Exhibit No.:	
Issue(s):	Operation of DSIM Changes
Witness:	William R. Davis
Type of Exhibit:	Supplemental Testimony
Sponsoring Party:	Union Electric Company
File No.:	EO-2015-0055
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MISSOURI PUBLIC SERVICE COMMISSION

FILE NO. EO-2015-0055

SUPPLEMENTAL TESTIMONY

OF

WILLIAM R. DAVIS

ON

BEHALF OF

UNION ELECTRIC COMPANY
d/b/a Ameren Missouri

St. Louis, Missouri
June 2015

SUPPLEMENTAL TESTIMONY

OF

WILLIAM R. DAVIS

FILE NO. EO-2015-0055

Q. Please state your name and business address.

A. My name is William ("Bill") R. Davis. My business address is One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri 63103.

Q. By whom and in what capacity are you employed?

A. I am an Economic Analysis and Pricing Manager for Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri" or "Company").

Q. Please describe your educational background and employment history.

A. I received a Bachelor of Science in Economics from Illinois State University in 2002. I subsequently received a Master of Science in Economics with an emphasis in regulatory economics from Illinois State University in 2003. I completed several internships during my college career, including an internship with Illinois Power Company. Upon completion of my master's degree, I began working full-time for Caterpillar, Inc., at its corporate headquarters in Peoria, Illinois, as an Advanced Quantitative Analyst in the Business Intelligence Group, with the primary duties of performing economic and sales analyses.

In May of 2005, I joined Ameren Services Company as a Load Research and Forecasting Specialist in the Corporate Planning Department. My duties included electricity and natural gas sales forecasting, load research, weather normalization, and various other sales analyses. In September of 2007, I became a Senior Load Research Specialist and then moved to the Resource Planning Group in March of 2009. In October of 2011, I became a Senior Corporate Planning Analyst. In that position, I was responsible for Ameren Missouri's 2011 Integrated Resource Plan and the 2012 Missouri Energy Efficiency Investment Act ("MEEIA") filing ("MEEIA 1"). I began my current position in March of 2013.

Q. What is the purpose of your supplemental testimony in this proceeding?

A. The purpose of my testimony is to explain two changes to the Demand-Side Investment Mechanism ("DSIM") that are included in the Non-Unanimous Stipulation and Agreement ("Stipulation") filed June 30, 2015 in this case. Specifically, I am explaining changes to how the sharing of net benefits retained by the Company to offset the throughput disincentive (referred to by the acronym "TD-NSB") occur, and also how changes to the operation of the performance incentive component of the DSIM will work.

Q. Are there any administrative issues that you need to address?

A. Yes, I am adopting the sections of the report filed by the Company to support its initial application in this proceeding as well as the surrebuttal testimony sponsored by Steve Wills. Mr. Wills has accepted a position with Ameren Illinois Company; consequently, I am adopting his testimony.

I. Throughput Disincentive

Q. How does the Stipulation change Ameren Missouri's original DSIM proposal?

A. As I will explain below, it makes changes to the method through which the Company shares with its customers the net benefits of energy efficiency programs in order to offset the throughput disincentive. This is referred to as the TD-NSB component of the DSIM.

Q. Please explain why Ameren Missouri is proposing changes to its TD-NSB proposal?

A. As explained in more detail in the Supplemental Testimony of Ameren Missouri witness Lynn M. Barnes, the Stipulation changes the mechanics of the TD-NSB component so that it reflects a two-tiered approach to recovering the throughput disincentive. This two-tiered approach addresses the concerns expressed by other parties arising from the sensitivity of the TD-NSB calculation to future rate case timing (and also to the magnitude of rate changes in those future cases). As Ms. Barnes also discusses, this change addresses that concern without creating a disincentive for the Company to pursue energy efficiency because it does not run afoul of applicable accounting standards.

Q. What specific changes does the Stipulation make to the TD-NSB?

A. It allows for the true-up of the rate case timing and the portion of the increase in those rate cases that arise from higher fixed costs. In addition, the TD-NSB model is updated to reflect the actual increase arising from the true-up test year level of fixed costs used to set rates in Ameren Missouri's most recent rate proceeding (File No. ER-2014-0258), since that figure is now known.

Q. In earlier testimony, Ameren Missouri has said rate case timing cannot be trued-up without running afoul of the accounting rules. How does the Stipulation resolve that conflict?

