Exhibit No.:	
Issues:	Through-Put Disincentive Customer Notice
Witness:	Sarah L. Kliethermes
Sponsoring Party:	MO PSC Staff
Type of Exhibit:	Rebuttal Testimony
Case No.:	EO-2015-0055
Date Testimony Prepared:	March 20, 2015

MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION

REBUTTAL TESTIMONY

OF

SARAH L. KLIETHERMES

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. EO-2015-0055

Jefferson City, Missouri
March 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 L. KLIETHERMES

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

Sarah L. Kliethermes, of lawful age, on her oath states: that she has participated in the preparation of the following Rebuttal Testimony in question and answer form, consisting of 14 pages of Rebuttal Testimony to be presented in the above case, that the answers in the following Rebuttal Testimony were given by her; that she has knowledge of the matters set forth in such answers; and that such matters are true to the best of her knowledge and belief.

Sarah L. Kliethermes

Subscribed and sworn to before me this 20th day of March, 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

Table of Contents

REBUTTAL TESTIMONY

OF

SARAH L. KLIETHERMES

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. EO-2015-0055

REBUTTAL TESTIMONY

OF

SARAH L. KLIETHERMES

UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI

CASE NO. EO-2015-0055

Q. Please state your name and business address.

A. My name is Sarah L. Kliethermes and my business address is Missouri Public Service Commission, P. O. Box 360, Jefferson City, Missouri 65102.

Q. Who is your employer and what is your present position?

A. I am employed by the Missouri Public Service Commission ("Commission") as a Regulatory Economist III, Economic Analysis Section, Tariff, Safety, Economic and Engineering Analysis Department, Regulatory Review Division.

Q. What is your educational background and work experience?

A. A copy of my credentials is attached as Schedule SLK-1.

EXECUTIVE SUMMARY

Q. Ameren Missouri is requesting approval to implement demand-side management ("DSM") programs and to implement separate demand-side investment mechanism ("DSIM") rate(s) to recover costs associated with DSM programs in this case. What is the purpose of your testimony?

A. First, I will discuss Ameren Missouri's compliance with customer notice and customer communication rules. Then, I will discuss Ameren Missouri's request for a net throughput disincentive (NTD).

Q. Is your testimony consistent with Staff's overall recommendation to reject Ameren Missouri's application made under the Commission's MEEIA rules[1] ?

A. Yes. For the reasons discussed by various Staff witnesses, I recommend the Commission reject Ameren Missouri's MEEIA application, including its filed tariff sheets.

Q. Do you identify and discuss any deficiencies in Ameren Missouri's filing supporting Staff's recommendation to reject Ameren Missouri's application?

A. Yes, I discuss Ameren Missouri's failure to propose a lost revenue recovery mechanism as provided for in the Commission's rules.[2] My testimony will also provide Staff's position on Ameren Missouri's improper calculation overstating recovery of NTD.[3]

SEPARATE DISCLOSURE OF DSIM CHARGE AND PROPOSED LANGUAGE REGARDING THIS DISCLOSURE

Q. Has Ameren Missouri submitted proposed language regarding the amounts charged under a DSIM to be disclosed on customers' bills?

A. There was no proposed language within the filing regarding this disclosure. Commission rule 4 CSR 240-20.093(6) provides for separate disclosure of any amounts charged under a DSIM. Proposed language regarding this disclosure shall be submitted to and approved by the Commission before it appears on customers' bills. Ameren Missouri filed its Application on December 22, 2014. However, on March 6, 2015, in response to Staff Data Request No. 0003, Ameren Missouri submitted an example customer bill showing how the proposed DSIM will be identified on affected customers' bills.

[1] The Commission's rules promulgated as a result of the Missouri Energy Efficiency Investment Act of 2009 ("MEEIA") (Section 393.1075, RSMo, Supp. 2012) include Rules 4 CSR 240-3.163, 4 CSR 240-3.164, 4 CSR 240-20.093 and 4 CSR 240-20.094.
[2] Rules 4 CSR 240-3.163, 4 CSR 240-3.164, 4 CSR 240-20.093 and 4 CSR 240-20.094.
[3] In other matters, this has been referred to as a throughput disincentive net shared benefit, or "TD-NSB."

Q. In the example customer bill submitted by Ameren Missouri, how was the proposed DSIM identified?

A. It was separately disclosed and identified as "Energy Efficiency Investment Charge". This is consistent with the separate disclosure and identification of the charge on customers' bills during Ameren Missouri's MEEIA for the period January 2, 2013 through December 31, 2015.

