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MISSOURI PUBLIC SERVICE COMMISSION

FILE NO. EA-2023-0286

SURREBUTTAL TESTIMONY

OF

STEVEN M. WILLS

ON

BEHALF OF

UNION ELECTRIC COMPANY

D/B/A AMEREN MISSOURI

St. Louis, Missouri
December, 2023

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SURREBUTTAL TESTIMONY

OF

STEVEN M. WILLS

FILE NO. EA-2023-0286

I. INTRODUCTION

Q. Please state your name and business address.

A. Steven M. Wills, Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri" or "Company"), One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri 63103.

Q. What is your position with Ameren Missouri?

A. I am the Director of Regulatory Affairs.

Q. Are you the same Steven M. Wills that submitted direct testimony in this case?

A. Yes, I am.

II. PURPOSE OF TESTIMONY

Q. To what testimony or issues are you responding?

A. My testimony responds to the rebuttal testimony of several Staff witnesses, including portions of rebuttal testimony from J Luebbert, Sarah Lange, Jim Busch, Michael Stahlman, Shawn Lange, Cedric Cunningan, Brad Fortson, Broderick Niemeier, and Jane Dhority. Throughout my testimony I will respond to certain specific Staff claims and allegations, but more importantly, I will describe how Staff's overall posture and position in its rebuttal testimony in this case represent a significant departure from the direction that

the Commission established in its Report and Order in the recent Boomtown solar CCN case (File No. EA-2022-0245),[1] building on a long series of orders that generally emphasize the policy benefits of promoting diverse generation portfolios that include increasing levels of renewable generation. Further, my testimony, along with the surrebuttal testimony of the Company's other witnesses, explain how Staff's perspective is fundamentally at odds with the macro drivers of energy policy that define the planning environment that utilities like Ameren Missouri must navigate, and which provide important context for resource planning decisions that must be made if we are going to continue to provide reliable electric service to our customers. Specifically, Staff ignores the long history of Commission orders and the clear policy perspective they establish regarding renewable energy sources. Instead, Staff erects false barriers and impossible standards that can only serve to impede renewable development in the state, while proposing no alternatives to mitigate the significant and obvious risks associated with failing to transition the generation fleet from over-reliance on aging fossil fuel resources that face increasing environmental regulations and pressures to a diverse, clean, reliable, and cost effective fleet that necessarily will rely on an equal build out of least cost renewable energy resources and dispatchable resources. Put simply, I will explain why the arguments presented by Staff do nothing to change the obvious fact that the Solar Projects[2] put forth by the Company in this case are clearly needed to meet the energy and capacity needs of the Company's customers and are squarely in the public interest.

[1] File No. EA-2022-0245, Final Report & Order, Issued April 12, 2023.
[2] The Solar Projects as used in my testimony are the Vandalia, Bowling Green, Cass County, and Split Rail Projects described in detail in the Company's direct testimony.

III. STAFF APPEARS TO BE INTENT ON IMPEDING PROGRESS ON THE NECESSARY ENERGY TRANSITION

Q. Please summarize the main drivers that appear to underly Staff's overall recommendation to reject the Company's application for CCNs for four additional renewable facilities.

A. The major themes voiced by Staff's rebuttal testimony in this case are, at their core, the same objections Staff presented in the Company's recent solar CCN case (File No. EA-2022-0245), in which the Commission approved a CCN for the Boomtown solar facility in April of this year on largely the same bases and justifications advanced by the Company for approving the Solar Projects in this docket. Despite Staff's efforts to repackage its primary arguments from the Boomtown case and buttress them with some new opinions and/or observations – many of which crumble under the slightest scrutiny, and none of which meaningfully change the dynamic of the decision the Commission is faced with in this case – the thrust of Staff's case can again be boiled down to the following categorical assertions:

- The Company has not adequately defined or demonstrated the need for the resources for which it seeks CCNs.
- The resources utilities develop to serve their customers should be subject to an economic litmus test such that they pay for themselves in the form of reduced revenue requirements; that is the service they provide should be provided for free and with little or no risk.

- Resource decisions made through the resource planning process (often generically referred to as the IRP) are not an appropriate basis for actually implementing the Company's generation resource plan.

All of these arguments are meritless in this case, just as they were when they were either explicitly or implicitly rejected by the Commission in its Boomtown Report & Order. These arguments should be again rejected in this case.

Q. Please provide a high level reaction to the Staff's issues.

A. As I mentioned, these are the very issues that we all debated in a hearing with a very similar set of facts just approximately ten months ago. Staff's contention that the Company has not defined or demonstrated the need for the resources is just plain wrong. Staff ignores the testimony the Company has presented on the topic of need – and similarly ignores many of the findings of the Commission from the Boomtown order – in order to make its incorrect claims - *again*. The reality is simply that the Company has not defined, and is not required to define, the need for the resources (and neither did or is this Commission) in a way that fits into the little box Staff has made up and within which it wishes to operate. Unfortunately for Staff, but as is otherwise obvious to anyone paying the slightest bit of attention to our industry, the energy landscape is in one of the most complex and dynamic periods in its history. Utilities are necessarily wrestling with the rapid change and myriad challenges of an energy transition driven by macro level forces related to policy and technology that are well beyond their control, but which are incredibly impactful to their operations and planning, and ultimately to their customers. However, these issues do not all fit in Staff's little box. Dealing with these macro forces requires a systematic approach to resource planning that deals with the coming challenges proactively

and holistically – dare I say in an *integrated* manner. And it should go without saying that such a holistic process that addresses the macro issues facing our industry will necessarily result in a plan that diversifies the Company's generation portfolio, including through the addition of at least some level of new renewable resources – a level that is certainly not exceeded by the amount of renewable capacity represented by the Solar Projects in this case. Such an outcome is a common sense, "no regrets" step in dealing with the challenges of the inevitable more stringent environmental regulations facing the Company's coal-fired generating fleet.

Staff, however, continues to attempt to define need as only being demonstrated based on a formulaic exercise that results in a need being identified as a single value in a capacity position table in a single year, and which must be directly and completely addressed by the addition of a single resource.[3] Staff cannot and does not articulate any vision for how the long-term challenge facing Ameren Missouri and its customers can or should be tackled. Staff's narrow view is a recipe for disaster when planning for how the ongoing energy transition that is indisputably happening in our industry, with all of its complexity and risks, will play out in Missouri.

In contrast, the Company's case is grounded in its detailed and thoughtful approach to the energy transition and the *fact*, undisputed by Staff, that the backbone of the current and historical generation fleet – over five gigawatts of coal fired generating capacity that until quite recently represented as much as 50% of the Company's total capacity and produced enough energy to meet over 85% of the Company's retail load requirements – is and will be retiring systematically over the planning horizon, leaving *massive* gaps in the

[3] File No. EA-2023-0286, Shawn Lange Rebuttal Testimony, p. 13, ll. 11-12, indicating that Staff finds a need for capacity in the winter in 2026 and the summer in 2031.

Company's ability to meet its customers' energy requirements[4] absent a significant and sustained build out of the next generation of generating resources – the new fleet that was discussed at length in the Boomtown case and in the Company's direct testimony in this case.

