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MISSOURI PUBLIC SERVICE COMMISSION

File No. EA-2015-0146

SURREBUTTAL TESTIMONY

OF

MATT MICHELS

ON

BEHALF OF

AMEREN TRANSMISSION COMPANY OF ILLINOIS

St. Louis, Missouri
November, 2015

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REBUTTAL TESTIMONY

OF

MATT MICHELS

FILE NO. EA-2015-0146

Q. Please state your name and business address.

A. Matt Michels, One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri 63103.

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

A. I work for the Ameren Services Company Corporate Planning Department as Senior Manager of Corporate Analysis. The Corporate Planning Department provides various corporate support services to Ameren Corporation ("Ameren") and its subsidiaries, including Ameren Transmission Company of Illinois ("ATXI" or "Company").

Q. Please describe your professional background and qualifications.

A. I joined Ameren Services Company in 2005 as a Consulting Engineer in Corporate Planning. My responsibilities included coordination and monitoring of projects implemented in conjunction with the integration of processes and systems following the acquisition by Ameren of Illinois Power Company ("Illinois Power") in October 2004. I was subsequently involved in the integration of combustion turbine facilities acquired by Ameren Missouri in 2006. In September 2008, I was promoted to Managing Supervisor of Resource Planning with responsibility for long-range resource planning, including Ameren Missouri's Integrated Resource Plan ("IRP") filings and associated analysis. In February 2013, I was promoted to Corporate Analysis Manager. In February 2014, my direct employer became Ameren Missouri because a majority of my work was in support of Ameren Missouri issues,

but I remain a part of the Corporate Planning Department, which provides services to all of the Ameren affiliates.

I earned a Bachelor of Science degree in Electrical Engineering from the University of Illinois at Urbana-Champaign in May 1990. I have been employed by an Ameren affiliate or Illinois Power since June 1990 in various positions related to resource and business planning. During most of that time, my responsibilities have included the development, use and oversight of various planning models used for purposes such as production costing, acquisition evaluation, corporate restructuring, financial forecasting and resource planning. I have previously testified before this Commission in proceedings involving resource planning, renewable energy standards compliance, and energy efficiency cost recovery.

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

A. The purpose of my rebuttal testimony is to respond to the testimony of Neighbors United Against Ameren's Power Line (the "Neighbors") witness William E. Powers regarding alternatives to wind energy.

Q. Please summarize the conclusions of your rebuttal testimony with respect to the issues raised by Mr. Powers.

A. Contrary to the assertions of Mr. Powers, new physical wind resources are a vitally important part of Ameren Missouri's plans for transitioning its generation portfolio to one that is cleaner and more fuel-diverse, meeting the requirements of the Missouri Renewable Energy Standard ("RES"), and complying with the U.S. Environmental Protection Agency's ("EPA") Clean Power Plan ("CPP"). New wind resources are also likely to be needed by other utilities (including those not regulated by this Commission) in

Missouri for some or all of these same reasons. The Mark Twain project helps to ensure planning flexibility needed to meet these goals and obligations.

Q. Please summarize the testimony of Mr. Powers regarding Ameren Missouri's need for wind generation.

A. Mr. Powers argues that Ameren Missouri does not need the type of wind resources that would be supported by the Mark Twain project, and that the MISO[1] cost-benefit analysis is flawed based on his assertions that:

- Ameren Missouri can rely entirely on purchases of renewable energy credits ("RECs") to satisfy its obligations under the Missouri RES.
- Solar generation provides renewable energy at the same or similar cost as wind generation.
- Ameren Missouri did not enter into a transaction for a specific wind generation project in the past.
- Ameren Missouri should expect continued rapid expansion of customer-owned solar generation in its service territory that will provide RECs used for RES compliance.
- Ameren Missouri can rely on significantly higher levels of participation in energy efficiency and demand response programs than expected in the balance of its service territory to mitigate or eliminate substation loading issues.

Q. Can you respond briefly to these main points?

A. Yes.

[1] Midcontinent Independent System Operator, Inc.