Q. Does this satisfy Commission rule 4 CSR 240-20.093(6)?

A. Yes.

COMPLIANCE WITH NOTICE TO CUSTOMERS AND EXAMPLE OF CUSTOMER BILL

Q. Did Ameren Missouri send a notice to customers regarding the DSIM and file that notice along with an example customer bill as required?

A. No. In accordance with 4 CSR 240-3.163(2), when an electric utility files to establish a DSIM, the electric utility shall file supporting information as part of, or in addition to, its direct testimony, that includes the notice provided to customers describing (1) how the proposed DSIM will work, (2) how any proposed DSIM rate will be determined, and (3) how any DSIM rate will appear on customer bills as well as an example customer bill showing how the proposed DSIM shall be separately identified on affected customer's bills. When Ameren Missouri filed its Application, it did not include proposed language regarding disclosure of its DSIM charge. Ameren Missouri also failed to provide the notice provided to customers or an example customer bill. However, on March 6, 2015, in response to Staff Data Request No. 0003, Ameren Missouri submitted an example customer bill showing how the proposed DSIM will be identified on affected customers' bills, as discussed in 4 CSR 240-3.163(2)(B).

Q. Has Ameren Missouri complied with the requirement to provide, with its filing, a copy of the notice provided to customers regarding the DSIM to satisfy 4 CSR 240-3.163(2)(A)?

A. No. The notice was neither filed as part of, nor in addition to, Ameren Missouri's direct testimony. On February 25, 2015, Staff submitted Data Request No. 0002 requesting Ameren Missouri provide the notice to Staff. To date, Ameren Missouri has not responded to that data request. Staff requests that Ameren Missouri provide the notice to customers, if they have not already, as well as provide a copy of that notice to Staff.

AMEREN MISSOURI'S DSIM MECHANISM.

Q. Please identify Staff's concerns with Ameren Missouri's DSIM mechanism.

A. One of Staff's concerns is that Ameren Missouri failed to propose a lost revenue recovery mechanism as provided for in the Commission's rules.[4] Another Staff concern is Ameren Missouri's improper calculation of its proposed NTD.

Q. What is NTD?

A. NTD is a component of a DSIM mechanism that provides cash to a utility to compensate the utility for marginal revenues the utility did not receive because the utility sold (or was deemed to have sold) less energy due to an energy efficiency program.

Q. Staff expresses concern with the improper calculation of Ameren Missouri's NTD. Did Staff perform its own calculation of a NTD for Ameren Missouri?

A. Yes. As previously stated, in Staff's opinion, Ameren Missouri should have proposed a lost revenue recovery mechanism consistent with Commission rules; however, Staff also performed a very rough, high level calculation of the NTD using the information it had available (Staff's estimate). This "back of the envelope" calculation is presented to

[4] Rules 4 CSR 240-3.163, 4 CSR 240-3.164, 4 CSR 240-20.093 and 4 CSR 240-20.094.

demonstrate the magnitude of Staff's concern related to Ameren Missouri's NTD calculations. While it demonstrates the magnitude of Staff's concerns, it is not intended to be considered an adequate substitute for Ameren Missouri's proposal.

Q. Is Ameren Missouri's requested level of NTD recovery consistent with Staff's estimate of the value of NTD?

A. No. While Staff does have other concerns with Ameren Missouri's NTD calculation, a major concern relates to the estimation of avoided cost to be considered in determining marginal revenues. Ameren Missouri used an avoided energy cost that is (1) net of off system sales margins, and (2) fails to consider the cost of transmission and supportive services that Ameren Missouri will avoid along with the energy cost. Staff's estimate incorporates these amounts.

Q. Based on Staff's estimate, how much has Ameren Missouri overstated its NTD?

A. The chart below compares Staff's estimate to Ameren Missouri's calculation. While Staff's estimate does not attempt to address all of the concerns and errors in Ameren Missouri's calculation, Staff's estimate demonstrates that Ameren Missouri has overstated its NTD request by roughly 2-3 times Staff's estimate of a more realistic calculation of marginal revenues. For purposes of illustration, assuming a given MEEIA program results in 500 kWh of annual energy savings per class, the overstatement of Ameren Missouri's quantification of NTD is as follows:

	Res	SGS	LGS	SPS	LPS
Ameren Missouri	$ 375.58	$ 405.91	$ 303.23	$ 284.33	$ 239.37
Staff Estimate	$ 186.59	$ 210.32	$ 116.14	$ 103.02	$ 81.59
% Difference	201%	193%	261%	276%	293%

Ameren Missouri's assumptions and Staff's use of or correction of those assumptions are discussed below.