A. Under the Stipulation, the TD-NSB mechanism is split into two tiers for recovery. The first tier acts as a floor for throughput disincentive recovery that, as I understand it, will meet the revenue recognition accounting requirements. The second tier represents an amount of throughput disincentive recovery to be collected through the DSIM if the rate case timing is different than what was assumed for the first tier. The second tier recovery would not be known until late 2019 under this proposal and thus no revenues associated with the second tier would be collected and/or recorded until that time. Ms. Barnes' supplemental testimony explains in greater detail how these proposed changes meet the applicable accounting standards and, consequently, do not pose a barrier to Ameren Missouri's pursuit of energy efficiency.

Q. You described the TD-NSB as being broken into two tiers for recovery. Please describe how you determined the sharing percentage for the first tier.

A. Because the first tier needs to act as a floor for cost recovery in order to meet the accounting requirements for revenue recognition, the first tier of TD-NSB is calculated under the most conservative assumption that rate cases are filed every 15 months. This is essentially the fastest pace at which Ameren Missouri could theoretically file rate cases. In contrast, the Company’s original TD-NSB proposal was based on an expected interval of 30 months between rate cases. Some of the other parties to the case expressed concern about the 30-month rate case assumption. Splitting TD-NSB recovery into two tiers, with the first tier based on a much more conservative estimate of the intervals between rate cases, should alleviate those concerns.

Q. How do you propose to calculate the second tier of TD-NSB?

A. The second tier of TD-NSB is largely based on actual rate case timing and will be calculated at the time of Ameren Missouri’s MEEIA 2 Rider filing in November of 2019. At the time of that filing, there will be two possible paths for calculating the second tier for TD-NSB. The first outcome occurs if, prior to that date, Ameren Missouri has filed one or more rate cases that include a billing determinants test period covering MEEIA 2 (i.e., through 12/31/2018). It is extremely important to understand that in each rate case, the energy efficiency savings associated with MEEIA 2 will be annualized[1] because the sharing percentages are calculated based on this assumption, and failure to annualize the energy efficiency savings would result in material under-collection of the throughput disincentive (as described in the MEEIA 2 report filed at the inception of this case). The second outcome is that if, at the time of the November 2019 MEEIA Rider filing, Ameren Missouri has not filed a rate case that includes a billing determinants test period covering MEEIA 2. In this circumstance, the Company proposes to use an assumption about when the next rate case will be filed (sometime after the November 2019 MEEIA Rider filing), and that assumed rate case will be the basis for determining the second tier. Again, this assumed rate case is only necessary if an actual rate case has not been filed that includes a billing determinants test period covering MEEIA 2. Neither of these scenarios allows the second tier to become a negative value.

Q. Under the second circumstance you just discussed – where by the time the MEEIA 2 Rider is filed Ameren Missouri has not filed a general rate case that includes test period billing determinants covering MEEIA 2 energy savings – how does the

[1] Annualization refers to the process in which explicit adjustments are made to the billing determinants to reflect the implementation of energy efficiency measures in all 12 months of the test period. For example, if the test period was a calendar year and all of the energy efficiency savings were first implemented in December, then only one of the 12 months in the test period would include the effects of energy efficiency. Annualizing the energy efficiency savings recognizes that going forward from December all months will incorporate those energy savings so the prior 11 months of the test period are adjusted to reflect the energy savings. In case ER-2012-0166, Ameren Missouri implemented this same type of adjustment for energy efficiency and in ER-2014-0258 a similar adjustment was made to account for the effects of customer-owned solar distributed generation.

Stipulation propose to determine the date of the future rate case to be used for the second tier sharing percentage?

A. In this circumstance, Ameren Missouri is proposing a three step process be used to determine the assumed rate case for determining the second tier TD-NSB, as follows: Step 1 - add 48 months onto the date of the Company's last rate case filing prior to the fall 2019 Rider EEIC adjustment filing; Step 2 – multiply the number of months between November 1, 2019, and the rate case filing date in Step 1 by 50%; and Step 3 – add the result of Step 2 to November 1, 2019, to determine the assumed filing date for the next rate case.

Q. Please provide an example of determining the last rate case filing date for final Tier 2 determination.

A. Below is a specific example of how the three step process works.

Step 1: last rate case filing date: January 1, 2018 (no billing unit true-up period with annualized energy efficiency savings extended to or beyond 12/31/2018)

add 48 months = January 1, 2022

Step 2: number of months between 11/1/2019 and 1/1/2022 = 26 * 0.5 = 13

Step 3: add 13 months to 11/1/2019 = 12/1/2020 which is the hypothetical rate case filing date for the final determination of the Tier 2 sharing percent

Q. Why can't Ameren Missouri wait to determine the second tier of TD-NSB until a rate case is filed that fully incorporates MEEIA 2 energy savings into the billing determinants?