Q. Does Staff provide any meaningful discussion of the macro forces driving the energy transition?

A. No.

Q. Does Staff provide any alternative approach to systematically replacing the capabilities that have historically been provided by over five gigawatts of coal-fired resources?

A. No.

Q. Does Staff address, or even acknowledge, the reliability or cost risks facing Ameren Missouri and its customers if the Company does not systematically replace the retiring resources according to its plan?

A. No.

Q. What does Staff do?

A. Staff simply bemoans the reality that resource additions such as those that the Company is proposing in this case may cost customers any money at all (rather than entirely paying for themselves). Staff does not, however, seem to have made any assessment of the customer impacts that would arise from a decision *not* to pursue these projects. Such impacts include the costs and risks (risks the Commission itself recognizes

[4] As demonstrated by numerous energy and capacity position charts in the Direct Testimony of Company witness Matt Michels.

exist[5]) associated with any alternative approaches to providing for customers' future energy needs – or, importantly, the costs and risks of the *failure* to provide for those needs in the face of environmental and policy pressures that may force the coal fleet to retire or reduce its dispatch even sooner than currently anticipated. To be clear, there can be no question that any solution to the energy transition will cost customers at least some amount of money. The energy transition simply is not paying for itself within utility revenue requirements.[6] But rather than constructively working toward solutions to the problem of replacing the retiring fleet as cost effectively as possible, Staff instead creates barriers to implementing the solutions that have been put forward without offering any alternative. Frankly, Staff's approach is irresponsible.

Q. You mentioned Staff's positions are at odds with the recent Boomtown order. Can you please discuss this point further?

A. I provided a high-level review of the Boomtown order and its application to the similar issues and facts presented in this case in my direct testimony. I would note that Staff claimed in its rebuttal testimony that the Company has said the CCNs sought in this

[5] *See, e.g.,* p. 17, ¶4; p 26. of the Commission's *Report and Order* in File No. EA-2022-0245

[6] This should not be construed as a reason to say the energy transition should not happen. It must happen. The aging resources currently serving customers ultimately will have to be replaced. Costs in the utility industry tend to follow cycles as major investments are made, and then the assets depreciate, and their revenue requirements reduce over time. The old fleet, e.g., Labadie, Sioux, Rush Island, Meramec (retired last year), Callaway, were not "free" when we were in the build cycle that produced them. We are unquestionably entering the active phase of a new build cycle now because we must replace these aging plants.

case should be approved *because* Boomtown was approved.[7] In saying that, Staff subtly altered the Company's wording so that it could imply that the Company is suggesting some lower standard of Commission review for these and future renewable CCN applications because of the Boomtown order.[8] That implication is false. What is true, though, is that the issues and facts between the two cases (Boomtown and this case) are analogous in many ways, and that, along with the Commission's very recent rationale for relying on certain facts and policies in approving Boomtown, demonstrates that the specific evidence presented by the Company in this case should make this case a lot easier than Staff wants to make it. But since Staff seems to desperately want to distinguish this case from Boomtown, I think it is worth the time and effort to take a detailed look at the relevant statements that the Commission included and relied on in its order approving Boomtown and review the extent to which very similar circumstances and facts, and evidence, exist in this case. I have done so in Schedule SMW-S1, which detailed key findings and conclusions by the Commission from its Report and Order in the Boomtown docket, demonstrating that the evidence in this case squarely supports the same findings, conclusions, and decisions here.

[7] File No. EA-2023-0286, James A. Busch Rebuttal Testimony, p, 22, ll. 7-9, which states that the Company asserts these resources are in the public interest "because" Boomtown was found to be so, and footnote 20 on the same page that shows the actual language from my direct testimony that says the resources in this case should be found to be in the public interest "for the same reasons" as Boomtown was. Drawing a parallel with another case as a useful analog for this case, as I did, is in no way the same thing as suggesting that that other case (Boomtown) ties the Commission's hands in this case. Staff Witnesses Busch and Lange go on to state that Ameren Missouri apparently intended this to lessen the Commission's obligation to review projects in this and future CCN applications (Busch rebuttal, p. 22, ll. 13-16 and Sarah Lange rebuttal, p. 5. ll. 4-6).

[8] James A. Busch Rebuttal Testimony, p. 22, ll. 13-16.

Q. What conclusion do you draw from this comparison?

A. Given that the facts and evidence presented in *this case* on need, economic feasibility, and public interest are at least as robust as in the Boomtown case, the conclusion that the Commission's decision and the rationale for it in the Boomtown order remains highly relevant to this case is inescapable. And this suggests that a similar outcome to Boomtown is *likely* to be appropriate here as well. That said, it is not the Company's position (as Staff erroneously suggested) that we can stop there and not deal with the facts that are specific to this case in order for the Commission to provide the appropriate level of review that is required in granting the requested CCNs.

Q. Does Staff appear to have heard the messages that are contained within the Boomtown order, among other recent Commission decisions relating to renewable energy?

A. Not at all. Staff's 14 witnesses and 302 pages of outright opposition to the Company's application[9] – which includes an apparent attempt to throw every opposing argument Staff could think of against the wall in hoping something sticks - speak loudly and clearly, and stand in stark contrast to the direction given by the Commission with respect to renewable energy and the transition to a more diverse energy system in Boomtown and other prior orders, as well as in stark contrast to the unambiguous direction the industry is taking all around us. A long history of orders clearly establishes that the Commission's policy preferences favor increasing the diversification of the generating mix

[9] A few of Staff's witnesses, such as Dr. Seoung Joun Won, Jane Dhority, Benjamin Burton, and Paul Amenthor do not directly oppose the projects per se, but rather just provide facts that end up being used by other opposing witnesses. However, neither do any of these witnesses provide support for approving them unless one views Dr. Won's recommendation to find that the Company is capable of financing the resources as a very narrow point of support.

in Missouri, with a particular emphasis on the benefits of renewable energy. Those orders also reflect the Commission's recognition of the risk of not doing so, and the benefits renewable energy brings. For what reason I cannot say, but it is evident that Staff has not heard the Commission clearly on these points and continues to exhibit a clear bias against renewables that runs counter to that direction established by the Commission.

Q. Has the Commission issued any additional orders since this case was filed that continue to highlight its policies regarding renewable energy and the unambiguous direction of the energy industry?