- **Reliance entirely on RECs to meet RES requirements carries significant risk** – Future availability of RECs and the price at which they are available are uncertain. The availability of RECs is uncertain. Also, there is pending litigation regarding the eligibility of RECs not associated with energy delivered to Missouri customers. Depending on the result of this litigation or possible future legislative efforts regardless of the outcome of that litigation, it may not be possible to use such RECs at all. The prices at which RECs may be purchased is also uncertain as I will later explain. Relying entirely on REC purchases could put Ameren Missouri in the position of being unable to meet its RES obligations or meet them at a reasonable cost.
- **Wind generation is less costly than solar generation under a fair comparison** – Mr. Power has slanted his comparison of wind and solar generation costs by 1) making apples to oranges price or cost comparisons of older wind technology to newer solar technology, and 2) relying on transactions for solar generation in regions outside of Missouri that have more favorable solar insolation conditions[2] and which reflect tax credit benefits that, under current law, will no longer be available by the end of next year.
- **Ameren Missouri's consideration of past potential wind deals is irrelevant to questions of future need** – Simply put, Ameren Missouri had no need for new wind resources during the time in which the project cited by Mr. Powers was under development. Ameren Missouri's plan, as presented in

[2] Insolation refers to the power per unit produced by the sun.

its 2014 IRP, includes the addition of 400 MW of wind resources starting in 2019. That is the year in which Ameren Missouri projects it will need new renewable generation to meet the increasing requirements of the RES. Further, compliance with the EPA's CPP may require the addition of more wind generation than that contemplated by the 2014 IRP.

- **The expansion of customer-owned solar generation in Missouri in the last few years was driven by solar rebates, which are coming to an end** – Solar rebates available under the Missouri RES, combined with declining costs of solar generation installs, fueled a rapid expansion of customer-owned solar generation in 2012-2014. As a result of the 1% rate impact limitation in the RES, those rebates were capped and the available funds are now virtually exhausted. Applications for net metering have since slowed to the low levels seen prior to this expansion, so every indication is that the recent customer-owned solar boom is over. Because by statute Ameren Missouri is only entitled to RECs from customer-owned solar generation if the customer receives a rebate, we cannot expect to use RECs from new customer-owned solar generation additions for RES compliance.
- **It is unreasonable to expect customer participation in energy efficiency and demand response programs at significantly higher levels than in the balance of Ameren Missouri's service territory** – Ameren Missouri offers broad-based energy efficiency programs to its customers and currently does not offer any demand response programs. Ameren Missouri cannot require customers to participate, and incentives would likely need to be increased

dramatically to achieve higher levels of participation than generally expected. As a result, relying on future high levels of participation in energy efficiency and demand response programs to address local reliability issues is unreasonable.

I will expand on each of these points in greater detail.

Q. Are there any key considerations that Mr. Powers has not included in his assessment?

A. Yes. Mr. Powers makes no mention of the U.S. EPA's Clean Power Plan. The CPP was finalized and recently published in the federal register, and is expected to be a key driver of utility resource decisions in Missouri and across the nation. I will discuss its relevance to the questions raised by Mr. Powers as well.

RELIANCE ON RECs CARRIES SIGNIFICANT RISK

Q. Does Missouri's RES allow the use of RECs for compliance even if they are not associated with energy that is delivered to Missouri customers?

A. Yes, under the current regulations. However, there is a pending case in the Missouri Supreme Court that could result in the prohibition of using RECs for RES compliance if the RECs are not associated with energy delivered to Missouri customers ("unassociated RECs"). This lawsuit was brought by the Missouri Coalition for the Environment, a solar developer, and one other individual against the Missouri Public Service Commission and other state officials with respect to the promulgation of rules implementing the RES statute. If the plaintiffs are successful, we would no longer be able to use such RECs for compliance with the RES. As a result, entering into long-term agreements for unassociated RECs is not currently a viable option.

I also note that the Commission initially issued regulations under the Missouri RES. These rules would have prevented use of RECs for compliance if the RECs are not associated with energy that is delivered to Missouri customers. The Commission withdrew that prohibition when it was disapproved as part of the Joint Committee on Administrative Rules process in Missouri. That issue is what gave rise to the litigation.

Given the Commission's stance and litigation, I would not at all be surprised if there are efforts to re-impose a "geographic sourcing" limitation in Missouri, even if the plaintiffs are unsuccessful. This uncertainty is a risk that we must account for given the history of this issue.

Q. If the existing regulations are upheld and there is no geographic sourcing limitation, are there other risks in relying on RECs for RES compliance?

A. Yes. First, while the RES rules allow for the use of unassociated RECs, they include a preference for RECs associated with energy delivered to Missouri customers ("associated RECs"). 4 CSR 240-20.100(5)(D) provides for this preference by requiring that any reductions in RECs required as a result of the 1% rate impact limitation first be taken from unassociated RECs. As a result, commitments to purchase large blocks of unassociated RECs may be determined to have been unnecessary.