A. First, it is entirely possible that the second tier of TD-NSB does in fact completely true-up rate case timing. However, if it is the case that the effects of MEEIA 2 have not been fully reflected in base rates by the November 2019 filing of the scheduled adjustment of the MEEIA Rider rate, then the proposed process reflects a reasonable balance between the desire to fully true-up for rate case timing and achieving recovery of energy efficiency costs within a reasonable time frame. For example, as I addressed in my (adopted) surrebuttal testimony, the final true up of the 2016-18 programs, then, could extend as late as 2023[2] or beyond.

Q. How does the Stipulation propose to true-up for actual increases arising from increased fixed costs from the true-up test year in future rate cases?

A. Because the aforementioned process allows for true-up of rate case timing, it makes sense to also true-up for the outcome of those rate cases. For the first tier, the Stipulation assumes the rate increases arising from higher fixed costs will be 1%. In determining the fixed cost portion of the rates set in future rate cases, it would be necessary to use the same process outlined in the MEEIA 2 report[3]. In the situation where there is a need to use the three step process to determine an assumed rate case (as described above), the Stipulation assumes that the portion of future rate increases arising from higher fixed costs will be 4%, which Staff has testified is a reasonable assumption.[4] In no case shall the second tier be a negative value; that is, when calculating the second tier TD-NSB sharing percentage, the increase in fixed costs for any future rate case cannot be modeled as less than the 1% assumed for the first tier.

Q. Based on your description of the changes to the TD-NSB mechanism, what is the proposed first tier (Tier 1) sharing percentage?

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[2] Three years beyond a 2018 test year would mean a 2021 test year, with rates likely implemented in the following year.

[3] The process is described on pages 32-35 of the MEEIA 2 Report which essentially represents an analysis of all customer bills for each rate class.

[4] Rebuttal testimony of Mark Oligschlaeger, page 12, lines 8-9.

A. Assuming rate cases are filed in successive 15-month intervals and a 1% increase in rates attributable to increases in fixed costs for future rate cases, the proposed Tier 1 sharing percentage is 27.68%. This amount is also based on the updated portfolio of programs created as part of the Stipulation and the updated fixed cost-driven portion of the rate increase approved in ER-2014-0258.

Q. Please provide a reconciliation of the Tier 1 sharing percentage to Ameren Missouri's original request of 32.57%.

A. The table below demonstrates how the changes in the Stipulation relate to the Company's original TD-NSB sharing percent. The column labeled "Larger Portfolio" simply reflects the increased net benefits and throughput disincentive associated with more energy savings. Because the larger portfolio is less cost-effective than Ameren Missouri's original proposal, the total sharing percentage increases compared to the original plan. The next column, titled "+1% Fixed Cost Increases," includes the assumption that future increases in fixed costs for future rate cases will be limited to 1% as opposed to the 4% assumed in the Company's original filing. The last column, labeled "+15-month Rate Cases," reflects all of the assumptions associated with Tier 1, which include the larger portfolio, 1% future increases arising from higher fixed costs, and 15 months between all future rate case filings. Since this final column represents a series of conservative assumptions, it is a reasonable floor for setting the TD-NSB sharing percent.

(NPV, 2016 $)	**Original Plan**	**Larger Portfolio**	**+ 1% Fixed Cost Increases**	**+ 15-month Rate Cases**
Throughput Disincentive	$44.0	$60.0	$57.8	**$45.8**
Net Benefit	$135.1	$165.4	$165.4	**$165.4**
Sharing Percent	32.57%	36.29%	34.93%	**27.68%**

Q. Please provide examples of how the second tier (Tier 2) of TD-NSB could turn out if some or all of the Company's original assumptions were accurate.

A. The table below demonstrates how Tier 2 would be determined. In the table below, the column labeled "Tier 1 Assumptions" represents what would happen in determining Tier 2 if actual rate case timing as of 11/1/2019 matched the Tier 1 assumptions. In this case, Tier 2 would be zero. The column labeled as "+30-month Rate Cases" demonstrates the Tier 2 percentage presuming rate cases happened in 30-month intervals instead of the 15-month assumption embedded in Tier 1. In this case, the Tier 2 sharing percentage would add 7.25% to the TD-NSB sharing percentage and those costs ($14.5 million) would most likely be collected over 12 months starting February 2020. The last column in the table below demonstrates the Tier 2 sharing percentage if there were 30-month successive rate cases and 4% increases in fixed costs for each rate case.

