Exhibit No.:
Issues: DSIM
Witness: Sarah L. Kliethermes
Sponsoring Party: MO PSC Staff
Type of Exhibit: Corrected Clean Supplemental Direct Testimony
Case No.: EO-2015-0055
Date Testimony Prepared: July 14, 2015

MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION

CORRECTED CLEAN SUPPLEMENTAL DIRECT TESTIMONY

OF

SARAH L. KLIETHERMES

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. EO-2015-0055

Jefferson City, Missouri
July 2015

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA.	))))	**Case No. EO-2015-0055**

MOTION FOR LEAVE TO FILE CORRECTED SUPPLEMENTAL DIRECT TESTIMONY OF STAFF WITNESS SARAH KLIETHERMES

COMES NOW the Staff of the Missouri Public Service Commission, by and through counsel, and hereby files its *Motion for Leave to File Corrected Supplemental Direct Testimony of Staff Witness Sarah Kliethermes* ("Motion") and for its Motion states:

1 On July 9, 2015, Staff witness Sarah Kliethermes filed supplemental direct testimony in support of the Amended Non-Unanimous Stipulation and Agreement filed by non-utility signatories on July 8, 2015 as allowed by Commission order.

2. Yesterday, July 13, 2015, Staff found an error that causes it to change the demand-related Performance Incentive value for Tier 1, changing the value from \$37/kW to \$48/kW. This correction necessitates that Staff correct its originally filed supplemental direct testimony and therefore seeks leave of the Commission to do so in this Motion. Staff will file a red-lined version of the corrected testimony for ease of reference.

3. There is no prejudice to Ameren Missouri or the signatories to its Non-Unanimous Stipulation and Agreement filed on June 30, 2015 because the change in value from \$37/kW to \$48/kW provides a slight increase in payout to Ameren Missouri should the Commission adopt the non-utility parties' proposed demand-related

Performance Incentive award for Tier 1. Staff will provide supporting workpapers from Ms. Kliethermes upon filing of her corrected supplemental direct testimony.

WHEREFORE, for the reasons stated above the Staff respectfully requests leave of the Commission to file the corrected supplemental direct testimony of Staff witness Sarah Kliethermes.

Respectfully submitted,

/s/ Robert S. Berlin
Robert S. Berlin
Deputy Counsel
Missouri Bar No. 51709
Attorney for the Staff of the
Missouri Public Service Commission
P.O. Box 360
Jefferson City, MO 65102
Phone (573) 526-7779
Facsimile (573) 751-9285
bob.berlin@psc.mo.gov

CERTIFICATE OF SERVICE

I do hereby certify that a true and correct copy of the foregoing document has been electronically mailed this 14th day of July, 2015 to all counsel of record in this proceeding.

/s/ Robert S. Berlin

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as allowed by MEEIA	)))))	Case No. EO-2015-0055

AFFIDAVIT OF SARAH KLIETHERMES

State of Missouri)
) ss.
County of Cole)

AFFIDAVIT

COMES NOW Sarah Kliethermes and on her oath declares that she is of sound mind and lawful age; that she contributed to the attached Corrected Supplemental Direct Testimony and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

Sarah Klietz

Sarah Kliethermes

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 14th day of May, 2015.

[signature]

NOTARY PUBLIC

LAURA DISTLER
Notary Public, Notary Seal
State of Missouri
Cole County
Commission # 15203914
My Commission Expires June 21, 2019

Table of Contents

CORRECTED CLEAN SUPPLEMENTAL DIRECT TESTIMONY

OF

SARAH L. KLIETHERMES

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. EO-2015-0055

CORRECTED CLEAN SUPPLEMENTAL DIRECT TESTIMONY

OF

SARAH L. KLIETHERMES

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. EO-2015-0055

Q. Are you the same Sarah L. Kliethermes who filed rebuttal testimony in this case?

A. Yes.

Executive Summary

Q. What is the subject of your supplemental direct testimony?

A. I will generally describe the Non-Unanimous Stipulation and Agreement ("Non-Utility Stipulation") filed on July 7, 2015, and as amended on July 8, 2015, concerning Union Electric Company's d/b/a Ameren Missouri ("Ameren Missouri" or "Company") application for approval of its second cycle of MEEIA programs., and provide support for the throughput disincentive mechanism and the demand-related performance incentive mechanism of the Non-Utility Stipulation. I recommend the Commission authorize the Net Throughput Disincentive ("NTD") and the Performance Incentive ("PI") mechanisms that form the alternative DSIM. The terms of the Non-Utility Stipulation remove the financial disincentive to Ameren Missouri's promotion of DSM programs and incent Ameren Missouri's promotion of DSM programs, respectively.