ESTIMATING MARGINAL REVENUES FOR USE IN NTD CALCULATION

Q. In Staff's estimate of the calculation of NTD, is Staff suggesting that it is appropriate to vary from the Commission's rule provision for lost revenue recovery?

A. No. If the Commission allows Ameren Missouri to use a NTD lost marginal revenues approach, Staff recommends the Commission order Ameren Missouri to work with the parties prior to submitting a tariff that purportedly complies with a Commission order approving or modifying Ameren Missouri's MEEIA Plan to finalize a set of tariff sheets to correct the marginal revenues used to determine the NTD share to a reasonable estimate.

Q. Has Ameren Missouri attempted to quantify marginal rates and marginal avoided costs for purposes of determining **lost margin** NTD recovery?

A. Yes, Ameren Missouri's filing uses a quantification of marginal revenues per kilowatt hour to develop the level of its requested NTD recovery. However, as compared to Staff's estimates, Ameren Missouri's quantification is overstated and does not utilize a reasonable estimate of the costs Ameren Missouri is able to avoid for each kWh of energy not sold.

Q. Do the Commission rules provide for lost margin NTD recovery?

A. No they do not. The rules use the term "lost revenue".

Q. What is the difference between "lost margins" and "lost revenue"?

A. Lost Revenues are defined in the Commission's MEEIA rules,[5] and are generally a quantification of the money a utility did not earn because of the existence of a

[5] 4 CSR 240-20.093(1)(Y) 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

MEEIA portfolio. Further, the existence and quantification of Lost Revenues are determined after a review of the MEEIA program by a qualified evaluator.

In contrast, generally, a lost margin an NTD mechanism relies on a projection of the money that a utility would not receive due to MEEIA if (1) all assumptions are correct regarding the programs' implementation and effectiveness, and (2) no other energy sales are made for any reason, including concerns such as rebound effect. Put simply, marginal revenues are the revenue a company did not earn on a sale that did not happen.

Q. Is it necessary to quantify marginal revenues if a **lost revenue** approach is used for any DSIM the Commission may authorize in this proceeding?

A. No, this calculation is not necessary for use of a lost revenue approach as described in the Commission's MEEIA rules.[6]

Q. How do you calculate the marginal revenues Ameren Missouri seeks to recover as NTD?

A. [Marginal Rate] – [Marginal Avoided Cost] = [Marginal Revenues]

Q. Under a NTD approach, what is a marginal rate?

A. A marginal rate is the value to Ameren Missouri's revenues from the sale of any energy deemed to have been saved as a result of a MEEIA program.

Q. Under a NTD approach, what is marginal avoided cost?

A. Marginal avoided cost is the value of energy (and supportive services for that energy) that Ameren Missouri was not obligated to purchase to serve its load. Ameren

---

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.

[6] See attached Schedule SLK-2 providing a flow chart of the mechanics of this calculation.

Missouri purchases all energy to serve its load through the MISO integrated energy market, as supported by the MISO ancillary services market.[7]

Q. Does Staff agree with Ameren Missouri's calculation of marginal rates for each class and month?

A. No. From Ameren Missouri's workpapers it appears that Ameren Missouri used an *average* rate, not a *marginal* rate. Additionally, there could be room for improvement in the method Ameren Missouri used for tying demand-related rates to an energy basis. Most significantly, Ameren Missouri's calculation, given the timing of its filing, was unable to incorporate the most recent calculations of billing determinants and updated tariff rates[8]. While Staff does have concerns with these aspects of Ameren Missouri's NTD calculation, given the magnitude of difference between Ameren Missouri's and Staff's estimates of avoided cost to be considered in determining marginal revenues, Staff did not independently calculate marginal rates.

Q. How does use of an average rate instead of a marginal rate cause NTD to be overstated?

A. An average rate represents a customer's total bill for energy consumed in all blocks divided by the kWh of energy consumed that month. However, using the Residential class as an example, in non-summer months, Ameren Missouri's customers pay a lower rate for each kWh of energy after the first 750 kWh. Under current rates, the first 750 kWh in a

[7] Ameren Missouri does purchase additional energy from qualified facility generators within its service territory, and also from solar producers within its service territory. However, Ameren Missouri is afforded little discretion in not purchasing energy from these sources, and therefore they are not factors in determining marginal avoided cost.