A. Yes. The Commission's recent Report and Order in the Grain Belt Express, LLC ("Grain Belt") CCN case (File No. EA-2023-0017) continued to build on the history of Commission orders related to renewables that I described in direct testimony. See the following examples, which are just a few of the salient highlights from the Commission's Findings of Fact and Decision in the Grain Belt order that reinforce the Commission's policies, policies that are also clearly promoted by the projects at issue in this case:

> There can be no debate that our energy future will require more diversity in energy resources, particularly renewable resources. We are witnessing a worldwide, long-term and comprehensive movement toward renewable energy. The energy on the Project provides great promise as a source for affordable, reliable, safe, and environmentally-friendly energy that will increase resiliency of the grid. The Project will facilitate this movement in Missouri, will thereby benefit Missouri citizens, and is, with the conditions set out below, in the public interest.[10]

> Industrial retail customers also have expressed demand for additional renewable energy. This is demonstrated by the industrial wholesale customers placing renewable energy goals in their corporate procurement policies. The Project will help MoPEP's member cities to remain or

[10] File No. EA-2023-0017, *Report and Order*, pp. 63-64

> become more attractive location for those industries.[11]
>
> Large corporate energy customers accounted for 37% of all carbon free energy added to the grid since 2014. In 2021 corporate buyers procured 11 GW of carbon free energy power. The demand in 2022 and beyond is projected to exceed the record amount from 2021.[12]
>
> Both Ameren Missouri and Evergy have announced carbon emission reduction goals. These goals show there will be demand and a need to expand the delivery capability of the Original Project.[13]

Each of these recent quotes from the Commission has a high degree of relevance to this case as well. The first paragraph I cited from the Grain Belt order is an unequivocal statement of the Commission's recognition of the transition that is occurring in our industry – the very same transition that underlies the Company's basic premise of need for the approval of new resources, and the transition that Staff completely ignores while somehow suggesting that the Company has not articulated a need for the resources.

The next paragraphs quoted above demonstrate that the Commission also weighs in its determination of need and the public interest the stated goals of both the utility companies it regulates and the customers served by those utilities, as I believe it should. I discussed in my direct testimony in this case that those utility and customer goals are very much present in this case as well. Given that the Staff seems determined to ignore these considerations and the support for the need for the resources they provide, despite the Commission's own recognition of this importance, Company witness Rob Dixon elaborates on the importance of meeting customers' expectations for clean energy in his surrebuttal testimony.

[11] Id. at p. 18
[12] Id. at p. 18
[13] Id. at p. 19

Q. What implications do Staff's positions in this case carry for the energy transition, generally and more specifically, for meeting the needs of the Company's customers in the environment in which we are operating today?

A. The path reflected in Staff's testimony is a path to complete paralysis, which, if followed, would result in the exposure of Ameren Missouri's customers to the very risks the Commission found renewable energy resources mitigate (environmental regulation, over-reliance on the MISO market) and that led the Commission to find that renewable energy resource additions are needed. It would also result in Missouri falling behind the industry and failing to proactively shape its own energy future. If we follow Staff's approach, when the inevitable end of life of the aging coal fleet does arrive[14] – on the dates of planned retirement, or sooner as the result of increasing federal environmental regulations – Missouri customers will face the cost and reliability risks of a haphazard and accelerated attempt to scramble to develop the new fleet that we won't have. This ill-planned alternative future will necessarily be less reliant on renewable resources because the amounts required simply will not be able to be deployed in time. The result is a future that looks more like the past, which based on IRP modeling of alternatives, will cost customers more and lock in those higher costs for decades.

Q. Please describe the barriers and biases that Staff introduced into this case that can have no apparent objective other than to impede progress on the renewables needed as a least cost energy source to meet the Company's and its customers' needs as the transition occurs.

[14] And/or if such circumstances force less dispatch than we are currently plan for, and thus less support from those resources even before they retire.

- A. They are many and obvious, including:Staff's insistence that renewable resources pay for themselves with market revenues – even when they are needed according to evidence and standards the Commission itself already determined establishes need -- relegates renewables to a second-class status as compared to all other resource types, and is a standard to which, to my knowledge, no other form of generating resource has ever been subjected. Under Staff's standard, utilities have a massive disincentive to invest in renewables relative to other – more costly – resources. Staff's insistence on this point is at odds with past Commission decisions, including in the Boomtown case, would be more costly for the Company's customers, and would represent decidedly poor regulatory policy as discussed throughout this testimony.
- Staff requested the Commission to order the Company to file supplemental testimony[15] featuring an incredible volume of down in the weeds analyses that are either duplicative of analyses already conducted, or which are of such a level of minutiae that it could not possibly change the conclusion of the analysis already conducted.
- Staff tries to discredit the value of the Commission's IRP rules and processes, of the resource planning process itself, by

[15] File No. EA-2023-0286, Sarah Lange Rebuttal Testimony. p. 16, l. 19 through p. 18, l. 17

suggesting that the years of effort by utilities to comply with the comprehensive rules be essentially discarded and that utilities and the Commission "start over" with brand new analyses when applying for a CCN, rather than building on the robust and well-tested plans that result from the IRP process.[16]

- Staff ignores provisions of the Commission's IRP rules that give guidance as to how resource planning analyses should be conducted and tries to replace them with their own preferred standard that backs Staff's desired outcome. As an example, which I will discuss in more depth later, where the Commission's IRP rules dictate that plans be analyzed according to the minimization of the Present Value of Revenue Requirement[17] and that this metric be determined using the utility's cost of capital as the discount rate, Staff substitutes both a nominal analysis (using no discounting at all) and a present value analysis with a different discount rate[18] to suit its purpose with little to no justification, and questions the merits of present value analysis being used at all,[19] despite it being the obvious foundation of almost all credible long term economic analysis and business planning, as reflected in the IRP rules themselves. This sea change in Staff's economic modeling that ignores the

[16] File No. EA-2023-0286, J. Luebbert Rebuttal Testimony, p. 5, ll. 4-6.
[17] 20 CSR 4240-22.010 (2)
[18] File No. EA-2023-0286, Sarah Lange Rebuttal Testimony, p. 24, ll. 9-12.
[19] File No. EA-2023-0286, Sarah Lange Rebuttal Testimony, p.24, ll. 1-2.

IRP rules becomes extremely impactful in Staff's overall approach to explaining the economics of the Solar Projects.

- Staff takes internally inconsistent positions that contradict each other in a manner that creates standards that would be impossible for any utility to meet. For example, one Staff witness argues that the solar resources the Company is proposing are not geographically diverse enough[20] (and by logical extension that they should be further apart), while a different Staff witness complains that the resource the Company has proposed was not appropriately studied to assess the potential impact of the resource on the locational prices that impact the Company's cost of serving that load in the MISO market,[21] which presumably suggests Staff's opinion that resource siting should not be geographically diverse at all, and instead should all be clustered together as close to the load as possible. It is literally impossible to site multiple solar resources that would achieve Staff's conflicting standards of ensuring they are electrically on top of the Company's load in an attempt to reduce the market prices in that location, but to also be much more substantially geographically diverse than the four projects presented by the Company in this case already are. Here is yet another example of Staff throwing every idea they have to oppose the projects

[20] File No. EA-2023-0286, Krishna Poudel Rebuttal Testimony, p. 3, ll. 16-18
[21] File No. EA-2023-0286, Sarah Lange Rebuttal Testimony, p. 22 l. 28 through p. 23 l. 3.

against the wall, and hoping one sticks, even if the combined suggestions by Staff are incoherent when viewed together.

