Exhibit No.:	
Issue:	*Demand Side Programs*
Witness:	*Brad J. Fortson*
Sponsoring Party:	*MoPSC Staff*
Type of Exhibit:	*Rebuttal Testimony*
Case No.:	*ER-2016-0023*
Date Testimony Prepared:	*May 2, 2016*

MISSOURI PUBLIC SERVICE COMMISSION

COMMISSION STAFF DIVISION

REBUTTAL TESTIMONY

OF

BRAD J. FORTSON

THE EMPIRE DISTRICT ELECTRIC COMPANY

CASE NO. ER-2016-0023

Jefferson City, Missouri
May 2016

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Q. Please state your name and business address.

A. My name is Brad J. Fortson, and my business address is Missouri Public Service Commission, P. O. Box 360, Jefferson City, Missouri 65102.

Q. Are you the same Brad J. Fortson who filed testimony on March 25, 2016, as a part of the Missouri Public Service Commission Staff's ("Staff") Revenue Requirement Cost-of-Service Report?

A. Yes, I am.

Q. What is the purpose of you rebuttal testimony?

A. My rebuttal testimony will: (1) provide a brief summary of The Empire District Electric Company's ("Empire") current Demand-Side Management ("DSM") programs and the programs' performance; (2) describe some of the results from Empire's 2016 triennial Integrated Resource Plan ("IRP") filed in Case No. EO-2016-0223 on April 1, 2016; (3) respond to Missouri Department of Economic Development Division of Energy ("DE") witness Mr. Martin R. Hyman's Direct Testimony; and (4) provide Staff's recommendations concerning Empire's DSM programs going forward.

EMPIRE'S CURRENT DEMAND-SIDE PROGRAMS

Q. Can you briefly describe Empire's DSM programs and how the programs have typically performed up until now?

A. Yes. Empire currently has three (3) Residential DSM programs,[1] one (1) Low-Income DSM program,[2] and two (2) Commercial & Industrial ("C&I") DSM programs.[3] Over the last five (5) years, all programs, with the exception of the C&I Custom Rebate program, have consistently under-performed as it pertains to reaching targeted budgets, energy savings, and demand savings targets as illustrated in the following three (3) tables:

Residential DSM Programs

Programs' Costs vs. Budgets % Variance	2011	2012	2013	2014	2015
ENERGY STAR® New Homes Program	-96%	-7%	8%	-72%	-59%
High Efficiency AC Rebate Program	-58%	-49%	-34%	-48%	-54%
Home Performance with ENERGY STAR® Program	-22%	-38%	-77%	-78%	-74%
Programs' Energy Savings vs. Targets % Variance	**2011**	**2012**	**2013**	**2014**	**2015**
ENERGY STAR® New Homes Program	-88%	-37%	-38%	-79%	-63%
High Efficiency AC Rebate Program	-43%	-52%	-43%	-51%	-59%
Home Performance with ENERGY STAR® Program	0%	-38%	-88%	-92%	-84%
Programs' Demand Savings vs. Targets % Variance	**2011**	**2012**	**2013**	**2014**	**2015**
ENERGY STAR® New Homes Program	-89%	-41%	-48%	-80%	-66%
High Efficiency AC Rebate Program	1%	-15%	0%	-41%	-47%
Home Performance with ENERGY STAR® Program	0%	-38%	-88%	-92%	-84%

Low-Income DSM Programs

Programs' Costs vs. Budgets % Variance	2011	2012	2013	2014	2015
Low-Income New Homes	-100%	-100%	-87%	-100%	-100%
Programs' Energy Savings vs. Targets % Variance	**2011**	**2012**	**2013**	**2014**	**2015**
Low-Income New Homes	-90%	-100%	-90%	-100%	-100%
Programs' Demand Savings vs. Targets % Variance	**2011**	**2012**	**2013**	**2014**	**2015**
Low-Income New Homes	-90%	-100%	-90%	-100%	-100%

[1] Empire's residential DSM programs include the ENERGY STAR® New Homes Program, High Efficiency AC Rebate Program, and Home Performance with ENERGY STAR® Program.