(NPV, 2016 $)	**Tier 1 Assumptions**	**+ 30-month Rate Cases**	**+ 4% Fixed Cost Increases**
Throughput Disincentive	$45.8	$57.8	$58.9
Net Benefit	$165.4	$165.4	$165.4
Sharing Percent	27.68%	34.93%	35.60%
Tier 1 - Sharing Percent	27.68%	27.68%	27.68%
Tier 2 - Sharing Percent	**0.00%**	**7.25%**	**7.91%**
Tier 2 - 2016 Dollars (MM$)	**$0**	**$12.0**	**$13.1**
Tier 2 - Rev. Req. (MM$)**	**$0**	**$14.5**	**$15.8**

**Includes a discount rate gross-up from 2016 dollars to 2019 dollars using with 6.46%

Q. Please provide specific details about the how the second tier of TD-NSB will mechanically be calculated.

A. To be clear, calculating the second tier is an all-other-factors-held-constant process. The intent is to open the workpaper used to calculate the first tier and only update the rate case filing dates (and associated billing unit test period dates) and the increase in fixed costs associated with those rate cases. Again, no other inputs to the model will change. Based on the updates to rate case filing dates and increases to fixed costs for those rate cases, the model will automatically calculate what the TD-NSB sharing percentage would be under those conditions. Then the first tier TD-NSB sharing percentage will be subtracted from the newly calculated TD-NSB sharing percentage and the result is the second tier sharing percentage. There is also a very clear and important rule that the second tier TD-NSB cannot be a negative number.

Q. Please summarize why these modifications to the TD-NSB mechanism are good for customers.

A. In short, the modifications provide a means to address the concerns of rate case timing and the outcomes of those rate cases which could cause the Company to "over-recover" the TD-NSB share. By using conservative assumptions in Tier 1, that risk has been mitigated to a very high degree. This means that since the mechanism, as modified, meets the applicable accounting standards, the Company can record the revenues associated with Tier 1 and thus not be faced with a disincentive to pursue energy efficiency. Consequently, the Company can continue to pursue energy efficiency programs to the benefit of its customers.

II. Performance Incentive

Q. What changes does the Stipulation make to Ameren Missouri's performance incentive?

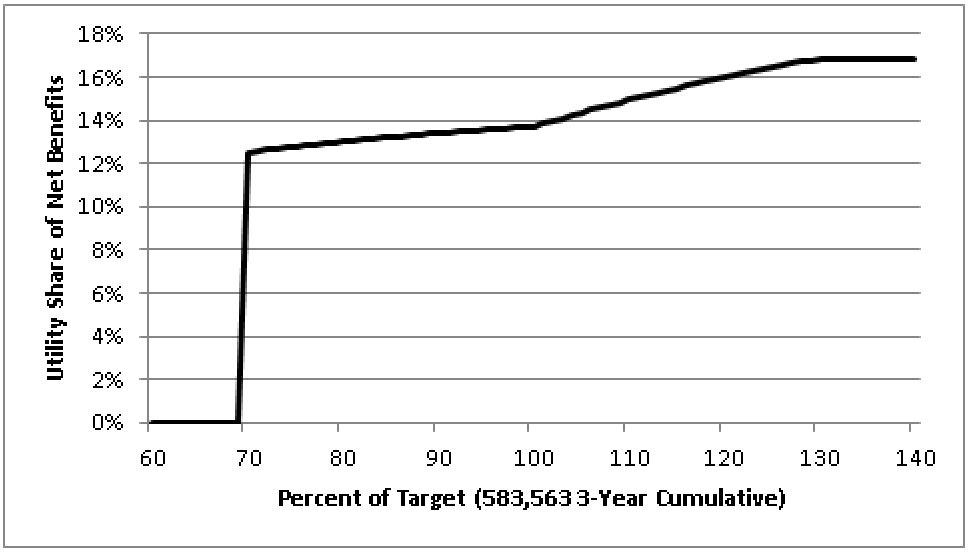
A. The Stipulation adopts the approach reflected in the agreement[5] resolving the first program year results from the Company's MEEIA 1 energy efficiency programs. This agreement results in a deemed net-to-gross of 1.0 for a given program year if both the Company's evaluation contractor and the Commission's auditor portfolio-wide average energy savings falls within a net-to-gross range of 0.9 to 1.1. The process in the aforementioned Stipulation also describes a process to follow if the net-to-gross results are outside the 0.9 to 1.1 range.

In addition, the Stipulation increases the performance incentive by 20%, an appropriate increase given that the Stipulation increases the targeted energy savings by 37%. The table below shows the relevant metrics and the following chart shows the full sharing curve using these revised figures. It is noteworthy that although the Stipulation sets a higher nominal performance incentive, the sharing percentages $/kWh-Achieved metric is more than 10% lower than Ameren Missouri's original request; i.e., the performance incentive *per kWh saved* is lower. In addition, the new proposed incentive level is also a smaller percentage of program costs and a smaller percentage of net benefits as demonstrated below.