- Staff frames its case in overtly negative language that appears to be intent on biasing the discussion against the Company's plan that relies on renewables partnering with dispatchable resources. When discussing the Company's IRP comparison of the preferred resource plan to other alternatives, Staff describes the Company's selection of the lowest cost plan as selecting "the least worst" plan.[22] Of course, a synonym for "least worst" is "best." Staff's statement is an acknowledgement of the plan being the *best* of all options in the IRP, and yet Staff finds it necessary to frame that as a negative. Unless Staff has figured out something that no other state, utility, region, or jurisdiction has figured out, the energy transition will cost at least some amount of money – i.e., it will not pay for itself in the form of lower utility revenue requirements. So, let's just call the lowest-cost option for achieving the transition exactly what it is – the best option.
- Staff is apparently so opposed to building renewables that it takes the shocking position that the Company should let itself become over eight million megawatt-hours ("MWh") short of the economic energy needed from its fleet to serve its load on an

[22] File No. EA-2023-0286, J. Luebbert Rebuttal Testimony, p. 8, ll. 6-9.

annual basis – which represents roughly a quarter of the Company's customers' total annual energy needs – so that it can take advantage of an "opportunity" to serve this quarter of its annual load under normal planning conditions from the market.[23] Staff takes this position after the Commission just recognized in Boomtown that greater reliance on the market is risky, as discussed further by Company witness Arora in his surrebuttal testimony.

- As described in more detail by Company witness Mitch Lansford, Staff performs an economic analysis (i.e., its "threshold analysis") of the Solar Projects that is so foundationally flawed in its treatment/calculation of routine elements of a revenue requirement that it includes approximately *a billion dollars of errors!* These errors increase the costs and/or reduce the benefits Staff's model estimated as being associated with the Projects. [24] Inexplicably, Staff failed to identify these basic revenue requirement construction issues and proceeded to use its wildly inaccurate economic analysis as a foundation of its recommendation in this case.[25]

[23] File No. EA-2023-0286, Shawn Lange Rebuttal Testimony, p. 9, ll. 9-16.
[24] I.e., the revenue requirement impact of the Projects.
[25] Staff's threshold analysis is irrelevant in any event if the Commission determines that the Projects are necessary or convenient for the public service because such utility assets are simply not subject to a "pay for themselves" test, as the Commission itself has stated. In any event, the errors in Staff's threshold analysis modeling don't even support Staff's the resources must pay for themselves case since, once those errors are corrected, Staff's corrected modeling indicates that they would pay for themselves as Company witness Lansford demonstrates in his surrebuttal testimony.

- Staff takes unnecessary "jabs" at the Company to further its negative posture, such as witness Niemeier throwing in casual comments about the Taum Sauk reservoir failure that occurred more than 17 years ago in a discussion in which he ultimately finds that the Company *is* qualified to operate the Solar Projects.[26] Staff did not seem to find that incident relevant to mention in the recent Boomtown case or any other Ameren Missouri renewables cases (there have been several of them) when assessing the Company's operational capabilities, but again appears to seek new and novel approaches to subtly or not so subtly undermine the Company's CCNs application in this case.

Simply put, no fair reading of Staff's testimony would support the notion that a utility or Commission that is tethered to Staff's worldview would have any credible chance of navigating the energy transition that will necessarily include higher levels of low-cost renewable energy in a way that best serves customers or the public interest. Staff's approach should be rejected.

[26] File No. EA-2023-0286, Brodrick Neimeier Rebuttal Testimony p. 4, ll. 13-16.

Q. Staff raises a concern that the Company is simultaneously considering adding generation resources, adding load (through economic development and electrification), and reducing load (through energy efficiency programs). Has Staff identified an internal inconsistency in the Company's approach to meeting its customers' needs?

A. Absolutely not. Staff states:

> Ameren Missouri is concurrently requesting to spend money, which they will recoup from ratepayers with additional costs due to PISA, to acquire generation to meet an "energy need", that is expected to entice commercial and industrial customers, who will require more energy, as well as be provided discounted rates, in which all other ratepayers cover the difference, providing incentives, collected from ratepayers, to support electrification efforts to increase the "energy need", providing efficiency incentives, collected from ratepayers, to reduce the "energy need" and future capital investment, while increasing current capital investments due to PISA participation, all while chasing an undefined "energy need," for which it did no modeling to estimate whether the addition of these projects would do more harm than good.[27]

What Staff's statement does do is confirm its apparent ignorance of and/or disdain for issues that are *the issues* of our day – the macro drivers of our industry, which are omnipresent in society today. In the interest of brevity, I will not write the full book's worth of testimony on this topic that I would like to. But suffice it to say, Staff puts the ultimate negative face on issues going on in the energy industry that are the most hotly discussed issues at every conference, in every industry news publication, and which many of the stakeholders to this case are likely most excited about. Ameren Missouri most certainly did not invent these issues as a clever ploy to grow its rate base. And the

[27] File No. EA-2023-0286, Sarah Lange Rebuttal Testimony, p. 76, l. 23 through p. 77, l. 2.

Company's approach to these issues is not at all inconsistent with the prevailing approaches to them across jurisdictions and regions all over the country, and even the world.

Yet Staff's statement suggests that Staff considers the idea of growing Missouri's economy as a negative because it will require additional energy resources to serve those new customers. I doubt our commercial and industrial customers, including those that intervened in this case, or even residential customers that may be employed by them, find this as such a negative. I also seriously doubt that the State, counties, municipalities, and school districts that benefit from tax revenues and jobs economic development provides oppose the development simply because the new or expanded businesses will require electric service. I know the Commission does not view adding load via economic development to be a negative --- all one need do is read the Commission's Boomtown order, e.g., at pages 16 and 31, where the Commission specifically concludes that such development is beneficial and supports the public interest in approving renewables. Staff's statement suggests that electrification – which saves customers money on their overall energy expenditures while reducing overall emissions – is a terrible thing. I doubt the intervenors in this case that advocate for improved environmental policies and outcomes find electrification as such a negative and bad public policy. Staff suggests that energy efficiency making cost effective investments to provide the same level of end use service with less electricity and requiring less new resource additions than would otherwise be required - as being in conflict with trying to grow the economy and enable the benefits just discussed associated with electrification. As if the existence of growth in useful applications of electricity reduces or eliminates the merits of using that electricity

efficiently and avoiding more new resources than would otherwise be required. And Staff suggests that the Company utilizing PISA and providing to others Economic Development Incentives passed at the same time the General Assembly adopted PISA (and then enhanced by the General Assembly a couple of years later) is somehow inappropriate. It is not, a fact clearly demonstrated by the fact that the elected officials in this state who passed the statutes providing for PISA and Economic Development Incentives established them as state policies that should be employed.

These issues cannot be understood unless one considers the macro drivers of the industry – technology evolution, policy direction (including state and federal policy), customer preferences, etc. But for anyone that *is* taking in the big picture, this statement that Staff framed in the most overtly negative way possible, could have been reframed as the mission statement of our entire industry to address the greatest challenges and opportunities of our era in a comprehensive and forward-thinking way.

Q. Can economic growth, electrification, and energy efficiency coexist cost effectively?

A. Yes. Energy efficiency and demand response programming can make room for new load to be brought onto the system without more expensive upgrades.