This risk is further compounded by CPP compliance. The CPP at its core is essentially a nationwide collection of state clean energy standards. With the emission limits on coal and preferences and incentives for renewable generation over gas generation, the CPP is expected to result in a significant expansion of renewables, primarily wind and solar. Since the same renewable energy can be used to comply with the CPP and the RES, we could have sufficient RECs for RES compliance simply by complying with the CPP. Therefore,

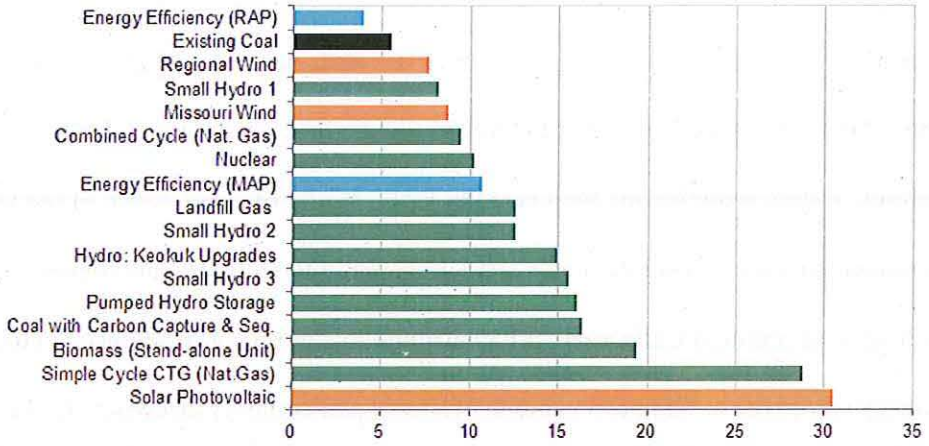
purchasing unassociated RECs that can only be used to comply with the RES would make little sense if these RECs are not preferred under the RES.

Second, we have no assurance as to the future availability or pricing of RECs on a short-term basis. Carrying a large, open position would expose Ameren Missouri to potential for non-compliance with the RES, or in the alternative the purchase of very expensive RECs to ensure compliance.

WIND IS A LOWER COST RESOURCE THAN SOLAR

Q. How does the cost of wind energy compare to the cost of solar energy?

A. Wind is lower cost than solar based on current technologies. In Ameren Missouri's 2014 IRP, we compared the levelized cost of energy ("LCOE") for various generation technologies. The LCOE is a measure of the cost of energy produced by a resource over its expected useful life, based on the full cost of ownership, including financing, depreciation, operations, maintenance and fuel costs. The chart below presents the comparison of LCOE included in our 2014 IRP. The cost for solar reflects the actual cost of the O'Fallon Renewable Energy Center completed by Ameren Missouri late in 2014, for which the construction contract was competitively bid.



Note: Does not reflect inclusion of tax incentives. Blue denotes energy efficiency. Black denotes existing coal. Orange denotes intermittent resources. MAP energy efficiency reflects costs and energy savings incremental to RAP.

Q. Have costs for solar continued to change since the chart above was published?

A. Yes. The cost of solar installations has continued to drop. For illustration purposes, if the cost were reduced by as much as one-third, that would bring the LCOE for solar down to around 20 cents per kwh, again with no tax incentives. This is still two to three times as much as the LCOE for wind. I would also note that while the installed cost of wind on a per kilowatt basis is not expected to decline the way solar is expected to decline, efficiency gains in wind technologies are leading to a further reduction in the LCOE produced.