[2] Low-Income New Homes is the only low-income program in the DSM portfolio. Low-Income Weatherization is currently an Empire program but is not a part of the DSM portfolio for cost recovery purposes.

[3] Empire's Commercial & Industrial DSM programs include the Commercial & Industrial Rebate program and the Building Operator Certification ("BOC") program. There is no budget or deemed energy and demand savings associated with the BOC, however there were expenditures of $22,675 in 2012.

C&I DSM Programs

Programs' Costs vs. Budgets % Variance	2011	2012	2013	2014	2015
Commercial & Industrial Rebate Program	43%	58%	92%	41%	126%
Programs' Energy Savings vs. Targets % Variance	**2011**	**2012**	**2013**	**2014**	**2015**
Commercial & Industrial Rebate Program	189%	168%	282%	156%	287%
Programs' Demand Savings vs. Targets % Variance	**2011**	**2012**	**2013**	**2014**	**2015**
Commercial & Industrial Rebate Program	19%	30%	85%	29%	134%

Q. The C&I Custom Rebate program consistently exceeds its budget and energy and demand savings targets. Would you consider the C&I Custom Rebate program to be successful?

A. I would hesitate to say the C&I Custom Rebate program has been successful.

Q. Please explain.

A. First, there has not been any independent evaluation, measurement, and verification ("EM&V) done for the C&I Custom Rebate program since 2009. Second, there has never been a net-to-gross ("NTG") evaluation done for the program. Finally, Empire offers a relatively high customer incentive for its C&I Custom Rebate program; Empire's C&I Custom Rebate program incentive is the lesser of either: (a) two (2) year simple payback or (b) fifty percent (50%) of incremental costs of the efficiency measure(s). On April 4, 2016, Empire sent its DSM Stakeholder Advisory Group an email notifying them that Empire will no longer be accepting new applications for the C&I Custom Rebate program due to the budget limit for the 2016 program year already being reached. The high incentive for this program is the biggest driver for this program already being shut down for the 2016 program year. Also, to Staff's knowledge, Empire has not calculated the benefits of any of its DSM programs. Without knowing the benefits of these programs it is impossible to know whether the programs are cost-effective or to know whether the programs are providing benefits to all Empire customers.

Q. Is Empire's incentive structure for the C&I Custom Rebate program unique?

A. Yes. Empire is the only Missouri electric Investor Owned Utility ("IOU") to use this incentive structure. Ameren Missouri offers the lowest $/kWh incentive for its C&I Custom Rebate program, which has been found to be cost effective as a result of a full EM&V. Recently, as a part of their MEEIA Cycle 2, Kansas City Power & Light and KCP&L Greater Missouri Operations Company changed the incentive in their C&I Custom Rebate programs from an incentive structure similar to Empire's to one more similar to, but a little higher than, Ameren Missouri's.

Q. Is Empire required to continue its DSM programs beyond the effective date of new rates as a result of this general rate case?

A. No. As part of its June 24, 2015, *Report and Order* in Case No. ER-2014-0351, the Commission approved an agreement of the parties concerning energy efficiency issues which states, in part, "With the exception of the low-income weatherization program discussed below, the Signatories agree that Empire will continue its current energy efficiency programs, at current funding levels and with the current recovery mechanism, until Empire has an approved MEEIA or until the effective date of rates in Empire's next general rate case."[4]

EMPIRE'S IRP

Q. When did Empire file its most recent IRP?

A. April 1, 2016.

[4] Case No. ER-2014-0351, *Report and Order* issued June 24, 2015, pp. 9 and 10.

Q. What is Empire's 2016 IRP[5] preferred resource plan?

A. Plan 5, a base case meeting the Renewable Portfolio Standard ("RPS") requirements but with no DSM in future years.

Q. Can you briefly describe some of Empire's reasons for choosing Plan 5 as its adopted preferred resource plan?

A. Yes. There were many reasons in Empire's IRP[6] for the selection of Plan 5 by Empire's decision makers. Following is a summarized list:

1. Plan 5 has the lowest Present Value of Revenue Requirement ("PVRR") of all the alternative resource plans[7] analyzed.

