\$ 21	\$ 20	\$ 7	\$ 6	\$ 14	\$ 14
<i>e</i>	Participant Bill Reductions	\$ 88	\$ 90	\$ 44	\$ 46	\$ 44	\$ 44
$t = c + d$	Customers' Costs	\$ 46	\$ 48	\$ 15	\$ 18	\$ 31	\$ 31
$u = c + e$	Customers' Benefits	\$ 109	\$ 110	\$ 51	\$ 52	\$ 59	\$ 58
$v = u / t$	Benefits / Costs	2.37	2.27	3.28	2.92	1.91	1.90



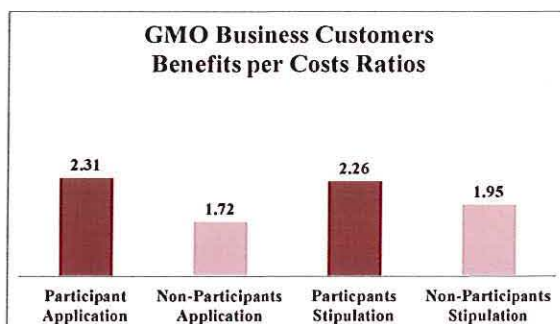
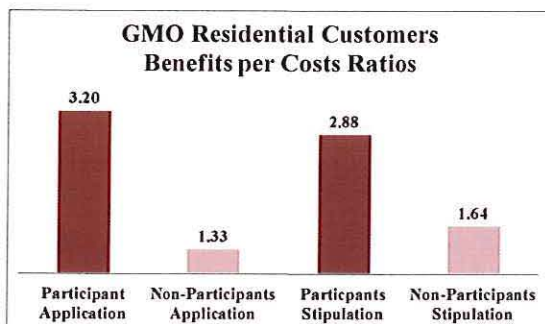
Summary Analysis of Customer Net Benefits for GMO MEEIA Application and Stipulation & Agreement (Millions of Discounted Dollars)

Benefits and Costs Summary		Portfolio		Residential		Business	
		Application	Stipulation	Application	Stipulation	Application	Stipulation
Energy Savings Target (GWh)		232	185	130	82	102	102
Demand Savings Target (MW)		173	106	37	30	136	76
<i>a</i>	Expected Benefits	\$ 134.2	\$ 139.1	\$ 59.2	\$ 64.0	\$ 75.0	\$ 75.0
<i>b</i>	Program Administration	\$ 30.5	\$ 31.8	\$ 17.4	\$ 18.4	\$ 13.1	\$ 13.4
<i>c</i>	Customer Incentives	\$ 22.7	\$ 20.9	\$ 7.5	\$ 6.8	\$ 15.2	\$ 14.2
<i>d</i>	Net Participant Cost	\$ 16.9	\$ 20.8	\$ 10.3	\$ 13.1	\$ 6.7	\$ 7.7
<i>e</i>	Participant Bill Reduction	\$ 84.6	\$ 85.8	\$ 49.2	\$ 50.4	\$ 35.4	\$ 35.4
$f = b + c$	Total UCT Cost	\$ 55.1	\$ 54.4	\$ 25.6	\$ 25.9	\$ 29.4	\$ 28.5
$g = b + c + d$	Total TRC Cost	\$ 72.8	\$ 76.3	\$ 36.3	\$ 39.6	\$ 36.5	\$ 36.7
$h = a / f$	UCT	2.44	2.55	2.31	2.47	2.55	2.63
$i = a / g$	TRC	1.84	1.82	1.63	1.62	2.06	2.04
$j = (c+e) / (c+d)$	PCT	2.71	2.56	3.20	2.88	2.31	2.26
$k = a - f$	UCT Net Benefits	\$ 79.2	\$ 84.6	\$ 33.6	\$ 38.1	\$ 45.6	\$ 46.5
<i>l</i>	Throughput Disincentive	\$ 25.0	\$ 14.4	\$ 14.2	\$ 9.2	\$ 10.8	\$ 5.2
<i>m</i>	Earnings Opportunity	\$ 10.0	\$ 10.4	\$ 5.6	\$ 4.6	\$ 4.4	\$ 5.7

Customers as a Whole		Portfolio		Residential		Business	
		Application	Stipulation	Application	Stipulation	Application	Stipulation
<i>a</i>	Expected Benefits	\$ 134	\$ 139	\$ 59	\$ 64	\$ 75	\$ 75
<i>b</i>	Program Administration	\$ 31	\$ 32	\$ 17	\$ 18	\$ 13	\$ 13
<i>c</i>	Customer Incentives	\$ 23	\$ 21	\$ 7	\$ 7	\$ 15	\$ 14
<i>m</i>	Earnings Opportunity	\$ 10	\$ 10	\$ 6	\$ 5	\$ 4	\$ 6
$n = b + c + m$	Customers' Costs	\$ 63	\$ 63	\$ 30	\$ 30	\$ 33	\$ 33
$o = a - n$	Customers' Net Benefits	\$ 71	\$ 76	\$ 29	\$ 34	\$ 42	\$ 42
$p = a / n$	Benefits / Costs	2.12	2.20	1.95	2.15	2.29	2.25