[8] Ameren Missouri pending rate case, Case No. ER-2014-0258. For purposes of providing an estimate at this time, Staff had to rely on Ameren Missouri's imprecise marginal rate calculation, and assumed a 4% rate increase awarded in equal percentages across all classes and rate components in Case No. ER-2014-0258. Staff's assumed 4% rate increase is not intended to imply any concession or change in Staff's or any other parties' positions in Case No. ER-2014-0258, it is simply to reasonably escalate the value of the marginal rates.

non-summer month are each billed at $.0808/kWh, but all kWh after the first 750 are billed at $.0538/kWh. The use of an average rate implies that a customer who reduces the amount of energy that customer consumes would somehow reduce usage in the first block billed proportionate to the usage that customer reduces in the second block billed. In reality, if a customer has usage falling in one or more blocks in a given billing month, that customer can only reduce usage in the first block (billed at a higher rate in many months) after that customer has eliminated all usage in the last block (billed at a lower rate in many months). A properly calculated marginal rate recognizes that if a customer uses more than 750 kWh in those non-summer months, unless that customer's participation in an energy efficiency program causes usage to drop below 750 kWh, the energy that the company is not selling would be billed at $.0538/kWh, not at the average rate paid by that customer or class of customers. A properly calculated marginal rate would be weighted between the non-summer blocks on the basis of the number of bills for each month that end in each block for the customers at which the programs are targeted.

Q. How does improperly tying demand to energy cause NTD to be overstated?

A. For some classes, Ameren Missouri charges a demand charge that is calculated based on the demand requirements of each customer (in kW) separate from the energy charge that is based on the energy requirements of each customer (in kWh). However, Ameren Missouri has calculated its NTD request on the basis of kWh only. Depending on the final program plan that Ameren Missouri makes available to those classes, it may or may not be reasonable to assume that there is a strong relationship between a participating customer's annual energy savings (in kWh) attributable to a program, and that customer's peak demands (in kW) that are the basis for that customer's demand charges. Determination of this

relationship will be dependent on the hourly load shapes of the programs that Ameren Missouri makes available to the relevant classes.

Q. What marginal rates did Ameren Missouri use as its starting point for determining marginal revenues?

A.

	Res	SGS	LGS	SPS	LPS
Jan	$ 0.05637	$ 0.06612	$ 0.05112	$ 0.04885	$ 0.04418
Feb	$ 0.05691	$ 0.06621	$ 0.05172	$ 0.04898	$ 0.04422
Mar	$ 0.05830	$ 0.06854	$ 0.05275	$ 0.04955	$ 0.04564
Apr	$ 0.05987	$ 0.07407	$ 0.05362	$ 0.05060	$ 0.04496
May	$ 0.06212	$ 0.07928	$ 0.05512	$ 0.05181	$ 0.04604
Jun	$ 0.11360	$ 0.10340	$ 0.09086	$ 0.08535	$ 0.07138
Jul	$ 0.11360	$ 0.10340	$ 0.08891	$ 0.08510	$ 0.07271
Aug	$ 0.11360	$ 0.10340	$ 0.08987	$ 0.08449	$ 0.07130
Sep	$ 0.11360	$ 0.10340	$ 0.08908	$ 0.08437	$ 0.07214
Oct	$ 0.06054	$ 0.07550	$ 0.05376	$ 0.05057	$ 0.04628
Nov	$ 0.06170	$ 0.07557	$ 0.05418	$ 0.05083	$ 0.04662
Dec	$ 0.05793	$ 0.06991	$ 0.05243	$ 0.04973	$ 0.04484

Q. Did Staff adjust these rates for purposes of this direct testimony?

A. No, with one exception. As discussed above, it is likely that these rates are average, and not marginal, rates for most classes for the non-summer months. Also, several of these classes' rates may require adjustment for the incorporation of demand-related charges. However, at this time, Staff has only made a simple adjustment to account for the pending rate increase case, Case No. ER-2014-0258. For purposes of this estimate only, Staff assumed a 4% increase to the values provided by Ameren Missouri. That increase results in the following rates:

	Res	SGS	LGS	SPS	LPS
Jan	$0.05862	$0.06612	$0.05112	$0.04885	$0.04418
Feb	$0.05691	$0.06621	$0.05172	$0.04898	$0.04422
Mar	$0.05830	$0.06854	$0.05275	$0.04955	$0.04564
Apr	$0.05987	$0.07407	$0.05362	$0.05060	$0.04496
May	$0.06212	$0.07928	$0.05512	$0.05181	$0.04604
Jun	$0.11360	$0.10340	$0.09086	$0.08535	$0.07138
Jul	$0.11360	$0.10340	$0.08891	$0.08510	$0.07271
Aug	$0.11360	$0.10340	$0.08987	$0.08449	$0.07130
Sep	$0.11360	$0.10340	$0.08908	$0.08437	$0.07214
Oct	$0.06054	$0.07550	$0.05376	$0.05057	$0.04628
Nov	$0.06170	$0.07557	$0.05418	$0.05083	$0.04662
Dec	$0.05793	$0.06991	$0.05243	$0.04973	$0.04484

Q. What assumptions underlie Staff's calculation of marginal avoided cost?

A. For its calculation of marginal avoided cost, Staff multiplied a calculation of Ameren Missouri's cost of energy and supportive services as purchased through the MISO integrated energy market by Ameren Missouri's normalized load by class.