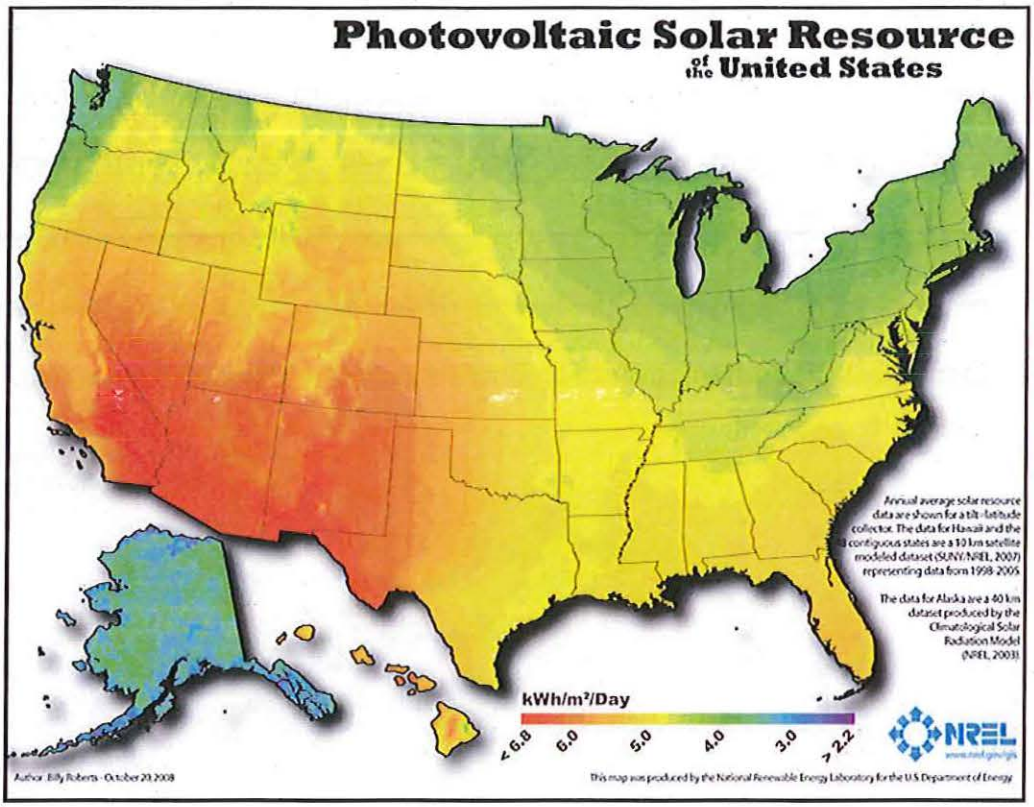
Q. How do you reconcile a 20 cents per kwh LCOE for solar with the 5.5 cents per kwh price cited by Mr. Powers for the city of Lancaster, California?

A. Comparisons with current purchase power agreement prices introduce a few potentially significant inconsistencies. First, there is a 30% federal investment tax credit ("ITC") for solar that is available through the end of 2016. Including this tax credit would bring the LCOE down to around 15 cents per kwh. Second, capacity factors in the southwest

U.S. can be on the order of 50% higher than those for comparable systems in Missouri. This would further reduce the LCOE to around 9-10 cents per kwh. Third, developers often use more highly leveraged capital structures to reduce financing costs and enhance equity returns, further reducing the total cost per kwh. While I am not aware of the financing arrangements underlying the Lancaster agreement, the 30% ITC and higher capacity factor available in southern California both contribute to significant differences in the cost of solar energy compared to that achievable in Missouri and certainly elsewhere in the MISO market in which Ameren Missouri participates. Finally, the Lancaster, California, example is a poor one given that Lancaster, California, is in the high desert and is exposed to the sun almost every day.

Q. Is there a simple way to illustrate the differences in solar potential between Missouri and other locations in the U.S.?

A. Yes. The National Renewable Energy Laboratory ("NREL") produces maps of solar resources that demonstrate how solar insolation varies across the U.S. The below map was produced by NREL and shows the significantly higher solar insolation experienced in the southwest U.S., including in Lancaster, California.



Q. When is the 30% ITC due to expire?

A. The 30% ITC is due to expire at the end of 2016. Any projects completed by the end of 2016 will be eligible for this credit. After 2016, the ITC will be reduced to 10%.