Q. Staff also alludes throughout its testimony to the incentive that it believes exists for the Company to over-invest in order to benefit shareholders. Staff at least implies that the Solar Projects are a manifestation of that incentive rather than needed resources, calling the Company's planned investment in the renewable resources needed to transition the fleet "unprecedented."[28] Is this Staff concern well founded?

A. Absolutely not. I provide more detail related to Staff's claim in a later section of this testimony. At this point, though, I think it is important to put the Staff's claim that the Company's shift to renewables is either 1) shareholder driven, and/or 2) unprecedented in context. The Company is taking prudent actions to develop the diversified future fleet of generating resources that will be essential to our ability to serve our customers and mitigate risks in a fashion that is consistent with the macro level policy and technology drivers that are impacting our entire industry, all while being mindful of the need to deploy the least cost energy resources in order to also prioritize customer affordability. One need only look at other authoritative sources of regional resource planning to see that the Company's plan is, in fact, *less aggressive* in terms of the pace of renewable build out than the industry as a whole. Take for example MISO's resource planning analysis underlying its transmission expansion planning. MISO is basing its Long Range Transmission Plan ("LRTP") on a future resource mix scenario that it identifies as Future 2A. MISO Future 2A projects total renewable capacity (utility scale solar and wind) of well over 100 Gigawatts ("GW") *by 2030.*[29] Ameren Missouri's load ratio share in MISO

[28] File No. EA-2023-0286, Brad Fortson Rebuttal Testimony, p. 7, l. 13.
[29] See citation for Figure 1 below

is approximately 5%[30] (i.e., Ameren Missouri's load is about 5% of MISO's total load). Using that load ratio share as a reasonable approximation of the percent of MISO-wide renewables that one would expect to be deployed by Ameren Missouri if it were building renewables at the same pace that MISO assumes utilities will build them, in order for Ameren Missouri to "keep up" with the pace of renewable deployment in the broader MISO region, it would need over 5 GW of renewables by 2030. Yet Ameren Missouri's plan only includes 3.5 GW at that point in time – over 30% fewer renewables than the MISO-wide projections would imply for a utility the size of the Company. In fact, Ameren Missouri's 20-year plan does not reach that approximately 5 GW level until late in the planning horizon, approaching the time when MISO's forecast suggests *well over 200 GW of renewables* will be in the regional resource mix (suggesting Ameren Missouri would own *over 10 GW* of solar and wind at that point if it kept pace with regional peers). With the MISO regional plan as a backdrop, Ameren Missouri's plan must be considered a measured and prudent approach to renewable deployment, rather than "unprecedented," as Staff would have the Commission believe.

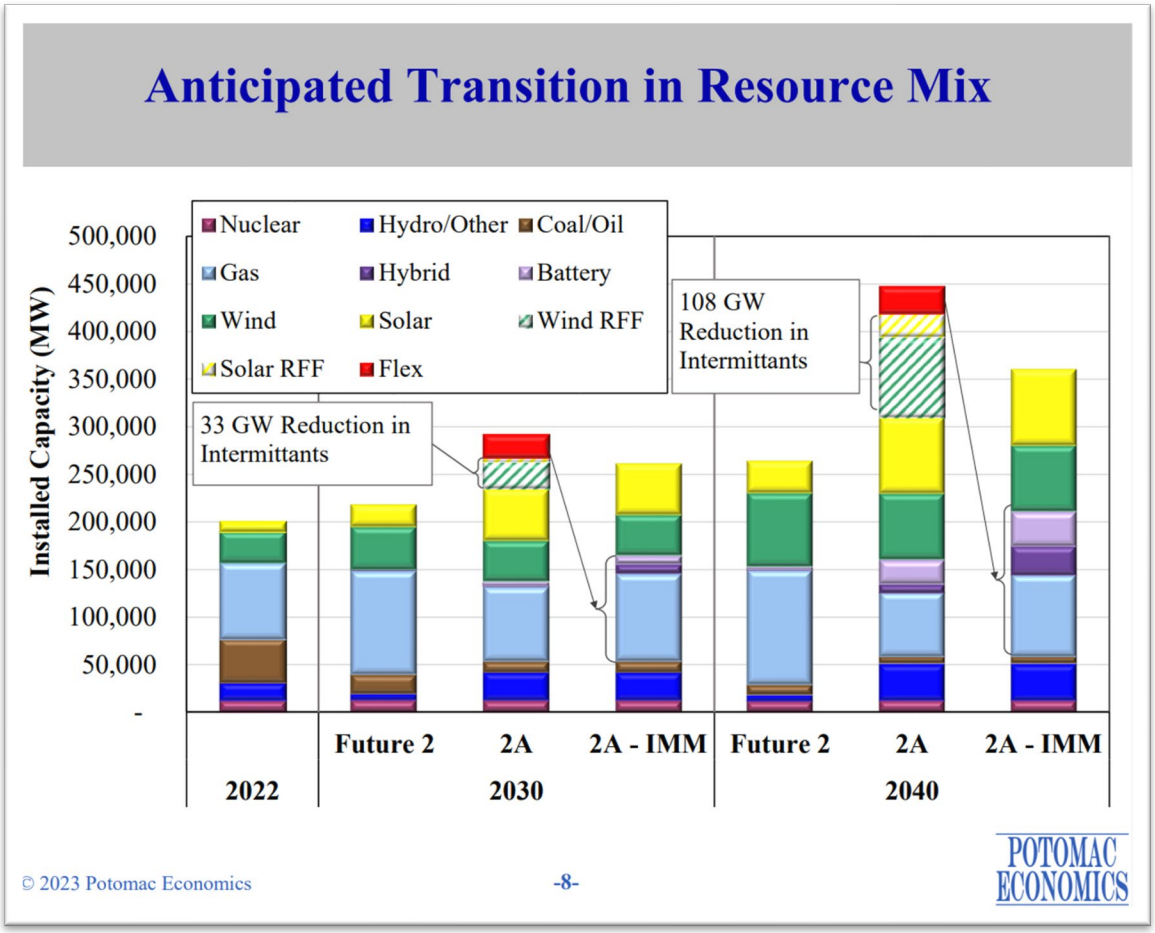
Q. Isn't it true that there are voices in the industry expressing concern that MISO's Future 2A assumptions are too aggressive and that a slower renewable buildout should occur?