% of Goal Achieved	70	100	130
3-Year Total Incentive (MM$)	$19.2	$30.0	$48
2016 NPV of Incentive (MM$)	$15.9	$24.9	$39.8
% of Net Benefits	12.55%	13.72%	16.89%
% of Program Costs	7.8%	12.2%	19.5%
$/kWh Achieved Incentive	$0.047	$0.051	$0.063

[5] Second Non-Unanimous Stipulation and Agreement Settling the Program Year 2013 Change Requests, EO-2014-0142, filed on February 11, 2015.

Chart 1 – Performance Incentive Sharing Curve



Q. Under the Stipulation, how is the low-income program accounted for in the TD-NSB and performance incentive calculations?

A. The low-income program is to be excluded[6] from the calculation of net benefits if the program is not cost effective but, even in that situation, the energy savings (MWhs) will count towards the performance target. Each year, a determination will be made if the low-income program is cost effective and, if it is, the net benefits will be included in the determination of the TD-NSB. Because the low-income program included in the Stipulation is not cost effective, each year will start assuming the program will not be cost effective. For example, starting in January of 2016, the TD-NSB calculations will not incorporate the low-income program costs and benefits into the calculation of net benefits. However, if in 2017 the low-income program is determined to be cost effective for the 2016 program year, then the 2016 TD-NSB calculations will be updated to reflect the net benefits of the low-income program and the additional TD-NSB will flow into the energy efficiency

[6] The program costs and avoided costs are not included in the calculation of net benefits.

Rider at that time. Likewise, for the performance incentive, the low-income program will be included in the net benefits only if the program has a cumulative net benefit from the three program years.

Q. Even with expanded net benefits from the larger proposed portfolio, the requested sharing percentages are higher than Ameren Missouri's MEEIA 1 plan. Please explain what is different about MEEIA 2 that is causing higher sharing percentages.

A. It is very important to understand that the major driver behind the sharing percentage increases is directly linked to the fact that MEEIA 2 is significantly less cost effective than MEEIA 1. For instance, the MEEIA 2 expanded portfolio produces $285 of net benefits per MWh of energy savings. In contrast, the MEEIA 1 approved plan produced $455 of net benefits per MWh. This means that the sharing percentages would be greater for MEEIA 2 even if every other aspect of the MEEIA 2 plan was identical to the MEEIA 1 plan. Ameren Missouri witness Richard A. Voytas has clearly explained in his testimony that the reduction in savings per measure associated with evaluations and a precipitous drop in avoided energy costs ($/MWh) explains the significant reduction in cost effectiveness. The table below demonstrates this relationship clearly. If the MEEIA 2 plan had the same cost effectiveness as MEEIA 1, then its TD-NSB sharing percentage would be lower than MEEIA 1. In addition, using the MEEIA 1 net benefits per MWh would reduce the performance incentive sharing request to 8.5%.

	MEEIA 2	**MEEIA 1**
Throughput Disincentive (NPV, 2016 $)	$60.0	$95.0
MWh Savings	583,563	793,100
Net Benefit (NPV, 2016 $)	$165.4	$360.8
TD-NSB Sharing Percent	**36.29%**	26.34%
Net Benefit/MWh ($)	$285	$455
Hypothetical Net Benefits Using Other Cycle net Benefits/MWh (NPV, 2016 $)	$265.5	$224.7
Hypothetical TD-NSB Sharing Percent	**22.61%**	42.29%

Q. Does this conclude your supplemental testimony?

A. Yes, it does.

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.	))))	File No. EO-2015-0055

AFFIDAVIT OF WILLIAM R. DAVIS

STATE OF MISSOURI)
) **ss**
CITY OF ST. LOUIS)

William R. Davis, being first duly sworn on his oath, states:

1. My name is William R. Davis. I work in the City of St. Louis, Missouri, and I am employed by Union Electric Company d/b/a Ameren Missouri as Economic Analysis and Pricing Manager.

2. Attached hereto and made a part hereof for all purposes is my Supplemental Testimony on behalf of Union Electric Company d/b/a Ameren Missouri consisting of 14 pages and Schedule(s) N/A, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

William R Davis
William R. Davis

Subscribed and sworn to before me this 22nd day of June, 2015.

Beckie J. Eaves
Notary Public

My commission expires:

BECKIE J. EAVES
Notary Public - Notary Seal
State of Missouri
Commissioned for St. Louis City
My Commission Expires: February 21, 2018
Commission Number: 14938572