Overview of Non-Utility Stipulation

Q. Does the Non-Utility Stipulation result in the MEEIA statutory policy objective "to value demand-side investments equal to traditional investments in supply and delivery infrastructure and allow recovery of all reasonable and prudent costs of delivering cost-effective demand-side programs?" *See 393.1075.3.*

A. Yes, the Non-Utility Stipulation sets up an interrelated framework of programs, disincentive removal, and incentive creation that supports the statutory policy. Specifically, in exchange for Ameren Missouri's development and promotion of a suite of programs to promote cost-effective measureable and verifiable efficiency savings, the Non-Utility Stipulation would provide Ameren Missouri with:

1. Contemporaneous program cost recovery on:
    a. A base level of programs that provide some level of benefit to all customers over the planning horizon,
    b. Targeted low-income programs that may not be cost effective, and
    c. Analysis and implementation of additional programs which provide some level of benefit to all customers over the planning horizon.
2. A mechanism to remove Ameren Missouri's throughput disincentive in a manner that makes Ameren Missouri financially indifferent to whether or not it promotes DSM programs.
3. A mechanism to incent Ameren Missouri to promote DSM programs through:
    a. A base level of benefit associated with annual energy savings targets, if approved by the Commission,
    b. An incentive targeted to improve participation among multi-family low income customers, and
    c. An incentive to meaningfully reduce future capacity requirements.

<u>Support for limited waiver of Chapter 20</u>

Q. In your pre-filed rebuttal testimony, you recommend the lost revenues mechanism described in Chapter 20 of the Commission's rules. Does the Non-Utility Stipulation contemplate the lost revenues mechanism?

A. No. The NTD mechanism recommended in the Non-Utility Stipulation is more generous to Ameren Missouri than the mechanism provided in the rules and recommended in my rebuttal testimony. The rules require a utility to show reduction in sales prior to the utility receiving an opportunity to collect revenues associated with the throughput disincentive. In contrast the Non-Utility Stipulation provides Ameren Missouri throughput disincentive recovery regardless of whether its overall utility sales are up or down.

Q. Does Staff support the Non-Utility Stipulation NTD mechanism and the associated waiver of the applicable Chapter 20 rules for Ameren Missouri MEEIA Cycle 2?

A. Yes, Staff supports a waiver of a portion of 4 CSR 240-20.093(1)(Y). The Non-Utility Stipulation NTD mechanism is part of an interrelated resolution derived in the spirit of compromise and with the support of several parties with diverse interests. To achieve the result of a MEEIA Cycle 2 as is described in the Non-Utility Stipulation, there is good cause to waive 4 CSR 240-20.093(1)(Y) which states "Lost revenue means the net reduction in utility retail revenue, taking into account all changes in costs and all changes in any revenues relevant to the Missouri jurisdictional revenue requirement, that occurs when utility demand-side programs approved by the commission in accordance with 4 CSR 240-20.094 cause a drop in net system retail kWh delivered to jurisdictional customers below the level used to set the electricity rates. Lost revenues are only those net revenues lost due to energy and demand savings from utility demand-side programs approved by the commission in accordance with 4 CSR 240-20.094 Demand-Side Programs and measured and verified through EM&V[.]"

Q. To what extent does Staff recommend a waiver of 4 CSR 240-20.093(1)(Y) in support of the Non-Utility Stipulation?

A. Staff recommends only waiver of the requirement that a utility prove that "utility demand-side programs approved by the commission in accordance with

4 CSR 240-20.094 cause a drop in net system retail kWh delivered to jurisdictional customers below the level used to set the electricity rates."

Q. Is Staff's recommendation to waive certain requirements of 4 CSR 240-20.093(1)(Y) similar to Ameren Missouri's request to waive the requirements of Chapter 20 for its throughput-disincentive net-shared benefit mechanism as contained in the Non-Unanimous Stipulation and Agreement filed June 30, 2015?

A. No. Ameren Missouri's proposed throughput disincentive mechanism is not modeled on the lost revenue concept found in Chapter 20. Rather it is modeled as an additional performance incentive mechanism. As such, Ameren Missouri requested a much broader waiver of the Chapter 20 rules than is reasonable.

Q. Why is the limited waiver of 4 CSR 240-20.093(1)(Y) recommended by Staff reasonable when Staff has testified that Ameren Missouri's requested waivers of Chapter 20 are unreasonable?

A. Staff recommends the Commission adopt the Non-Utility Stipulation of NTD, which requires measurement and verification of the magnitude and causation of realized kWh savings, but still relies on a quantification of the net reduction in utility retail revenue. In contrast, Ameren Missouri requested that the Commission authorize its throughput disincentive mechanism as an additional performance incentive mechanism, and it relied on accelerating the recovery of pre-deemed projections of program effectiveness.

<u>Net Throughput Disincentive</u>

Q. What is the goal of the NTD mechanism provided in the Non-Utility Stipulation?

A. The Non-Utility Stipulation NTD mechanism provides Ameren Missouri with revenue as a result of energy efficiency programs it offers and promotes in lieu of revenue it did not earn because of sales of energy it did not make. This recovery of the net throughput disincentive results in Ameren Missouri being financially indifferent to whether or not it promotes DSM programs, all else being equal. The Non-Utility Stipulation NTD mechanism removes any disincentive associated with Ameren Missouri's promotion of energy efficiency.

Q. Is the Non-Utility Stipulation NTD structured as an incentive or as a share of future net benefits that may or may not materialize?

A. No, the Non-Utility Stipulation does not rely on an estimate of the future benefits of the programs, and it preserves the distinction between removing disincentives and creating positive incentives that is contained in the MEEIA statute.