Q. What are those average energy costs by month, by class?

A.

	Res	SGS	LGS	SPS	LPS
Jan	$0.05025	$0.05111	$0.04894	$0.04708	$0.04091
Feb	$0.04605	$0.04606	$0.04397	$0.04254	$0.03762
Mar	$0.04168	$0.04291	$0.04200	$0.04088	$0.03828
Apr	$0.04599	$0.04696	$0.04653	$0.04530	$0.04332
May	$0.04437	$0.04528	$0.04497	$0.04380	$0.04232
Jun	$0.04273	$0.04360	$0.04264	$0.04113	$0.03968
Jul	$0.04054	$0.04126	$0.04016	$0.03894	$0.03775
Aug	$0.03967	$0.03969	$0.03822	$0.03690	$0.03577
Sep	$0.04635	$0.04804	$0.04724	$0.04593	$0.04189
Oct	$0.05487	$0.05599	$0.05394	$0.05255	$0.04628
Nov	$0.04895	$0.04976	$0.04756	$0.04613	$0.03892
Dec	$0.05578	$0.05750	$0.05497	$0.05301	$0.04439

Q. If the Commission orders Ameren Missouri to utilize a NTD approach against Staff's recommendation, are there refinements that will need to be made to Staff's estimated marginal avoided cost calculation?

A. Yes. As previously stated, Staff's estimate was a very rough, high-level calculation of marginal revenues, so any NTD approach that is approved by the Commission will require additional refinements as follows.

Regarding the cost of energy that Ameren Missouri purchases to serve its load, Staff's estimate presented in this testimony relies on Ameren Missouri's GenNode LMPs used by Ameren Missouri for production cost modeling from Case No. ER-2014-0258. GenNodes LMPs are the market value of energy at the point of generation, as opposed to Load Node LMPs, which are the market value of energy as a weighted average at the points from which Ameren Missouri withdraws energy to serve its load. Using GenNode LMPs, which tend to be lower than the Load Node LMP, understates the value of avoided energy. If a NTD approach is ordered by the Commission, the marginal avoided cost analysis either needs to be redone using Ameren Missouri's normalized Load Node LMP, or redone using values that are grossed-up to account for relative LMP at generation versus at load.

Further, Staff's estimate did not consider any escalation for market energy or transmission costs (including MISO Schedule 26a). If a NTD approach is ordered by the Commission, the marginal avoided cost analysis will need to be updated to reflect reasonably expected escalation to the marginal avoided cost.

Finally, because Ameren Missouri did not provide as part of its NTD analysis estimates of the hourly shapes of the energy savings expected for the majority of projected savings under its MEEIA programs, Staff's estimate assumes that energy savings pursuant to Ameren Missouri's MEEIA programs will occur evenly around-the clock.[9] To the extent energy savings are experienced on-peak to a greater extent than off-peak, these amounts are

[9] Staff used class billing determinants from pending Case No. ER-2014-0258, which is consistent for most classes with the billing determinant settlement pending approval that case.

too low - and vice-versa. If program shapes are available, then an exact calculation can be made to find the cost savings associated with each program's energy savings.

These corrections are necessary to reasonably estimate the cost of the energy that Ameren Missouri will not need to procure for its load due to energy savings under a MEEIA program, if authorized. However, these calculations would not be needed for a lost revenues recovery mechanism as contemplated in the MEEIA rules.

Q. Using the above-provided amounts for marginal rates and marginal avoided cost, what are the estimated marginal revenues by month and class?