A. Yes. It's also true that the voices I have heard still generally acknowledge that a renewable build out will be necessary – up to and even *exceeding* the levels included in Ameren Missouri's IRP. Many such voices are also advocating for a more diversified

[30] Based on the Company's settlement statements from MISO, the Company's load ratio shares in recent years were: 2019 – 5.30%, 2020 – 5.27%, 2021 – 5.13%, 2022 – 5.11%, and through October 2023 – 5.00%.

mix that includes more natural gas resources to backstop reliability, just as Ameren Missouri has included in its preferred resource plan. MISO's Independent Market Monitor ("IMM") is one such voice. At a recent meeting of MISO's LRTP working group, the IMM presented a perspective that suggested that Future 2A was too aggressive with respect to renewable build out (and a lack of gas or other flexible resources). The IMM developed his own perspective of what a more realistic renewable deployment schedule would look like. And it looks a lot like Ameren Missouri's plan. Figure 1 below is a slide from the IMM's August 31, 2023 presentation to the LRTP working group, which shows both MISO Future 2A and the IMM's preferred alternative, which clearly shows that the IMM's "more realistic" renewable deployment schedule would align quite well with Ameren Missouri's preferred resource plan. In fact, it is visually evident from the chart that the IMM's scenario has more than 130 GW of renewables by 2040, which would suggest, based on a 5% load ratio share, that Ameren Missouri would own over 6.5 GW of renewables, rather than just the 5.4 GW reflected in our IRP. Said another way, even extremely well-informed voices in the industry like the MISO IMM that have expressed concern about the pace of renewable deployment region-wide view renewable deployments at a pace similar to that suggested in Ameren Missouri's IRP as appropriate and reasonable – and certainly not unprecedented.

Figure 1 – MISO IMM Presentation to LRTP Working Group[31]



[31]IMM Discussion of MISO Futures and Long-Range Transmission Planning, August 31, 2023, found at: https://cdn.misoenergy.org/20230831%20LRTP%20Workshop%20Item%2005%20IMM%20Presentation630042.pdf

IV. THE IRP IS THE APPROPRIATE – AND ONLY RATIONAL – WAY TO PLAN THE RESOURCES NEEDED TO SERVE CUSTOMERS INCLUDING THE NEED TO TRANSITION THE FLEET – AND THE OBVIOUS CONCLUSION OF THE COMPANY'S IRP IS THAT THE SOLAR PROJECTS ARE NEEDED

Q. What concern does Staff raise about utilities' reliance on IRPs for the approval of CCNs for generation projects?

A. Staff states:

> Q. Ameren Missouri has indicated throughout its testimony that the need for these projects is laid out in its IRP and/or Annual update to its IRP. Does this reliance on the IRP process concern Staff going forward?
>
> A. Yes. Over the past handful of years, Ameren Missouri, as well as other utilities, have pointed to their IRP preferred plan as justification and evidence of need of specific projects for which the utility is seeking a CCN…It is Staff's recommendation that the Commission make an affirmative statement that indicates that justification for any future generation facility needs more detailed analysis as described within my testimony and other Staff rebuttal testimony and reliance on the IRP or Annual update preferred plan is insufficient justification. [32]

Q. What is your reaction to Staff's concern?

A. If I had not read it for myself, and also recently lived through a similar Staff attack on the Commission's IRP process in the Boomtown case, I would not have believed that the Staff of the Missouri Public Service Commission would work so hard to undermine a cornerstone of Missouri electric utility regulation. But here we are - *again*.

[32] File No. EA-2023-0286, James Busch Rebuttal Testimony, p. 29, ll. 8-18

The Commission has the incredibly thorough, detailed, and prescriptive IRP rules that it has for a reason. And that reason is that the Commission has determined that this is the process that should be the foundation of utility resource planning – the foundation of ensuring regulated utilities can meet their customers' needs in a reliable and cost-effective manner.[33] A CCN application – a request for permission to construct or acquire a resource – is nothing if not a manifestation of that resource plan.

While not constituting preapproval of the utility's Preferred Resource Plan, the Commission's rules reflect the importance of a utility's IRP.

- The IRP rules require that each triennial compliance filing be accompanied with a letter of transmittal that is "signed by an officer of the utility having the authority to ***bind and commit*** the utility to the resource acquisition strategy."[34]

- If, in between the triennial filings, the utilities "…business plan or acquisition strategy becomes materially inconsistent with the preferred resource plan or if the utility determines that the preferred resource plan or acquisition strategy is no longer appropriate…", then the utility must notify the Commission within 60 days.[35]

- Finally, the rules *require* that, in any case which involve a requested action that is affected by electric utility resources, the Company must "certify" that the resource which it is seeking authority to construct is "substantially consistent" with its Preferred Resource Plan.[36]

[33] Policy Objective No. 1 in the Commission's IRP rules is that in promulgating them, the Commission adopted a resource planning process that exists to "ensure that the public interest is adequately served." 20 CSR 4240-22.010(1). That being the case, it makes no sense that the outcome of that process is to be discarded when actually implementing resources.
[34] 20 CSR 4240-22.080(2)(A), emphasis added.
[35] 20 CSR 42490-20.080(12).
[36] 20 CSR 4240-22.080(18).

It is pretty telling that the Commission expects a utility's resource acquisitions to be done in the context of, and driven by, their IRPs. And yet Staff is expressing as a *concern* that utilities are "relying on their IRP." This makes no sense.

Let's be clear, the IRP is a massive exercise. It takes about 18 months to prepare a triennial filing plus at least 6 months (typically longer) for review in front of the Commission. There is also a full annual update process in years without a triennial filing, and a requirement that a formal filing be made if changed circumstances require a change to the PRP. The IRP involves extensive research and analysis that require a utility to devote tremendous resources to it. Multiple full-time utility employees, supported by countless hours of time from subject matter experts from numerous departments and functions across the organization, dedicate thousands and thousands of hours to the detailed work that is an IRP. Substantial dollars are spent to bring to bear some of the best external consulting resources to the project in order to make sure industry leading analysis is conducted. If the IRP is not and cannot be considered the basis for making decisions about resource acquisitions, then it is one of the biggest administrative wastes of time and money – money ultimately paid for by customers – that I can imagine. There is and should be no question that the IRP must be both the starting point and foundation for justifying CCN applications for generation resources.

Q. Why does Staff take its view that the IRP is not an appropriate basis for a CCN?

A. It appears that Staff is primarily opposed to the IRP being used because the utility conducts the IRP analysis and therefore has, Staff claims, too much control of the plan. Staff states:

> [E]ach utility retains an immense amount of discretion in the planning process, including nearly all of the assumptions that will be included in the analyses based on the opinion of utility management. These assumptions drive the outcomes of the various metrics reported within the IOU's IRP report. Assumptions within an IRP include, but are not limited to:
>
> - load growth;
> - load shape;
> - the capital costs of various resource types;
> - timing and size of resource additions;
> - timing of resource retirements;
> - tax benefits;
> - fuel prices;
> - energy prices;
> - capacity prices;
> - operations and maintenance expense;
> - the capital cost of environmental compliance upgrades;
> - costs associated with regulatory requirements;
> - depreciation rates including net salvage assumptions;
> - and many more.
>
> Many of the assumptions are variable by resource type, scenario, and year within the planning horizon. Utilities also have discretion for planning objectives utilized to rank alternative resource plans. While the IRP includes checks on process implementation, the assumptions and planning parameters are entirely subject to utility discretion.[37]

Q. What is your reaction to Staff's concern?

A. It is perplexing to me that Staff objects to the use of an IRP as support in a CCN case because the utility conducts and controls the inputs to the IRP analysis, and as an alternative wants the utility itself to conduct and present the same, related, or additional

[37] File No. EA-2023-0286, J. Luebbert Rebuttal Testimony, p. 6, l. 4 through p. 7, l. 4

analysis for a CCN case, for which it will also make all of the input and assumption choices. It seems to me that either way, Staff and other parties to IRPs and/or CCNs are going to be responding to analysis conducted by the utility. And this is as it should be. The utility alone has the responsibility to serve its customers – and is responsible for raising the capital for and executing the projects to implement the plan. It is the utility that will be held to account if resources are not adequate to meet customers' needs. It is the utility that has all of these responsibilities that should develop its own plan for how to do that. Staff and other stakeholders do and should have the responsibility to provide the Commission with their perspectives on the reasonableness of those plans, but it is wholly appropriate for the utility to develop the plan.