Q. How does the Non-Utility Stipulation NTD work?

A. The Non-Utility Stipulation allows Ameren Missouri to bill and retain the unrealized revenue caused by its promotion of the DSM programs in MEEIA Cycle 2. Each month, Ameren Missouri will book revenues associated with the unbilled kWh for that month. The dollar values booked will later be trued-up after it is determined how many unbilled kWh actually occurred that month.

Q. What is an unbilled kWh and what is unrealized revenue?

A. DSM programs, by design, reduce the number of kWh a utility sells. An unbilled kWh is a kWh that an Ameren Missouri customer did not buy from Ameren Missouri, because that customer participated in an Ameren Missouri MEEIA Cycle 2 program to reduce his or her energy usage. The unrealized revenue is the revenue that Ameren Missouri did not receive from the sales of energy it did not sell because of MEEIA Cycle 2, minus the costs that Ameren Missouri avoided incurring because it did not have to procure that energy.

Q. How much revenue does Ameren Missouri lose on each unbilled kWh?

A. It depends. The rate Ameren Missouri would charge for that kWh will vary by customer class, season, the level of energy that customer otherwise consumes that month, and whether or not a rate case has occurred to change applicable rates.

Q. Does Ameren Missouri avoid incurring costs when it does not sell a given kWh of energy?

A. Yes. Ameren Missouri avoids incurring the cost of obtaining that energy for its customer through the MISO integrated energy market, as well as the cost of transmission and ancillary services associated with that energy. Reductions in customer load also translate to reduction in Ameren Missouri's share of MISO administrative charges, capacity requirements, and transmission build-out expense.

Q. Is the FAC Base Factor an accurate measure of the specific costs Ameren Missouri avoids when it avoids selling a specific kWh of energy?

A. No. Not only are some of the elements of the transmission costs excluded from the FAC Base Factor, the FAC Base Factor is netted against revenues from Off-System Sales. Additionally, while the market value of energy varies greatly during the hours of the year, the FAC Base Factor is adjusted only twice annually.

Q. Will net revenues from Off-System Sales go up or down, all else being equal, if Ameren Missouri avoids selling energy to its customers because of a program under MEEIA Cycle 2?

A. All else being equal, net revenues from Off-System Sales will go up if Ameren Missouri avoids selling a given kWh of energy to its customers, because Ameren Missouri will not have to buy that energy through the MISO integrated marketplace.

Q. Although it is not an accurate measure of the specific costs and revenues Ameren Missouri avoids when it avoids selling a specific kWh of energy, is it reasonable to use the FAC Base Factor for determining marginal avoided cost under the Non-Utility Stipulation NTD?

A. While it is not 100% accurate, it is reasonable to use the FAC Base Factor as a measure of net avoided costs and off-system sales revenues because the Non-Utility Stipulation provides that unbilled revenues are recorded real-time, and are not subject to significant present-valuing. Additionally, by relying on the existing FAC mechanism, shareholders will retain 5% of the net avoided costs and off-system sales revenues.

Q. Why has Staff not developed a number that represents this 5% shareholder retention?

A. To develop that number Staff needs hourly savings estimates for each measure. Ameren Missouri has stated in its response to Staff Data Request 0013 that it will not provide Staff with those numbers on an hourly basis.

Q. Under the Non-Utility Stipulation NTD, is it necessary to make assumptions about rate case timing?

A. No. Because unbilled revenues are tracked on a monthly basis, there is no need to create a projection of rate case intervals years into the future to determine the NTD.

Q. Under the Non-Utility Stipulation NTD, is it necessary to make assumptions about what level of revenue will be collected through the fixed customer charge in the outcome of a future rate case?

A. No. Because unbilled revenues are tracked on a monthly basis, there is no need to project out future rate case outcomes to determine the NTD.

Q. Under the Non-Utility Stipulation NTD, is it necessary to make assumptions about what future fuel and transportation expense, purchased power expense, transmission expense, and off-system sales revenue levels will be in the outcome of a future rate case?

A. No. By eliminating the present valuing of the throughput disincentive, the Non-Utility Stipulation NTD is able to avoid the need to make many of the critical and controversial assumptions that would be necessary for a present-value throughput disincentive.

Q. Is the Non-Utility Stipulation NTD designed to be trued-up for the actual effectiveness of the measures that have been installed?

A. Yes. An important characteristic of the Non-Utility Stipulation NTD is that by requiring true-up based on the results of Evaluation, Measurement, and Verification ("EM&V") and Net to Gross ("NTG") adjustments, the mechanism is designed to make the utility truly indifferent to not only whether programs are delivered pursuant to MEEIA Cycle 2, but more importantly, the utility is made indifferent as to which programs are delivered and whether or not that delivery is effective.

Q. Is the utility protected against the chance that the programs have not reduced energy consumption?

A. Yes. Unlike lost revenue recovery pursuant to 4 CSR 240-20.093(1), the Non-Utility Stipulation does not require a showing that sales have decreased. Under the Non-Utility Stipulation NTD, overall energy consumption could be up, but Ameren Missouri will still recover NTD associated with the realized kWh savings determined through EM&V and NTG analysis.