A. While Staff cautions that these amounts are not reliable for rate-making purposes for the reasons discussed above, for purposes of determining the reasonableness of Ameren Missouri's marginal revenue calculation, Staff determined the following marginal revenues values:

	Res	SGS	LGS	SPS	LPS
Jan	$0.00837	$0.01501	$0.00218	$0.00177	$0.00326
Feb	$0.01086	$0.02015	$0.00775	$0.00644	$0.00661
Mar	$0.01663	$0.02564	$0.01075	$0.00867	$0.00737
Apr	$0.01388	$0.02710	$0.00710	$0.00530	$0.00164
May	$0.01776	$0.03400	$0.01015	$0.00801	$0.00372
Jun	$0.07087	$0.05980	$0.04822	$0.04423	$0.03170
Jul	$0.07306	$0.06214	$0.04875	$0.04616	$0.03496
Aug	$0.07393	$0.06371	$0.05165	$0.04759	$0.03553
Sep	$0.06725	$0.05536	$0.04184	$0.03845	$0.03025
Oct	$0.00567	$0.01951	$(0.00018)	$(0.00198)	$(0.00000)
Nov	$0.01275	$0.02581	$0.00663	$0.00470	$0.00770
Dec	$0.00214	$0.01241	$(0.00254)	$(0.00328)	$0.00045

Q. Are there additional necessary refinements that will need to be made to Ameren Missouri's estimated marginal rate calculation?

A. Yes. Both the billing determinants and the tariff rates will need to be updated for the outcome of the currently-pending Case No. ER-2014-0258, and the issues with Ameren Missouri's calculation discussed above will need to be addressed.

Q. What is Staff's recommendation concerning Ameren Missouri's request for a DSIM including a NTD component?

A. Staff recommends the Commission reject Ameren Missouri's tariff sheets filed as a part of its MEEIA application, which uses a NTD approach.

Q. Does this conclude your rebuttal testimony?

A. Yes.

Sarah L. Kliethermes

MoPSC Employment Experience

Regulatory Economist III (July 2013 – Present)
Economic Analysis Section, Energy Unit, Tariff, Safety, Economic and Engineering Analysis Department of the Missouri Public Service Commission. In this position my duties include providing analysis and recommendations in the areas of RTO and ISO transmission, rate design, class cost of service, tariff compliance and design, and energy efficiency mechanism and tariff design. I also continue to provide legal advice and assistance regarding generating station and environmental control construction audits and electric utility regulatory depreciation.

My prior positions in the Commission's General Counsel's Office, which was reorganized as the Staff Counsel's Office, consisted of leading major rate case litigation and settlement and presenting Staff's position to the Commission, and providing legal advice and assistance primarily in the areas of depreciation, cost of service, class cost of service, rate design, tariff issues, resource planning, accounting authority orders, construction audits, rulemakings and workshops, fuel adjustment clauses, document management and retention, and customer complaints. Those positions were:
Senior Counsel (September 2011 – July 2013)
Associate Counsel (September 2009 – September 2011)
Legal Counsel (September 2007 – September 2009)
Legal Intern (May 2006 – September 2007)

Testimony

Contributor to Staff Cost of Service Report, regarding special contract tariff revenues, and Staff Class Cost of Service and Rate Design Report, regarding Class Cost of Service; prefiled Rebuttal, regarding Class Cost of Service and special contracts, in Case No. ER-2014-0351, In the Matter of The Empire District Electric Company's Request for Authority to File Tariffs to Increase Rates.

Provided at hearing and deposed, as well as contributor to Staff Cost of Service Report, regarding Noranda revenues, and Staff Class Cost of Service and Rate Design Report, regarding Class Cost of Service; prefiled Rebuttal, regarding Class Cost of Service and Noranda rate design request; prefiled Surrebuttal regarding Noranda rate design and class cost of service, in Case No. ER-2014-0258, In the Matter of Union Electric Company d/b/a Ameren Missouri for Authority to File Tariffs to Increase Rates.

Provided at hearing, as well as prefiled Rebuttal and Surrebuttal, regarding energy price efficiency and transmission, in Case No. EA-2014-0207, Application of Grain Belt Express Clean Line LLC for a Certificate of Convenience and Necessity.

Contributor to Staff recommendation concerning Ameren Missouri municipal lighting, in Case No. EC-2014-0316, City of O'Fallon, Missouri, and City of Ballwin, Missouri, Complainants v. Union Electric Company d/b/a Ameren Missouri, Respondent.

Contributor to Staff Report, regarding a requested Certificate of Convenience and Necessity, a requested Special Contract tariff sheet, and tariff review, in Case No. HR-2014-0066, In the Matter of Veolia Energy Kansas City, Inc for Authority to File Tariffs to Increase Rates.

Provided at hearing, as well as prefiled Rebuttal and Surrebuttal, regarding average wholesale energy prices, in Case No. EC-2014-0224, Noranda Aluminum, Inc., et al., Complainants, v. Union Electric Company d/b/a Ameren Missouri, Respondent.

Rebuttal, regarding DSIM tariff design, margin rate calculation, and customer-related issues, in Case No. ER-2014-0095, Kansas City Power & Light application under the Missouri Energy Efficiency Investment Act. Case resolved by stipulation.