2. Currently, avoided energy costs are relatively low due in large part to historically low natural gas prices.

3. Load growth has moderated as compared to past IRP assumptions and base case load forecast is now 0.25 percent compound annual growth over the 20-year planning horizon.[8]

4. With the upgrading of the Riverton 12 generating station, Empire has recently concluded a significant construction phase and does not have a near-term capacity need that could be impacted by energy efficiency programs.

5. The analysis in this most recent IRP, which includes the financial impact of a demand-side investment mechanism, finds that Plan 5, the "No DSM" option is the least cost plan.

[5] File No. EO-2016-0223.

[6] Empire 2016 IRP Volume 1 – Executive Summary Section 10 Acquisition Strategy Selection, pp. 38-41.

[7] Empire's alternative resources plans each included one of the following demand-side portfolios: realistic achievable potential ("RAP"), maximum achievable potential ("MAP"), RAP -, RAP +, aggressive capacity portfolio, and no DSM.

[8] File No. EO-2016-0223, Volume 1, p. 13.

6. Under Plan 5, with no DSM, no new generation is needed until the year 2029.

As a result of its IRP resource analysis and strategy selection process, Empire concluded that:

> Therefore, there is no short-term implementation plan for additional demand-side resources to report for the implementation period. Additionally, based on the IRP results, which did not support the inclusion of an updated demand-side portfolio in the preferred plan, the existing Missouri demand-side programs are planned to be discontinued as well. Empire will continue to monitor the factors related to demand-side management. Demand-side resources will be reevaluated during the next IRP currently scheduled for 2019. By that time, 2019, a statewide technical resource manual may be available in Missouri, which could help facilitate the analysis, reporting and evaluation of demand-side resources.[9]

<u>RESPONSE TO DIVISION OF ENERGY WITNESS MR. MARTIN R. HYMAN'S DIRECT TESTIMONY</u>

Q. Does Mr. Hyman suggest that Empire continue its DSM programs?

A. Yes.

Q. What reasons does Mr. Hyman give as support?

A. Mr. Hyman attempts to justify continuation of Empire's DSM programs by offering that, "DSM programs better enable customers to use energy efficiently, reduce demand, or shift demand to off-peak periods, thereby mitigating the impacts of rate increases."[10]

Q. Do you agree with Mr. Hyman's statement?

A. Mr. Hyman's statement would be much more accurate if Empire's DSM programs had more participation, had better design, and performed better. DSM programs do

[9] File No. EO-2016-0223, Volume 1, pp. 41-42.

[10] Martin R. Hyman Direct Testimony, p. 32, filed April 8, 2016, in case no. ER-2016-0023.

tend to better enable customers to use energy efficiently, reduce demand, or shift demand to off-peak periods when there is participation in the programs and program design allows for reasonable savings targets to be met. Unfortunately, Empire's residential DSM programs have not garnered much participation, at times due to poor program design, which has led to poor program performance. The following tables demonstrate the poor residential DSM program performance as it pertains to achieving energy and demand savings targets:

High Efficiency AC Rebate Program				
2015	Q1	Q2	Q3	Q4
Actual kWh savings	68,526	135,783	106,307	92,719
Budget kWh savings	247,455	247,455	247,455	247,455
Difference	(178,929)	(111,672)	(141,148)	(154,736)
Actual kW savings	45	89	110	96
Budget kW savings	162	162	162	162
Difference	(117)	(73)	(52)	(66)

Home Performance with Energy Star® Rebate Program				
2015	Q1	Q2	Q3	Q4
Actual kWh savings	6,000	6,000	33,600	1,200
Budget kWh savings	75,000	75,000	75,000	75,000
Difference	(69,000)	(69,000)	(41,400)	(73,800)
Actual kW savings	4	4	23	1
Budget kW savings	52	52	52	52
Difference	(48)	(48)	(29)	(51)

Energy Star® New Homes Rebate Program				
2015	Q1	Q2	Q3	Q4
Actual kWh savings	10,428	-	260,700	41,712
Budget kWh savings	212,471	212,471	212,471	212,471
Difference	(202,043)	(212,471)	48,229	(170,759)
Actual kW savings	4	0	93	15
Budget kW savings	82	82	82	82
Difference	(78)	(82)	11	(67)