Q. Is there a floor and a cap associated with the Non-Utility Stipulation NTD?

A. Yes. Staff witness Mark Oligschlaeger is providing supplemental direct testimony related to the floor and cap, as well as the alternative 100% booking mechanism described in the Non-Utility Stipulation.

Demand-related Performance Incentive

Q. What is the goal of the Non-Utility Stipulation demand-related PI mechanism?

A. The Non-Utility Stipulation demand-related PI mechanism results in Ameren Missouri shareholders receiving a performance incentive to approximate the present value of the earnings opportunity on capacity-related investments that they would receive if Ameren Missouri did not promote DSM programs, all else being equal. This creates an incentive for Ameren Missouri to promote energy efficiency.

Q. What is the basis for the dollar values and the kW values in the Non-Utility Stipulation's demand-related PI?

A. The first tier of the demand-related PI is based on the approximate value to shareholders of the recently experienced change in retirement date of the Meramec plant, as a reasonable surrogate for a future change in supply-side resources. The second tier of the demand-related PI is the approximate value to shareholders of the deferred investment in a combined cycle plant pursuant to the modeling of DSM in Ameren Missouri's Chapter 22 filing.

Q. How were the Meramec numbers, which were used to determine the reasonable surrogate, derived?

A. The rate base value of the Meramec generating units is approximately $685 million, and the current depreciation reserve is approximately $345 million, leaving a net rate base value of approximately $340 million. Ameren Missouri's shareholders earn a return on this net investment. Every year, the net investment in the plant decreases, all else being equal, because ratepayers contribute depreciation expense which increases the depreciation reserve. Because Ameren Missouri's generating units receive "life span" depreciation treatment, an acceleration of the projected retirement date of a generating unit increases the level of depreciation expense the ratepayers will contribute, which decreases the net rate base on which shareholders earn a return (assuming rate cases occur to adjust the depreciation expense and to recognize the decrease in net rate base). Assuming a 2027 retirement date, shareholders would have an earnings stream of approximately $127 million from now until plant retirement. This earnings stream has a present-value of approximately $125 million. But, assuming a 2022 retirement date, the shareholders' earnings stream is valued at approximately $84.8 million, which has a present value of approximately $84.5 million. Moving the Meramec projected retirement date from 2027 to 2022 therefore reduces the estimated present-value earnings stream by approximately $40 million, all else being equal.

Q. What is the total capacity of the Meramec generating units?

A. The total capacity at Meramec is approximately 834,000 kW. This means, that if the projected date of all of the Meramec generating units is moved from 2027 to 2022, shareholders will forego an earnings opportunity of approximately $48/kW.

Q. How were the combined cycle numbers derived?

A. In its 2014 Chapter 22 filing, at Table 9.9 on page 23, Ameren Missouri provided an estimated capital cost of $1,297/kW for a 600,000 kW combined cycle plant, including associated transmission upgrades, in 2013 dollars. On an annual basis, that investment represents an earnings opportunity of approximately $65/kW. Three years of that earnings stream therefore yields an earnings opportunity of approximately $250/kW. To generously incent Ameren Missouri to achieve meaningful demand-related savings, Staff did not compare the difference in earnings streams associated with simply moving the date of constructing a combined cycle unit, which would substantially reduce the value of the earnings stream for which shareholders are compensated under the demand-related PI.

Q. What is contemplated under the MEEIA statute for the performance incentive?

A. The MEEIA statute relies on certain assumptions:

1. Utility opportunities for profits come from investment of shareholder dollars, including investment in generation facilities.
2. Rates can ultimately be cheaper for all ratepayers to reduce the amount of generation facilities needed in the future.
3. Absent MEEIA, the utility's incentive to invest in generation facilities serves as a disincentive for that utility to facilitate programs to reduce future capacity requirements.

In light of these assumptions, the MEEIA statute provides utilities with timely earnings opportunities associated with cost-effective measurable and verifiable efficiency savings.

Q. Does the Non-Utility Stipulation demand-related PI provide Ameren Missouri with timely earnings opportunities associated with cost-effective measurable and verifiable efficiency savings?

A. Yes. In fact, the mechanism is more generous than would otherwise be reasonable in that it:

1. Does not require Ameren Missouri to reach the total demand savings that are associated with moving the retirement date of the surrogate units before being compensated on a per-kWh basis for the change in retirement date of those units; and
2. Does not require Ameren Missouri to reach the 600 MW demand savings associated with deferral of the construction of a combined cycle unit in order to receive payout of the Non-Utility Stipulation demand-related PI Tier 2.

Q. Is it fair to ratepayers to design a performance incentive that compensates Ameren Missouri shareholders for a lost earnings opportunity that may not be lost?

A. In Staff's opinion, it is a reasonable compromise for ratepayers to accept the risk of compensating Ameren Missouri's shareholders for lost earnings opportunities associated with an early retirement (and potential deferral of the construction of a combined cycle unit) in that it encourages Ameren Missouri to promote meaningful cost-effective energy efficiency programs, while maintaining the statutory requirement for measured and verified results of those programs.

Q. Are there other aspects of the Non-Utility Stipulation demand-related PI that are more advantageous to Ameren Missouri shareholders?