I would also note the extensive list of items presented by witness Luebbert in the quote above related to inputs and assumptions that go into an IRP. The scope of items covered by this list hints at what a massive undertaking an IRP is. And let's be clear about the fact that, if the utility were to discard its IRP and conduct new or different analysis to support its CCN application, *every single one* of the same factors from that list would still be important to analyze in order to demonstrate the need for the resource for which the CCN is being sought (unless, of course we relied on the IRP for any of them). The items in the list exists because they are many of the factors that can and do influence the need for, and appropriate mix of, resources. And if the analysis was conducted anew for the CCN case, the utility itself would once again select the inputs and assumptions to that analysis, but probably with *less* opportunity for Staff and other stakeholder input than occurs in an IRP. In this alternate world that Staff seems to prefer, a CCN application would simply amount to a redo of an IRP from the ground up. An IRP that, as I just mentioned,

takes tremendous time, effort, human resources, and money to conduct. Starting over for each CCN is a recipe for paralysis that would entirely lock up the process in a permanent regulatory limbo, from which we could never escape. It would be untenable - almost literally impossible - to ever file for a CCN, and still continue to conduct the otherwise required cyclical IRP analysis on parallel paths and maintain a coherent process. This is especially true in a time period like the current energy transition where a build cycle results in the need for many new resources – and therefore many CCN applications - in a relatively compressed timeframe. The wasted cost and effort of all of this would be tremendous.

Q. Staff raises a concern arising from the Company's incentives to create shareholder value, and the influence that may have on the assumptions made in the IRP. What is your response?

A. First, let me say unequivocally that the Company understands that its business interests – the interests of its shareholders – are inextricably intertwined with our customers' interests. While this reality is true for most or all businesses, it is uniquely true for a regulated utility that has a franchise to be the sole provider of service within its territory. Ameren Missouri, as a provider of critical infrastructure, is a part of the fabric of the communities we serve, and we take seriously our obligation to pursue the types of investments that are in the mutual interest of all stakeholders – customers, communities, and shareholders – to ensure the type of infrastructure exists that is needed for our region to thrive. The Company stands behind its historical track record of making good investment choices that have resulted in a high standard of service at rates that are well below the

national and regional averages as compared to its peer utilities.[38] The Company also stands behind its request to build the Solar Projects as representing a win-win that benefits customers and shareholders alike because replacing the energy we are losing from the coal-fired fleet with low-cost renewable resources is by far the lowest cost option for our customers.[39]

I would also note that Staff's concern about the Company's "unfettered"[40] control of the assumptions to the IRP analysis would also exist in any analysis that Staff would otherwise have the Company conduct for a CCN application – probably even more so given the opportunities described by witness Michels for stakeholders to provide input to both the utility and the Commission in the IRP process. The fact, however, that the Company has such control over the inputs to the IRP analysis is not only appropriate, but dictated by the Commission's own IRP rules, where, for example, the Company is required to use its internal subject matter experts to develop subjective probabilities for critical uncertain factors.[41] These rules demonstrate that the Commission wants the Company to develop expertise in energy market and policy topics and use that expertise in devising its plan, and there's nothing remotely wrong with that. That is exactly what the Company has done. But either way, whether in an IRP case or CCN case, the Company is in the position of putting

[38] According to the Edison Electric Institute's 2023 Winter EEI Typical Bills and Average Rates Report, the Company's residential electric rates are 29% below the national average and 25% below the Midwest Average for the 12-month period ending December, 2022. This is consistent with the general order of magnitude that the Company's rates have been below these respective averages for several years, according to prior versions of this EEI report.
[39] The IRP demonstrates that implementing renewables like those proposed in this case reduces the net present value of revenue requirement by hundreds of millions of dollars as compared to the alternative of not transitioning, which is what would happen if Staff gets its way. Should the Company build all new gas generation to replace coal-fired resources at a higher cost to customers (with more rate base on which to earn)?
[40] File No. EA-2023-0286, James Busch Rebuttal Testimony, p. 17, ll. 21-22.
[41] 20 CSR 4240-22.080(7).

forward its justification for a plan or a resource, and the Staff in the position of reviewing the reasonableness of that plan or resource and letting the Commission know what it thinks. Removing the process of developing planning assumptions and analysis inputs from the IRP and putting it into the CCN case does nothing to change the dynamic. And under the prevailing paradigm where the IRP forms the foundation of the CCN application, nothing in the CCN case prevents Staff from raising any concerns it has about the IRP assumptions and their impact on the Company's selection of a resource – which is entirely clear here based on the extensive Staff testimony in this case that does exactly that.

Staff acts as though the incentive it identifies associated with the framework of the existing regulatory model for the Company to invest in its system is an inherently bad thing. But to the extent this incentive is at work, it has been present in the regulated utility model for over a century and has resulted in the transformation of our society through the development of now critical infrastructure that has become the backbone of the lifestyles and economies of our communities. If there was no incentive to invest in the system, we would not have the system we have. Said simply, the Company *should* have an incentive to invest in useful infrastructure for the benefit of its customers.

And I would also argue, and have argued, that the investments pursued in this case are without question useful and beneficial to customers. It is noteworthy that Staff does not produce any credible[42] evidence that the Company's plans for renewables are unduly driven by this investment incentive it identifies rather than a genuine interest in developing needed resources. Staff simply appears to believe that by raising the specter of a potentially

[42] I will note in a moment an allegation Staff made that entirely lacks factual support and is in fact completely inaccurate.

impure motive, they can cast shade on the Company and doubt on the true need for the Solar Projects. Staff's insinuations are not evidence that the Solar Projects are not needed.

Q. But do you agree with Staff that the Commission does have an important role in balancing the interests of shareholders – i.e., balancing the incentive to invest in useful infrastructure – with the interests of customers, in order to ensure that these infrastructure solutions are cost effective and promote the public interest?

A. Absolutely. The Commission's oversight, the very process that we are engaged in here today and which ultimately will play out in the rate reviews when the Commission will decide if our investment choices were prudent, allow the Commission to balance those interests. Indeed, the Commission itself has been clear about its role in a CCN case versus its role of ultimately deciding if an investment choice should be reflected in rates. In another CCN case, involving an Ameren Missouri transmission line (different asset but same principle) in response to project opponent's argument that the line was not the best solution, the Commission stated:

> AmerenUE is a regulated monopoly. As such, the Commission sets the rates AmerenUE charges and limits the earnings of its shareholders. If AmerenUE did not consider all reasonable alternatives and the profitability of alternatives, the Commission may determine that those expenses are not prudent in the context of a rate case. In this context of this [CCN] case, however, the Commission will not step into AmerenUE's shoes as to management decisions, but will only determine whether its request to build the transmission line is in the public interest.[43]

[43] In the Matter of Union Electric Company, *Report and Order*, File No. EO-2002-351 (Aug. 21, 2003), p. 29. As I discuss below, the Staff itself urged the Commission to follow this standard and approve the projects at issue in the EO-2002-351 docket, despite claims that the projects were not the best solution.