Q. Mr. Hyman continues by stating, "Empire's discontinuation of these programs, combined with its proposed residential customer charge increase, would severely reduce the ability of residential customers to control their bills while increasing the Company's guarantee of recovering its revenue requirement."[11]

Q. How do you respond to that statement?

A. The preferred resource plan is the low cost plan for all of Empire's customers. Other than low-income and education programs, demand-side programs should benefit all customers. Empire's IRP indicates that adding any DSM will result in higher bills – and not lower bills – for all customers. While it may be true that customers who participate in DSM programs may have lower bills, the fact that the No DSM Plan is Empire's low cost alternative resource plan means that customers who do not directly participate in programs will only experience higher bills as a result of continuation of DSM programs.

Q. Does Mr. Hyman encourage Empire to file a MEEIA application?

A. Yes.

Q. Do you agree that Empire should file a MEEIA application?

A. Absolutely not.

Q. Please explain.

A. There are several reasons, but I would specifically point to the previously mentioned list from Empire's most recent IRP. Empire's preferred plan from the most recent IRP, Plan 5, excludes all DSM. Plan 5 had the lowest PVRR of all the scenarios analyzed. That essentially means that Plan 5, with no DSM, is the lowest cost plan for Empire's

[11] Martin R. Hyman Direct Testimony, p. 32, filed April 8, 2016, in case no. ER-2016-0023.

ratepayers. The MEEIA statute requires that all customers receive benefits from DSM programs they pay for, even those customers who do not participate directly in the programs.

Q. Has Empire previously filed a MEEIA application?

A. Yes, Empire filed two separate MEEIA applications.

Q. What was the result of each of those MEEIA application filings?

A. Both applications were withdrawn by Empire.

Q. Why were both applications withdrawn by Empire?

A. On February 28, 2012, Empire filed its MEEIA application in Commission File No. EO-2012-0206 seeking approval of a DSM portfolio and for the authority to establish a Demand-Side Management Investment Mechanism ("DSIM") rider. On June 27, 2012, the Commission approved a *Nonunanimous Stipulation and Agreement* ("Stipulation") that was filed by Empire and certain other parties to Empire's 2010 IRP proceeding, Commission File No. EO-2011-0066. Essentially, this Stipulation provided that Empire would withdraw its pending MEEIA filing and file a new application under the Commission's MEEIA rules after Empire made its next IRP filing. At that time, Empire was in the process of completing its required DSM market potential study and withdrawing the MEEIA filing would afford Empire the opportunity to complete its study and use the results of that study to provide for a comprehensive IRP followed by a comprehensive MEEIA filing.

Subsequently, on October 29, 2013, Empire filed its second MEEIA application requesting Commission approval of DSM programs and a DSIM rider in File No. EO-2014-0030. On July 24, 2015, after numerous technical conferences, suspension of the procedural schedule, and numerous status reports to update and inform the Commission of the progress of Empire's MEEIA case, Empire filed its *Motion to Withdraw its MEEIA*

Application and Request for this Docket to be Closed. The Commission approved the motion on August 13, 2015, thus concluding Empire's second attempt at receiving approval of a MEEIA application.

STAFF'S RECOMMENDATION FOR EMPIRE'S DSM PROGRAMS

Q. What is Staff's recommendation concerning Empire's DSM programs?

A. Staff recommends that Empire work with the parties in this case to reach agreement on program designs and annual spending levels for: (a) the low-income weatherization program,[12] and (b) a new Empire low-income energy efficiency program.

Q. Does that conclude your rebuttal testimony?

A. Yes.

[12] The low-income weatherization program is not currently a part of Empire's DSM portfolio and costs of the program are recovered in permanent rates. However, it is an issue in this rate case as addressed in Staff witness Kory Boustead's rebuttal testimony.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of The Empire District Electric Company's Request for Authority to Implement a General Rate Increase for Electric Service	)))	Case No. ER-2016-0023

AFFIDAVIT OF BRAD J. FORTSON

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW BRAD J. FORTSON and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing REBUTTAL TESTIMONY; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

Brad J Fortson

BRAD J. FORTSON

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 2nd day of May, 2016.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2016
Commission Number: 12412070

D Suzie Mankin

Notary Public