A. Yes. Please see the supplemental direct testimony of Staff witness Mark Oligschlaeger.

Q. Is another witness filing testimony in support of the participation-related component of the PI mechanism?

A. Yes. I understand that Geoffrey Marke will be filing testimony on this component on behalf of the Office of the Public Counsel, in support of the Non-Utility Stipulation.

Q. Does the Non-Utility Stipulation provide for the creation of an additional incentive mechanism related to meeting energy savings targets?

A. Yes.

Q. Does this conclude your supplemental direct testimony?

A. Yes.

Exhibit No.:
Issues: DSIM
Witness: Sarah L. Kliethermes
Sponsoring Party: MO PSC Staff
Type of Exhibit: Corrected Red-Line Supplemental Direct Testimony
Case No.: EO-2015-0055
Date Testimony Prepared: July ~~9~~14, 2015

MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION

CORRECTED RED-LINE SUPPLEMENTAL DIRECT TESTIMONY

OF

SARAH L. KLIETHERMES

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. EO-2015-0055

Jefferson City, Missouri
July 2015

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as allowed by MEEIA	)))))	Case No. EO-2015-0055

AFFIDAVIT OF SARAH KLIETHERMES

State of Missouri)
) ss.
County of Cole)

AFFIDAVIT

COMES NOW Sarah Kliethermes and on her oath declares that she is of sound mind and lawful age; that she contributed to the attached Corrected Supplemental Direct Testimony and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

Sarah Kliet

Sarah Kliethermes

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 14th day of July, 2015.

NOTARY PUBLIC

LAURA DISTLER
Notary Public, Notary Seal
State of Missouri
Cole County
Commission # 15203914
My Commission Expires June 21, 2019

Table of Contents

CORRECTED RED-LINE SUPPLEMENTAL DIRECT TESTIMONY

OF

SARAH L. KLIETHERMES

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. EO-2015-0055

CORRECTED RED-LINE SUPPLEMENTAL DIRECT TESTIMONY

OF

SARAH L. KLIETHERMES

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. EO-2015-0055

Q. Are you the same Sarah L. Kliethermes who filed rebuttal testimony in this case?

A. Yes.

Executive Summary

Q. What is the subject of your supplemental direct testimony?

A. I will generally describe the Non-Unanimous Stipulation and Agreement ("Non-Utility Stipulation") filed on July 7, 2015, and as amended on July 8, 2015, concerning Union Electric Company's d/b/a Ameren Missouri ("Ameren Missouri" or "Company") application for approval of its second cycle of MEEIA programs., and provide support for the throughput disincentive mechanism and the demand-related performance incentive mechanism of the Non-Utility Stipulation. I recommend the Commission authorize the Net Throughput Disincentive ("NTD") and the Performance Incentive ("PI") mechanisms that form the alternative DSIM. The terms of the Non-Utility Stipulation remove the financial disincentive to Ameren Missouri's promotion of DSM programs and incent Ameren Missouri's promotion of DSM programs, respectively.

Overview of Non-Utility Stipulation

Q. Does the Non-Utility Stipulation result in the MEEIA statutory policy objective "to value demand-side investments equal to traditional investments in supply and delivery infrastructure and allow recovery of all reasonable and prudent costs of delivering cost-effective demand-side programs?" *See 393.1075.3.*

A. Yes, the Non-Utility Stipulation sets up an interrelated framework of programs, disincentive removal, and incentive creation that supports the statutory policy. Specifically, in exchange for Ameren Missouri's development and promotion of a suite of programs to promote cost-effective measureable and verifiable efficiency savings, the Non-Utility Stipulation would provide Ameren Missouri with:

1. Contemporaneous program cost recovery on:
    a. A base level of programs that provide some level of benefit to all customers over the planning horizon,
    b. Targeted low-income programs that may not be cost effective, and
    c. Analysis and implementation of additional programs which provide some level of benefit to all customers over the planning horizon.
2. A mechanism to remove Ameren Missouri's throughput disincentive in a manner that makes Ameren Missouri financially indifferent to whether or not it promotes DSM programs.
3. A mechanism to incent Ameren Missouri to promote DSM programs through:
    a. A base level of benefit associated with annual energy savings targets, if approved by the Commission,
    b. An incentive targeted to improve participation among multi-family low income customers, and
    c. An incentive to meaningfully reduce future capacity requirements.

<u>Support for limited waiver of Chapter 20</u>

Q. In your pre-filed rebuttal testimony, you recommend the lost revenues mechanism described in Chapter 20 of the Commission's rules. Does the Non-Utility Stipulation contemplate the lost revenues mechanism?

A. No. The NTD mechanism recommended in the Non-Utility Stipulation is more generous to Ameren Missouri than the mechanism provided in the rules and recommended in my rebuttal testimony. The rules require a utility to show reduction in sales prior to the utility receiving an opportunity to collect revenues associated with the throughput disincentive. In contrast the Non-Utility Stipulation provides Ameren Missouri throughput disincentive recovery regardless of whether its overall utility sales are up or down.