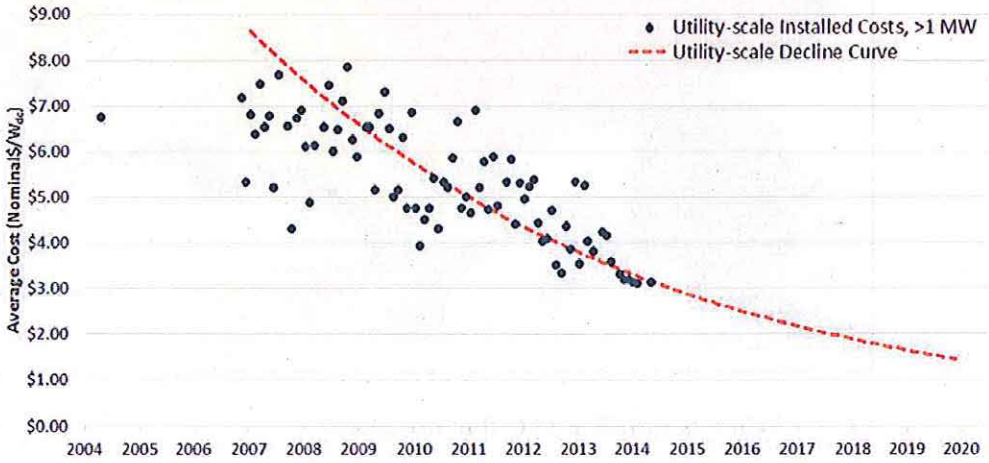
Q. Mr. Powers makes a comparison of wind and solar costs and concludes that they are comparable. How does he reach this conclusion?

A. Mr. Powers compares capital cost estimates and capacity factors for wind and solar. Based on his assumptions, Mr. Powers finds that the capital costs for wind and capacity factors for wind are both about 50% higher than the comparable figures for solar. He then concludes that the costs are the same.

Q. Are there any flaws in this analysis?

A. Yes. First, Mr. Powers has selected a source for solar installed cost data that is highly favorable to the point he wants to make. For comparison, we can look to a study

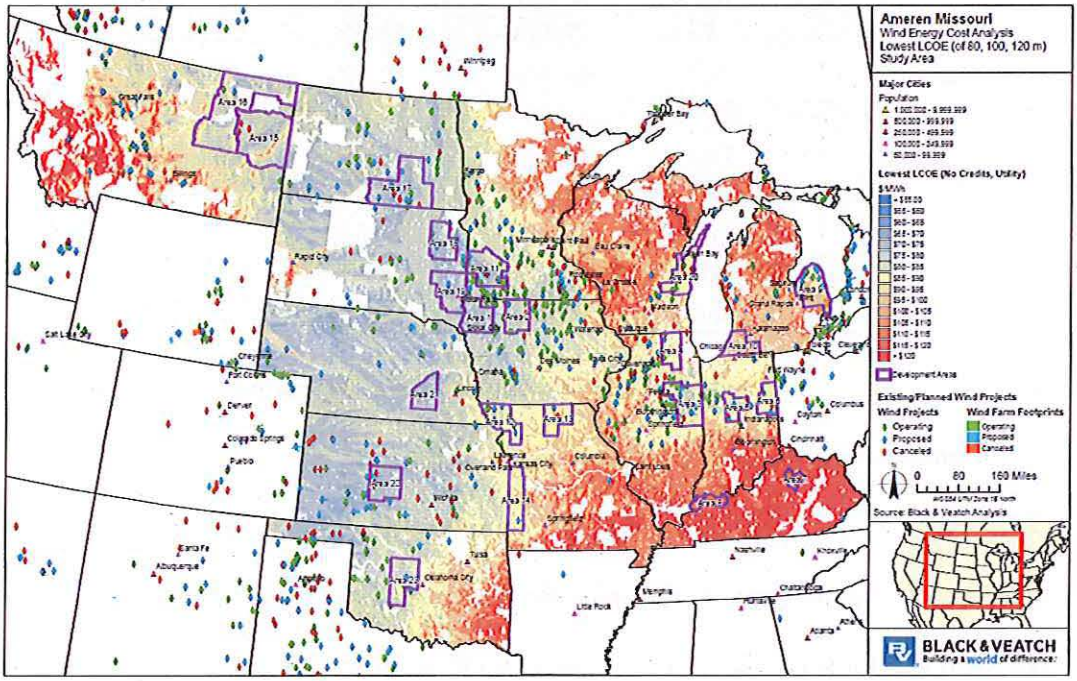
completed recently by The Brattle Group ("Brattle") which compares the costs of utility scale and customer-owned solar generation. To estimate the future installed cost of utility scale solar generation, Brattle relied on two primary sources – NREL's Open PV Project and solar studies from Lawrence Berkeley National Laboratory. Based on these sources, and corroborated by other sources, Brattle estimated the future cost of utility scale solar installations. The 2016 cost based on Brattle's analysis is about $2,500 per kw_{dc}.



Mr. Powers' estimated cost for wind, which he draws from MISO's MTEP14 Triennial Review, is very similar to the $2,377 per kw used by Ameren Missouri in its 2014 IRP for wind generation in northeast Missouri. On this basis, the capital costs for wind are roughly equivalent (even a bit lower) to that for solar, not 50% greater.