Non-Participating Customers		Portfolio		Residential		Business	
		Application	Stipulation	Application	Stipulation	Application	Stipulation
<i>a</i>	Expected Benefits	\$ 134	\$ 139	\$ 59	\$ 64	\$ 75	\$ 75
<i>b</i>	Program Administration	\$ 31	\$ 32	\$ 17	\$ 18	\$ 13	\$ 13
<i>c</i>	Customer Incentives	\$ 23	\$ 21	\$ 7	\$ 7	\$ 15	\$ 14
<i>l</i>	Throughput Disincentive	\$ 25	\$ 14	\$ 14	\$ 9	\$ 11	\$ 5
<i>m</i>	Earnings Opportunity	\$ 10	\$ 10	\$ 6	\$ 5	\$ 4	\$ 6
$q = b + c + l + m$	Customers' Costs	\$ 88	\$ 77	\$ 45	\$ 39	\$ 44	\$ 39
$r = a - q$	Customers' Net Benefits	\$ 46	\$ 62	\$ 15	\$ 25	\$ 31	\$ 37
$s = a / q$	Benefits / Costs	1.52	1.79	1.33	1.64	1.72	1.95

Participating Customers		Portfolio		Residential		Business	
		Application	Stipulation	Application	Stipulation	Application	Stipulation
<i>d</i>	Net Participant Cost	\$ 17	\$ 21	\$ 10	\$ 13	\$ 7	\$ 8
<i>c</i>	Customer Incentives	\$ 23	\$ 21	\$ 7	\$ 7	\$ 15	\$ 14
<i>e</i>	Participant Bill Reductions	\$ 85	\$ 86	\$ 49	\$ 50	\$ 35	\$ 35
$t = c + d$	Customers' Costs	\$ 40	\$ 42	\$ 18	\$ 20	\$ 22	\$ 22
$u = c + e$	Customers' Benefits	\$ 107	\$ 107	\$ 57	\$ 57	\$ 51	\$ 50
$v = u / t$	Benefits / Costs	2.71	2.56	3.20	2.88	2.31	2.26



GMO - 36 Month Plan

	Annual Energy Savings Targets (MWh)			Annual Demand Savings Targets (MW)		
	Application (1)	Stipulation (2)	Change	Application (1)	Stipulation (2)	Change
Business Energy Efficiency Rebate - Standard	38,711	38,711	0	6.39	6.39	0.00
Business Energy Efficiency Rebate - Custom	30,080	30,080	0	7.76	7.76	0.00
Strategic Energy Management	12,128	12,128	0	2.84	2.84	0.00
Block Bidding	17,604	17,604	0	3.05	3.05	0.00
Small Business Direct Install	3,570	3,570	0	0.59	0.59	0.00
Business Programmable Thermostat	79	79	0	0.20	0.22	0.02
Demand Response Incentive	0	0	0	115.00	55.00	-60.00
Online Business Energy Audit	0	0	0		0.00	0.00
GMO Business Programs	102,172	102,171	-1	135.83	75.84	-59.99
Home Lighting Rebate	45,649	25,288	-20,361	4.70	2.56	-2.14
Home Appliance Recycling Rebate	8,106	8,106	0	1.35	1.35	0.00
Home Energy Report	61,010	21,071	-39,939	11.96	4.22	-7.75
Income-Eligible Home Energy Report	0	0	0	0.00	0.00	0.00
Whole House Efficiency	8,408	11,612	3,204	2.70	3.72	1.02
Income-Eligible Multi-Family	439	10,014	9,575	0.03	1.36	1.33
Income-Eligible Weatherization	430	143	-287	0.10	0.05	-0.05
Residential Programmable Thermostat	6,144	6,144	0	15.69	16.76	1.07
Online Home Energy Audit	0	0	0	0.00	0.00	0.00
GMO Residential Programs	130,186	82,379	-47,807	36.53	30.01	-6.52
GMO Portfolio	232,358	184,550	-47,808	172.36	105.86	-66.50

KCPL-MO - 36 Month Plan

	Annual Energy Savings Targets (MWh)			Annual Demand Savings Targets (MW)		
	Application (3)	Stipulation (2)	Change	Application (3)	Stipulation (2)	Change
Business Energy Efficiency Rebate - Standard	58,371	58,371	0	10.93	10.93	0.00
Business Energy Efficiency Rebate - Custom	44,361	44,361	0	12.13	12.13	0.00
Strategic Energy Management	9,027	9,027	0	2.02	2.02	0.00
Block Bidding	10,059	10,059	0	1.74	1.74	0.00
Small Business Direct Install	3,510	3,510	0	0.56	0.56	0.00
Business Programmable Thermostat	98	98	0	0.17	0.27	0.10
Demand Response Incentive	0	0	0	38.00	15.00	-23.00
Online Business Energy Audit	0	0	0	0.00	0.00	0.00
KCPL Business Programs	125,426	125,427	1	65.55	42.66	-22.89
Home Lighting Rebate	44,579	24,693	-19,886	4.59	2.50	-2.09
Home Appliance Recycling Rebate	6,330	6,330	0	1.06	1.06	0.00
Home Energy Report	39,741	13,862	-25,879	8.60	2.87	-5.73
Income-Eligible Home Energy Report	5,336	1,683	-3,653	1.42	0.47	-0.95
Whole House Efficiency	7,697	11,138	3,441	2.29	3.27	0.98
Income-Eligible Multi-Family	466	10,577	10,111	0.17	1.54	1.37
Income-Eligible Weatherization	449	0	-449	0.17	0.00	-0.17
Residential Programmable Thermostat	4,388	4,388	0	7.69	11.97	4.28
Online Home Energy Audit	0	0	0	0.00	0.00	0.00
KCPL Residential Programs	108,986	72,671	-36,315	25.99	23.67	-2.32
KCPL Portfolio	234,412	198,098	-36,314	91.54	66.33	-25.21

All changes due to proper accounting of one year measure life in Stipulation, and no persistence in savings from one year to the next.

All CFLs removed from program as a result of negotiated Stipulation.

Enhancements to program as a result of negotiated Stipulation.

- (1) Table 1-2 of GMO's Application filed 8/28/2015
- (2) Appendix A of the Stipulation filed 11/23/2015.
- (3) Table 1-2 of KCPL's Application filed 8/28/2015.