Q. Does Staff support the Non-Utility Stipulation NTD mechanism and the associated waiver of the applicable Chapter 20 rules for Ameren Missouri MEEIA Cycle 2?

A. Yes, Staff supports a waiver of a portion of 4 CSR 240-20.093(1)(Y). The Non-Utility Stipulation NTD mechanism is part of an interrelated resolution derived in the spirit of compromise and with the support of several parties with diverse interests. To achieve the result of a MEEIA Cycle 2 as is described in the Non-Utility Stipulation, there is good cause to waive 4 CSR 240-20.093(1)(Y) which states "Lost revenue means the net reduction in utility retail revenue, taking into account all changes in costs and all changes in any revenues relevant to the Missouri jurisdictional revenue requirement, that occurs when utility demand-side programs approved by the commission in accordance with 4 CSR 240-20.094 cause a drop in net system retail kWh delivered to jurisdictional customers below the level used to set the electricity rates. Lost revenues are only those net revenues lost due to energy and demand savings from utility demand-side programs approved by the commission in accordance with 4 CSR 240-20.094 Demand-Side Programs and measured and verified through EM&V[.]"

Q. To what extent does Staff recommend a waiver of 4 CSR 240-20.093(1)(Y) in support of the Non-Utility Stipulation?

A. Staff recommends only waiver of the requirement that a utility prove that "utility demand-side programs approved by the commission in accordance with

4 CSR 240-20.094 cause a drop in net system retail kWh delivered to jurisdictional customers below the level used to set the electricity rates."

Q. Is Staff's recommendation to waive certain requirements of 4 CSR 240-20.093(1)(Y) similar to Ameren Missouri's request to waive the requirements of Chapter 20 for its throughput-disincentive net-shared benefit mechanism as contained in the Non-Unanimous Stipulation and Agreement filed June 30, 2015?

A. No. Ameren Missouri's proposed throughput disincentive mechanism is not modeled on the lost revenue concept found in Chapter 20. Rather it is modeled as an additional performance incentive mechanism. As such, Ameren Missouri requested a much broader waiver of the Chapter 20 rules than is reasonable.

Q. Why is the limited waiver of 4 CSR 240-20.093(1)(Y) recommended by Staff reasonable when Staff has testified that Ameren Missouri's requested waivers of Chapter 20 are unreasonable?

A. Staff recommends the Commission adopt the Non-Utility Stipulation of NTD, which requires measurement and verification of the magnitude and causation of realized kWh savings, but still relies on a quantification of the net reduction in utility retail revenue. In contrast, Ameren Missouri requested that the Commission authorize its throughput disincentive mechanism as an additional performance incentive mechanism, and it relied on accelerating the recovery of pre-deemed projections of program effectiveness.

<u>Net Throughput Disincentive</u>

Q. What is the goal of the NTD mechanism provided in the Non-Utility Stipulation?

A. The Non-Utility Stipulation NTD mechanism provides Ameren Missouri with revenue as a result of energy efficiency programs it offers and promotes in lieu of revenue it did not earn because of sales of energy it did not make. This recovery of the net throughput disincentive results in Ameren Missouri being financially indifferent to whether or not it promotes DSM programs, all else being equal. The Non-Utility Stipulation NTD mechanism removes any disincentive associated with Ameren Missouri's promotion of energy efficiency.

Q. Is the Non-Utility Stipulation NTD structured as an incentive or as a share of future net benefits that may or may not materialize?

A. No, the Non-Utility Stipulation does not rely on an estimate of the future benefits of the programs, and it preserves the distinction between removing disincentives and creating positive incentives that is contained in the MEEIA statute.

Q. How does the Non-Utility Stipulation NTD work?

A. The Non-Utility Stipulation allows Ameren Missouri to bill and retain the unrealized revenue caused by its promotion of the DSM programs in MEEIA Cycle 2. Each month, Ameren Missouri will book revenues associated with the unbilled kWh for that month. The dollar values booked will later be trued-up after it is determined how many unbilled kWh actually occurred that month.

Q. What is an unbilled kWh and what is unrealized revenue?

A. DSM programs, by design, reduce the number of kWh a utility sells. An unbilled kWh is a kWh that an Ameren Missouri customer did not buy from Ameren Missouri, because that customer participated in an Ameren Missouri MEEIA Cycle 2 program to reduce his or her energy usage. The unrealized revenue is the revenue that Ameren Missouri did not receive from the sales of energy it did not sell because of MEEIA Cycle 2, minus the costs that Ameren Missouri avoided incurring because it did not have to procure that energy.

Q. How much revenue does Ameren Missouri lose on each unbilled kWh?

A. It depends. The rate Ameren Missouri would charge for that kWh will vary by customer class, season, the level of energy that customer otherwise consumes that month, and whether or not a rate case has occurred to change applicable rates.

Q. Does Ameren Missouri avoid incurring costs when it does not sell a given kWh of energy?

A. Yes. Ameren Missouri avoids incurring the cost of obtaining that energy for its customer through the MISO integrated energy market, as well as the cost of transmission and ancillary services associated with that energy. Reductions in customer load also translate to reduction in Ameren Missouri's share of MISO administrative charges, capacity requirements, and transmission build-out expense.