Second, Mr. Powers compares performance of current solar technology to wind technology from a decade ago. Wind technologies have continued to evolve, including the development of wind turbines with higher hub heights and wider rotor diameters (i.e., longer blades) to more effectively produce electric power. According to the U.S. Department of Energy's ("DOE's") 2014 Wind Technologies market report, which Mr. Power cites in his testimony, "In 2008, no turbines employed rotors that were 100 meters in diameter or larger;

by 2014, that percentage was 80%."[3] Ameren Missouri's 2014 IRP includes a comprehensive analysis of wind turbines with various hub heights in 23 different potential development zones, including one in north central/northeast Missouri. The estimated capacity factor for that development zone based on turbines at a 100-meter hub height is 37.5%, significantly higher than the 28% exhibited by the older generation of wind technologies in operation in Missouri today and nearly twice the expected capacity factor for utility scale solar generation. Below is the map of wind development areas examined in the IRP, as well as a table showing capital costs, capacity factors and the resultant levelized cost of energy. The development area in north central/northeast Missouri is designated as Area 13.



[3] U.S. DOE 2014 Wind Technologies Market Report, Executive Summary, page vi.

Area	State	Capital Cost, ($/kW)	Capacity Factor (%)	LCOE without Incentives (¢/kWh)
1	IA	$2,385	41.0%	8.10
2	IA	$2,370	41.1%	8.10
3	IL	$2,370	40.0%	8.30
4	IL	$2,365	37.9%	8.70
5	IN	$2,369	39.8%	8.30
6	IN	$2,366	37.3%	8.90
7	KY	$2,366	28.4%	11.70
8	KY	$2,364	28.3%	11.80
9	MI	$2,365	35.5%	9.40
10	MI	$2,365	33.6%	9.90
11	MN	$2,371	41.0%	8.10
12	MO	$2,368	39.8%	8.30
13	MO	$2,377	37.5%	8.90
14	MO	$2,369	37.0%	9.00
15	MT	$2,381	38.9%	8.60
16	MT	$2,424	39.5%	8.60
17	ND	$2,375	40.9%	8.10
18	SD**	-	-	-
19	SD	$2,373	41.0%	8.10
20	WI	$2,365	37.9%	8.80
21	NE	$2,366	41.0%	8.00
22	KS**	-	-	-
23	OK	$,2367	40.5%	8.20

Q. What conclusion can be drawn by correcting the flaws in Mr. Powers' comparison of wind and solar energy costs?

A. With capital costs that are comparable on a per-kw basis and capacity factors for wind approaching double those for solar, the cost of wind energy in our region is about half that for solar. Based on the estimated future costs of solar by Brattle, the cost of wind generation can be expected to remain below that for solar until the early 2020s even if there are no improvements in the cost or efficiency of wind turbines.

AMEREN MISSOURI IS PLANNING TO ADD WIND RESOURCES

Q. Does Ameren Missouri's IRP include the addition of new wind resources?

A. Yes. Our IRP preferred resource plan includes 400 MW of wind resource additions starting in 2019.

Q. Is there a possibility that more wind resources could be added?

A. Yes. Ameren Missouri has expressed its intent to transition its portfolio to one that is cleaner and more fuel diverse. In addition, the EPA's Clean Power Plan is likely to drive the need for more renewable energy sources in Missouri to replace generation from coal-fired sources, which currently supply over 70% of the energy Ameren Missouri generates.

Q. So is Mr. Powers' reference to disinterest on the part of Ameren Missouri in the cited Shuteye Creek project relevant?

A. Not at all. Ameren Missouri's need for new renewable resources to comply with the RES becomes apparent in 2019. Compliance with the Clean Power Plan begins in 2022, and a Clean Energy Incentive Program created by EPA provides incentives for renewable generation between 2018 and 2022. That Ameren Missouri did not enter into a transaction with a developing wind project in the past has no bearing on our future need for wind resources.