Contributor to Staff recommendation concerning KCP&L Greater Missouri Operations Company's Application for a Renewable Energy Standard Rate Adjustment Mechanism, in Case No. EO-2014-0151, addressing issues of customer notice and tariff design. Staff recommendation to approve compliance tariffs.

RELATED TRAINING AND EXPERIENCE

Participant in Missouri's Comprehensive Statewide Energy Plan working group on Energy Pricing and Rate Setting Processes.

Presented:
Ratemaking Basics (Sept. 14, 2012)
Fundamentals of Ratemaking at the MoPSC (October 8, 2014)

Attended:
Net Metering presented by Ralph Zarumba (December, 9, 2014)
Fourth Annual Public Utility Law Symposium (October 17, 2014)
Electricity Energy Storage Sources (August 29, 2014)
Combined Heat & Power: Planning, Design and Operation (August 11, 2014)
Today's U.S. Electric Power Industry, the Smart Grid, ISO Markets & Wholesale Power Transactions (July 29-30)
MISO Markets & Settlements Training for OMS and ERSC Commissioners & Staff (Jan. 27 – 28, 2014)
Validating Settlement Charges in New SPP Integrated Marketplace (July 22, 2013)
PSC Transmission Training (May 14 – 16, 2013)
Grid School (March 4 – 7, 2013)
Specialized Technical Training - Electric Transmission (April 18 – 19, 2012)
Legal Practice Before the Missouri Public Service Commission (Sept. 1, 2011)
Renewable Energy Finance Forum (Sept. 29 – Oct 3, 2010)
The New Energy Markets: Technologies, Differentials and Dependencies (June 16, 2011)
Mid-American Regulatory Conference Annual Meeting (June 5 – 8, 2011)

Utility Basics (Oct. 14 – 19, 2007)