Q. Is the FAC Base Factor an accurate measure of the specific costs Ameren Missouri avoids when it avoids selling a specific kWh of energy?

A. No. Not only are some of the elements of the transmission costs excluded from the FAC Base Factor, the FAC Base Factor is netted against revenues from Off-System Sales. Additionally, while the market value of energy varies greatly during the hours of the year, the FAC Base Factor is adjusted only twice annually.

Q. Will net revenues from Off-System Sales go up or down, all else being equal, if Ameren Missouri avoids selling energy to its customers because of a program under MEEIA Cycle 2?

A. All else being equal, net revenues from Off-System Sales will go up if Ameren Missouri avoids selling a given kWh of energy to its customers, because Ameren Missouri will not have to buy that energy through the MISO integrated marketplace.

Q. Although it is not an accurate measure of the specific costs and revenues Ameren Missouri avoids when it avoids selling a specific kWh of energy, is it reasonable to use the FAC Base Factor for determining marginal avoided cost under the Non-Utility Stipulation NTD?

A. While it is not 100% accurate, it is reasonable to use the FAC Base Factor as a measure of net avoided costs and off-system sales revenues because the Non-Utility Stipulation provides that unbilled revenues are recorded real-time, and are not subject to significant present-valuing. Additionally, by relying on the existing FAC mechanism, shareholders will retain 5% of the net avoided costs and off-system sales revenues.

Q. Why has Staff not developed a number that represents this 5% shareholder retention?

A. To develop that number Staff needs hourly savings estimates for each measure. Ameren Missouri has stated in its response to Staff Data Request 0013 that it will not provide Staff with those numbers on an hourly basis.

Q. Under the Non-Utility Stipulation NTD, is it necessary to make assumptions about rate case timing?

A. No. Because unbilled revenues are tracked on a monthly basis, there is no need to create a projection of rate case intervals years into the future to determine the NTD.

Q. Under the Non-Utility Stipulation NTD, is it necessary to make assumptions about what level of revenue will be collected through the fixed customer charge in the outcome of a future rate case?

A. No. Because unbilled revenues are tracked on a monthly basis, there is no need to project out future rate case outcomes to determine the NTD.

Q. Under the Non-Utility Stipulation NTD, is it necessary to make assumptions about what future fuel and transportation expense, purchased power expense, transmission expense, and off-system sales revenue levels will be in the outcome of a future rate case?

A. No. By eliminating the present valuing of the throughput disincentive, the Non-Utility Stipulation NTD is able to avoid the need to make many of the critical and controversial assumptions that would be necessary for a present-value throughput disincentive.

Q. Is the Non-Utility Stipulation NTD designed to be trued-up for the actual effectiveness of the measures that have been installed?

A. Yes. An important characteristic of the Non-Utility Stipulation NTD is that by requiring true-up based on the results of Evaluation, Measurement, and Verification ("EM&V") and Net to Gross ("NTG") adjustments, the mechanism is designed to make the utility truly indifferent to not only whether programs are delivered pursuant to MEEIA Cycle 2, but more importantly, the utility is made indifferent as to which programs are delivered and whether or not that delivery is effective.

Q. Is the utility protected against the chance that the programs have not reduced energy consumption?

A. Yes. Unlike lost revenue recovery pursuant to 4 CSR 240-20.093(1), the Non-Utility Stipulation does not require a showing that sales have decreased. Under the Non-Utility Stipulation NTD, overall energy consumption could be up, but Ameren Missouri will still recover NTD associated with the realized kWh savings determined through EM&V and NTG analysis.

Q. Is there a floor and a cap associated with the Non-Utility Stipulation NTD?

A. Yes. Staff witness Mark Oligschlaeger is providing supplemental direct testimony related to the floor and cap, as well as the alternative 100% booking mechanism described in the Non-Utility Stipulation.

Demand-related Performance Incentive

Q. What is the goal of the Non-Utility Stipulation demand-related PI mechanism?

A. The Non-Utility Stipulation demand-related PI mechanism results in Ameren Missouri shareholders receiving a performance incentive equal to the present value of the earnings opportunity on capacity-related investments that they would receive if Ameren Missouri did not promote DSM programs, all else being equal. This creates an incentive for Ameren Missouri to promote energy efficiency.

Q. What is the basis for the dollar values and the kW values in the Non-Utility Stipulation's demand-related PI?

A. The first tier of the demand-related PI is based on the approximate value to shareholders of the recently experienced change in retirement date of the Meramec plant, as a reasonable surrogate for a future change in supply-side ~~pursuant to the modeling of DSM in Ameren Missouri's Chapter 22 filing~~. The second tier of the demand-related PI is the approximate value to shareholders of the deferred investment in a combined cycle plant pursuant to the modeling of DSM in Ameren Missouri's Chapter 22 filing.