THE RECENT TREND IN CUSTOMER-OWNED SOLAR ADDITIONS IS NOT EXPECTED TO CONTINUE

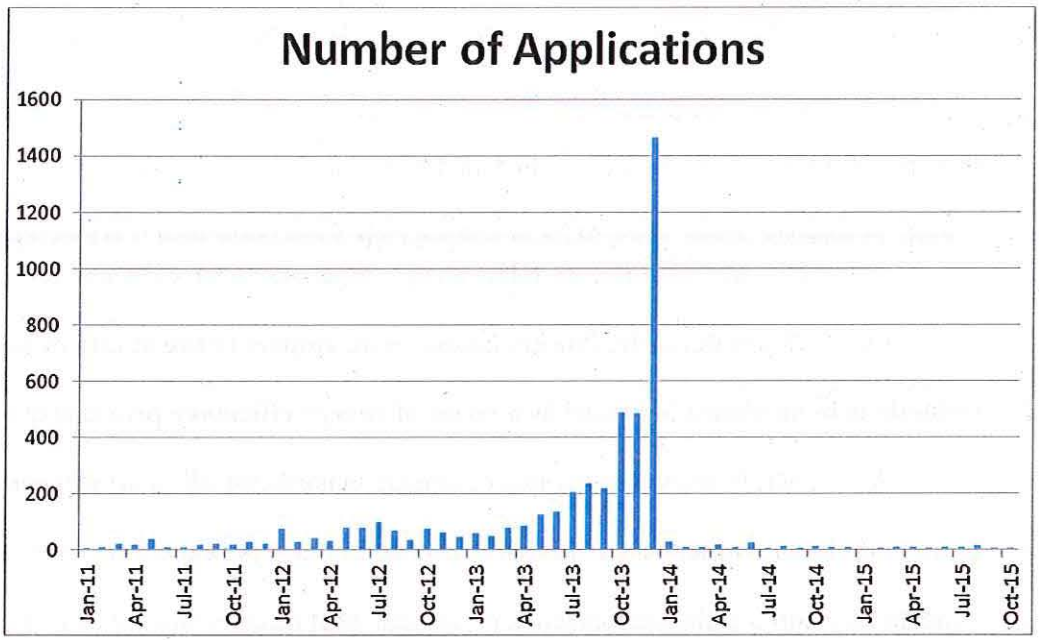
Q. Has there been an expansion of customer-owned solar generation in Ameren Missouri's service territory in recent years?

A. Yes. Beginning in 2012 Ameren Missouri saw an increase in customer-owned solar generation installations. This was driven by declining costs for solar installation

combined with a $2 per watt solar rebate under the Missouri RES and a 30% federal tax credit, which reduced payback periods for customers to a year or less in some cases.

Q. Has that trend continued?

A. No. In 2013, Ameren Missouri filed a request with the Commission to suspend its solar rebate program to avoid exceeding the 1% rate impact limitation included in the Missouri RES. The Company eventually entered into a settlement agreement with the other parties to that case, which the Commission approved. Under the terms of the agreement, a pool of approximately $92 million was established to fund rebates, and no further rebates would be paid out once that pool of funds was exhausted. At this time all rebate dollars have been committed, and less than $600,000 remained unpaid as of the end of September 2015. Since the surge of applications for net metering agreements corresponding to the establishment of the limited rebate pool, applications for net metering have returned to levels at or below those in 2011. The chart below shows the monthly net metering applications received and clearly shows the spike in applications that coincided with the establishment of the limited solar rebate pool.



Q. Is it possible that applications could increase in the future?

A. Yes, most anything can be said to being possible. The reality is, we have no way of knowing for sure and certainly cannot count on a rapid expansion of solar that we witnessed in the last few years.

Q. If another rapid expansion of solar were to occur, would that help Ameren Missouri to comply with the Missouri RES requirements?

A. Not necessarily. Under the Missouri RES regulations, customers own the solar RECs ("SRECs") generated by the systems they own. They are only obligated to transfer those SRECs, for a period of ten years, to the utility if a rebate has been paid. While Ameren Missouri could make a standard offer contract for SRECs available as it has done in the past, there is no guarantee that customers will sell their SRECs, so reliance on those SRECs to comply with the RES requirements is just as risky as relying on the ability to purchase RECs on the open market. Even if there were another rapid expansion of customer-owned solar and Ameren Missouri were to acquire the SRECs from the customers who own

the systems, another 100 MW of customer-owned solar, roughly twice the amount current on our system, would not provide the same volume of RECs for RES compliance as is available from the 400 MW of wind additions included in our plan.

MR. POWERS ASSUMES MUCH GREATER LOAD REDUCTIONS THAN ARE LIKELY TO BE ACHIEVED IN NORTHEAST MISSOURI

Q. What does Mr. Powers assume with respect to the ability to achieve load reductions in northeast Missouri as a result of energy efficiency programs?