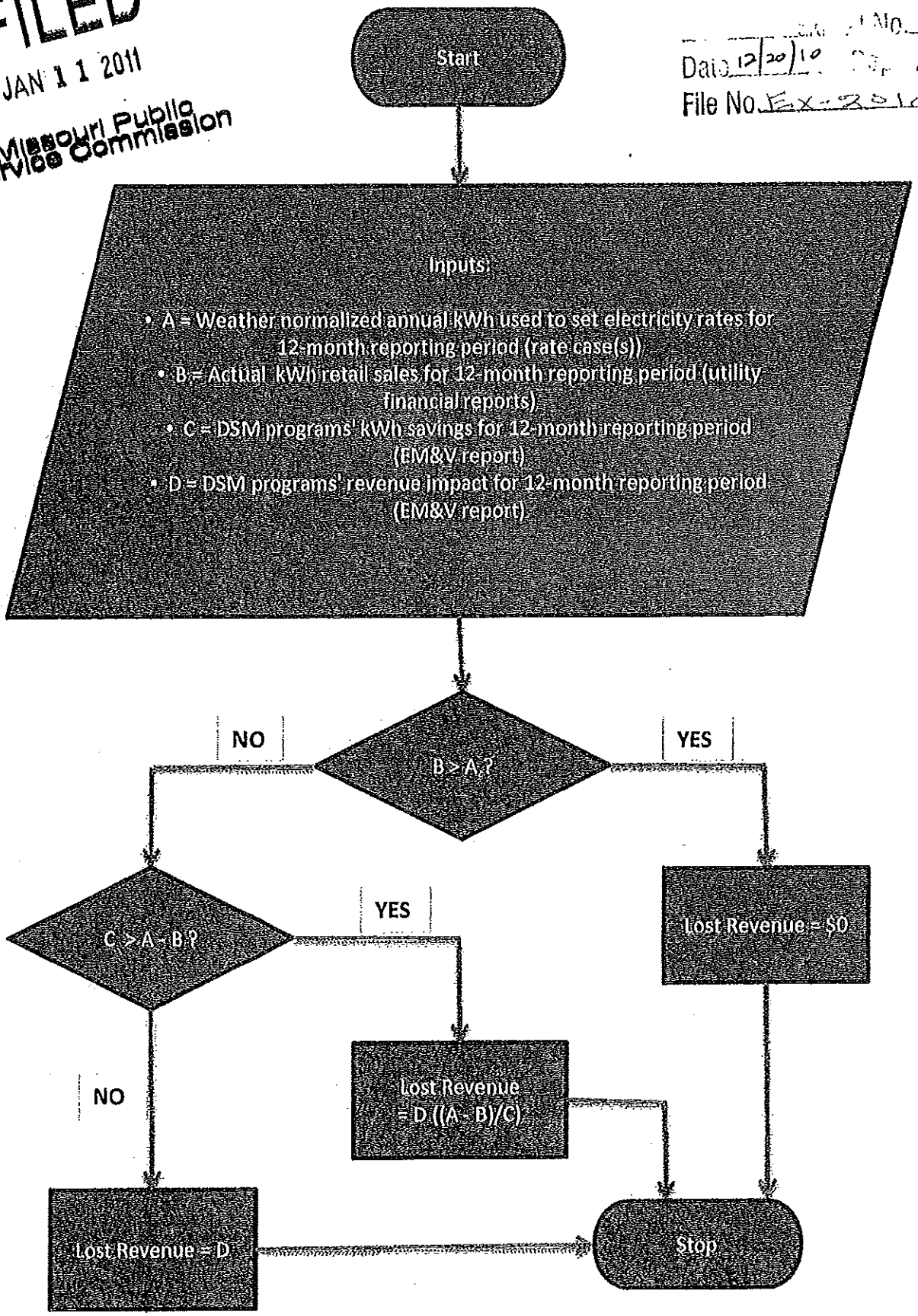
EDUCATION

Studying Energy Transmission at Bismarck State College, online (2014 – Present)
Licensed to Practice Law in Missouri, MoBar # 60024 (Summer 2007).
Juris Doctorate, University of Missouri, Columbia, Missouri (2004 – 2007).
Bachelor of Science in Historic Preservation, Cum Laude, minor in Architectural Design, Southeast Missouri State University, Cape Girardeau, Missouri (2002 – 2004).
2000 – 2002: Studied Architecture and English Literature at Drury University, Springfield, Missouri.
2013Economics courses at Columbia College, Jefferson City campus.

OTHER EMPLOYMENT EXPERIENCE

Law Clerk, Contracting and Organization Research Institute. Performed legal research; analyzed, described, and categorized contracts.
Paid Intern, Southeast Missouri State University. Accessioned and organized artifact collections for the Missouri Department of Natural Resources, Division of State Parks and Historic Sites.
Intermediate Clerk, Missouri Department of Elementary and Secondary Education. Responsibilities included organizing and managing various forms of data.

Lost Revenue Definition in 4 CSR 240-20.093(1)(X)



Schedule SLK-2-1

Definition of Lost Revenue and Examples of Lost Revenue Calculation

4 CSR 240-20.093(1)(X): 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 occur when utility demand-side programs approved by the commission in accordance with 4 CSR 240-20.094 cause a drop in net retail kWh delivered to jurisdictional customers below the level used to set the electricity rates. Lost renenues are only those net revenues lost due to energy and demand savings from utility demand-side progrms approved by the commission in accordance with 4 CSR 240-20.094 Demand-Side Programs and measured and verified through EM&V.

Case 1 No Lost Revenue

Inputs	Description		Value	Comments
A	Weather normalized annual kWh used to set electricity rates		20,000,000,000	For 12-month reporting period
B	Actual kWh retail sales for 12-month reporting period		20,300,000,000	Reported in utility financial reports
C	DSM programs kWh savings for 12-month reporting period		500,000,000	Reported in EM&V
D	DSM revenue impact for 12-month reporting period	$	40,000,000	Reported in EM&V
	Is B > A?		YES	
	Lost revenue = $0	$	-	

Case 2 Partial Lost Revenue

Inputs	Description		Value	Comments
A	Weather normalized annual kWh used to set electricity rates		20,000,000,000	For 12-month reporting period
B	Actual kWh retail sales for 12-month reporting period		19,700,000,000	Reported in utility financial reports
C	DSM programs kWh savings for 12-month reporting period		500,000,000	Reported in EM&V
D	DSM revenue impact for 12-month reporting period	$	40,000,000	Reported in EM&V
	Is B > A?		NO	
	Is C > A - B?		YES	
	Lost revenue = D ((A - B))/C)	$	24,000,000	

Case 3 Full Lost Revenue

Inputs	Description		Value	Comments
A	Weather normalized annual kWh used to set electricity rates		20,000,000,000	For 12-month reporting period
B	Actual kWh retail sales for 12-month reporting period		19,300,000,000	Reported in utility financial reports
C	DSM programs kWh savings for 12-month reporting period		500,000,000	Reported in EM&V
D	DSM revenue impact for 12-month reporting period	$	40,000,000	Reported in EM&V
	Is B > A?		NO	
	Is C > A - B?		NO	
	Lost revenue = D	$	40,000,000	