Q. How were the Meramec numbers, which were used to determine the reasonable surrote, derived?

A. The rate base value of the Meramec generating units is approximately $685 million, and the current depreciation reserve is approximately $345 million, leaving a net rate base value of approximately $340 million. Ameren Missouri's shareholders earn a return on this net investment. Every year, the net investment in the plant decreases, all else being equal, because ratepayers contribute depreciation expense which increases the depreciation reserve. Because Ameren Missouri's generating units receive "life span" depreciation treatment, an acceleration of the projected retirement date of a generating unit increases the level of depreciation expense the ratepayers will contribute, which decreases the net rate base on which shareholders earn a return (assuming rate cases occur to adjust the depreciation expense and to recognize the decrease in net rate base). Assuming a ~~2030~~ 2027 retirement date, shareholders ~~will receive~~would have an earnings stream of approximately $~~145~~ 127 million from now until plant retirement. This earnings stream has a present-value of approximately $~~140~~ 125 million. But, assuming a ~~2026~~ 2022 retirement date, the shareholders' earnings stream is valued at approximately $~~110~~ 84.8 million, which has a present value of approximately $~~108~~ 84.5 million. Moving the Meramec projected retirement date from ~~2030~~ 2027 to ~~2026~~ 2022 therefore reduces the estimated present-value earnings stream by approximately $~~31~~ 40 million, all else being equal.

Q. What is the total capacity of the Meramec generating units?

A. The total capacity at Meramec is approximately 834,000 kW. This means, that if the projected date of all of the Meramec generating units is moved from ~~2030~~ 2027 to ~~2026~~2022, shareholders will forego an earnings opportunity of approximately $~~37~~48/kW.

~~Q. If sufficient kW savings are not generated to move the projected retirement date of all of the units at Meramec from 2030 to 2026, will shareholders forego that same earnings opportunity?~~

~~A. No. The $37/kW value assumes that all units will be retired in 2026 for depreciation purposes. Foregone shareholder earnings would be less if all units are not retired in 2026, all else being equal.~~

Q. How were the combined cycle numbers derived?

A. In its 2014 Chapter 22 filing, at Table 9.9 on page 23, Ameren Missouri provided an estimated capital cost of $1,297/kW for a 600,000 kW combined cycle plant, including associated transmission upgrades, in 2013 dollars. On an annual basis, that investment represents an earnings opportunity of approximately $65/kW. Three years of that earnings stream therefore yields an earnings opportunity of approximately $250/kW. To generously incent Ameren Missouri to achieve meaningful demand-related savings, Staff did not compare the difference in earnings streams associated with simply moving the date of constructing a combined cycle unit, which would substantially reduce the value of the earnings stream for which shareholders are compensated under the demand-related PI.

Q. What is contemplated under the MEEIA statute for the performance incentive?

A. The MEEIA statute relies on certain assumptions:

1. Utility opportunities for profits come from investment of shareholder dollars, including investment in generation facilities.
2. Rates can ultimately be cheaper for all ratepayers to reduce the amount of generation facilities needed in the future.
3. Absent MEEIA, the utility's incentive to invest in generation facilities serves as a disincentive for that utility to facilitate programs to reduce future capacity requirements.

In light of these assumptions, the MEEIA statute provides utilities with timely earnings opportunities associated with cost-effective measurable and verifiable efficiency savings.

Q. Does the Non-Utility Stipulation demand-related PI provide Ameren Missouri with timely earnings opportunities associated with cost-effective measurable and verifiable efficiency savings?

A. Yes. In fact, the mechanism is more generous than would otherwise be reasonable in that it:

1. Does not require Ameren Missouri to reach the total demand savings that are associated with moving the retirement date of the surrogate~~Meramec~~ units before being compensated on a per-kWh basis for the change in retirement date of those units; and
2. Does not require Ameren Missouri to reach the 600 MW demand savings associated with deferral of the construction of a combined cycle unit in order to receive payout of the Non-Utility Stipulation demand-related PI Tier 2.

~~Q. Will shareholders lose earnings opportunities if the retirement date of the Meramec generating units is not shifted, all else being equal?~~

~~A. No. Unless the retirement date for depreciation purposes shifts, the earnings opportunity remains constant. In this sense, the Non-Utility Stipulation demand-related PI is very generous to Ameren Missouri's shareholders.~~

Q. Is it fair to ratepayers to design a performance incentive that compensates Ameren Missouri shareholders for a lost earnings opportunity that may not be lost?

A. In Staff's opinion, it is a reasonable compromise for ratepayers to accept the risk of compensating Ameren Missouri's shareholders for lost earnings opportunities associated with an early ~~Meramec~~ retirement (and potential deferral of the construction of a combined cycle unit) in that it encourages Ameren Missouri to promote meaningful cost-effective energy efficiency programs, while maintaining the statutory requirement for measured and verified results of those programs.

Q. Are there other aspects of the Non-Utility Stipulation demand-related PI that are more advantageous to Ameren Missouri shareholders?

A. Yes. Please see the supplemental direct testimony of Staff witness Mark Oligschlaeger.

Q. Is another witness filing testimony in support of the participation-related component of the PI mechanism?

A. Yes. I understand that Geoffrey Marke will be filing testimony on this component on behalf of the Office of the Public Counsel, in support of the Non-Utility Stipulation.

Q. Does the Non-Utility Stipulation provide for the creation of an additional incentive mechanism related to meeting energy savings targets?

A. Yes.

Q. Does this conclude your supplemental direct testimony?

A. Yes.