A. Mr. Powers assumes that customers in northeast Missouri will participate in energy efficiency programs at a rate that is five to ten times the expected participation rate in Ameren Missouri's entire service territory through what he calls "focused energy efficiency investments."

Q. Does Mr. Powers provide any analytical support for this assumption?

A. No.

Q. Can Ameren Missouri force customers to participate in energy efficiency programs?

A. No. To achieve five-fold or ten-fold greater participation rates in a particular region would require much greater incentives than what has been offered to our customers.

Q. What does Mr. Powers assume with respect to load reductions available from demand response programs?

A. Mr. Powers assumes that all 10,308 customers would choose to participate in a direct-control air conditioning demand response program and that the cooling load for all customers could be dropped simultaneously in emergency contingency conditions. He concludes that this would result in a 50% reduction of the 64 MW load he estimates under emergency contingency conditions, or about 32 MW.

Moreover, as ATXI witness Dennis Kramer explains in his surrebuttal testimony, even if 32 MW of load reduction were realistic (it is not), it would fall far short of the load reduction that is needed, which Mr. Kramer indicates is significantly greater.[4]

Q. Does Mr. Power provide any analytical support for these assumptions?

A. No.

Q. Are these assumptions reasonable?

A. Not at all. First, as Mr. Powers notes, Ameren Missouri currently has no demand response programs available to customers. Second, if there were such a program available, it would be voluntary on the part of the customer. Customers may not choose to participate even if program participation costs them nothing. Third, even if all customers in the area did participate, a highly unlikely occurrence, the air conditioning load would be cycled. That is, some customer cooling equipment would be shut off for a short period, and then other customer cooling equipment would be shut off when the first group came back online, and so on. This is the nature of what is meant by the term "air conditioner *cycling* devices," which Mr. Powers references himself. Dropping all customer cooling load at once could be problematic because it would interrupt the cycle and likely result in a higher load when devices returned to operation.

Finally, Ameren Missouri's total estimated potential peak load reduction from demand response over the next twenty years is 166 MW. The 32 MW load reduction assumed by Mr. Powers is nearly 20% of the total estimated demand response potential for Ameren Missouri's entire service territory. Mr. Powers estimates that approximately 1% of

[4] The figure can be found in the Highly Confidential version of Mr. Kramer's surrebuttal testimony.

Ameren Missouri customers are located in the Kirksville area. It is not reasonable to expect to achieve 20% of all demand response potential across only 1% of the customer base.

Q. What conclusions can you draw with respect to Mr. Powers' assumptions regarding load reductions available from energy efficiency and demand response programs?

A. It is unrealistic. His assumptions are unsupported by any analytical or other rational basis and are without merit.

CONCLUSION

Q. Please summarize your conclusions regarding Mr. Powers' assertions regarding Ameren Missouri's need for wind generation that would be supported by the completion of the Mark Twain project.

A. Ameren Missouri plans to add wind generation as early as 2019. This wind generation will be needed to meet RES requirements and to help the Company transition its generation portfolio. Further wind additions may be needed as a result of the EPA's Clean Power Plan.

The Mark Twain project helps to ensure that new wind generation can be delivered to Ameren Missouri's system and, thus, ensure that the Company meets is goals and obligations. Mr. Powers' speculative and incomplete or flawed analyses and positions are not supported by a reasonable and critical review of the assumptions and in my judgment should be disregarded by the Commission.

Q. Does this conclude your surrebuttal testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Ameren Transmission Company of Illinois for Other Relief or, in the Alternative, a Certificate of Public Convenience and Necessity Authorizing it to Construct, Install, Own, Operate, Maintain and Otherwise Control and Manage a 345,000-volt Electric Transmission Line from Palmyra, Missouri, to the Iowa Border and an Associated Substation Near Kirksville, Missouri.	)))))))	File No. EA-2015-0146

AFFIDAVIT OF MATT MICHELS

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

Matt Michels, being first duly sworn on his oath, states:

1. My name is Matt Michels. I work in the City of St. Louis, Missouri, and I am employed by Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri" or "Company") as Senior Manager of Corporate Analysis.

2. Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of Ameren Transmission Company of Illinois consisting of 20 pages, and Schedule(s) ~~XXXX~~ _____ 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.

Matt Michels

Subscribed and sworn to before me this 16th day of November, 2015.

Notary Public

My commission expires:

2-21-18

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