Let me be clear: the Company's evidence, for the reasons I and other Company witnesses discuss, shows that we are implementing the best solution to the needs we have but the point is that in a CCN case the Commission's basic job is to make an overall public interest determination. It is not to get lost in, or be beholden to, Staff's overly narrow claim about what one Tartan Factor means or doesn't mean.

Q. You stated above that Staff did not produce any credible evidence that the incentive to invest unduly influenced the Company's plans. What evidence did Staff claim supported its allegation?

A. Staff witness Cunigan testified that the RFP scorecard that the Company used to evaluate candidate projects that resulted in the selection of the Solar Projects that are the subject of this case gave *better* scores for projects that were *more expensive* than for lower cost projects – i.e., that the Company developed an evaluation framework that favored higher cost projects.[44] Other Staff witnesses liberally rely on witness Cunigan's assertion in backing their claims of inappropriate incentives influencing the Company's decisions and analyses.[45] Company witness Scott Wibbenmeyer's surrebuttal testimony demonstrates that witness Cunigan's assertion is completely wrong. Cunigan simply misread or misinterpreted the scorecard. To the contrary, the Company's evaluation favored *less expensive* projects – i.e., the RFP was designed to select the most cost-effective solutions to the Company's need for solar facilities.

It is really concerning to me not only that Staff misread the scorecard in the way that it did on what should be such an obvious point, but that it did not double check that point before making what is such a stunning allegation in testimony. It's fair to say that if

[44] Cunigan rebuttal, p. 10, ll. 5-8
[45] Sa. Lange rebuttal, p.71, ll. 7-9. Busch rebuttal, p. 10, ll. 15-17, Luebbert rebuttal, p. 32, ll. 7-8.

the Company had developed its scorecard in the way Staff represented it we should have been called out strongly in front of the Commission. There is no place for deliberately selecting higher cost alternatives for the mere sake of incurring a higher cost, and the Company does not and would not do that. But it should be so obvious that any sensible utility would not structure an RFP evaluation scorecard to try to find the highest cost solutions to a problem, that such an observation by Staff would warrant follow up. The fact that other Staff witnesses accepted Mr. Cunigan's errant claim and echoed it without following up to ensure that it was accurate is at least as concerning. For example, when I read Mr. Cunigan's testimony on this point, I was so shocked at this assertion that I *immediately* stopped what I was doing and reached out to the Company's renewable development team (i.e., witness Wibbenmeyer and his colleagues) to confirm that this couldn't possibly be true. They assured me that it was not – that Mr. Cunigan had misread the scorecard. If Staff was not so apparently eager for fodder to use to cast the Company's Solar Projects in the most negative light possible, I would have expected Staff to stop and ask the same question I did before accepting that the Company would do something so egregious that was obviously contrary to customers' interests. We most certainly did not do that.

Q. Is the suggestion that the Company has an incentive to invest to benefit shareholders alone a good explanation for the motivation for the Company to pursue the Solar Projects?

A. No. The massive job of replacing the capabilities of the retiring coal facilities as a part of the ongoing energy transition – and the job of making sure the resources that are needed to keep the lights on throughout this process are available - is

all the motivation the Company needs. That motivation is rooted in a commitment, indeed an obligation, to provide service to customers and to not expose them to the massive risks they would face if we ignore what is occurring in the industry. Those risks include the ongoing risks environmental regulation poses to our existing coal fleet and the risk of over-reliance on the market by outsourcing our service obligation to others. It should be obvious to even a casual observer that that is the case.

Q. Having discussed the issues of why the utility's IRP is the appropriate starting point for consideration of a CCN, can you next provide your reaction to a few of the specific allegations that Staff makes that it claims make the Company's IRP unreasonable?

A. Despite Staff's protests that the IRP should not be the basis of the CCN application, Staff does go on to level certain criticisms of the Company's IRP as well as its economic modeling of the resources in this case. However, what becomes immediately obvious when reviewing the criticisms is that Staff does not have a thorough understanding of the Company's analysis (i.e., it already addresses many of their concerns within the analysis that has been conducted), but moreover, that Staff lacks any Freal sense of what issues would move the needle in a meaningful way in an analysis at the scale of the Company's resource plan. Keep in mind, as context for this point, that the NPVRR of the 20-year revenue requirement in the Company's analysis exceeds $80 billion, and the PRP (a partial implementation of which is to add solar resources like the projects in this case) is over 700 million dollars *better* than the next best alternative that does not include the same level of renewable generation as exists in the Company's plan. Company witness Michels responds to Staff's specific criticisms in more detail in his

surrebuttal. But I would just observe that, in essence, Staff ignores the macro drivers of the transition that make the Solar Projects in this case a common sense, "no regrets" step to address the major risks – issues that can swing the results of the plan by the hundreds of millions or billions of dollars that really move the needle on what overall approach should be taken to designing the new fleet. Instead, Staff focuses on criticisms that go into minutiae that cannot possibly impact the outcome of what the Company's PRP is (transition to renewables but with appropriate dispatchable additions as well) or should be. For example, Staff's only substantive acknowledgment of the potential for regulation of carbon dioxide emissions is its criticism that the Company did not evaluate a larger number of potential mechanisms through which carbon regulation might be implemented. But Staff does nothing to dispute that the potential for carbon regulation is an "elephant in the room" kind of issue – a "move the needle by billions of dollars" kind of issue - and that, whatever mechanism it may be manifest through, the emissions free energy of the Solar Projects will be an essential ingredient of the new fleet in *any* carbon constrained future. If the Staff credibly questioned the Company's concern that carbon regulation is a significant risk, that would have been a criticism well worth diving into more for the Commission.

But rather than devote any time to thinking about such game changing macro level issues and how they impact the realistic alternatives the Company has available to it to protect and provide for its customers' energy future, Staff focuses on things like the voltage at which the resources connect, and whether connection voltage difference may have some marginal impact on locational market prices and load serving charges in MISO that the Company experiences. Details like these exist. And if the Staff had a

suggestion of an analysis that might marginally improve a future IRP, the Company would listen to and evaluate that idea. It is worth noting, as well, that this particular issue identified by Staff resulted in the Company *understating* the market value of two of the Solar Projects proposed in this case.[46] So, fixing it could only strengthen the assessment of the economics of those resources. But irrespective of the direction of the impact, issues like this do not and will not change the answer in an $80 billion NPVRR analysis where the leading plan has a roughly three-quarters of a billion-dollar advantage entirely predicated on much more renewable energy than just the 550 MW of Solar Projects at issue in this case.

Q. How should the Commission consider factors that will not impact the overall investment strategy but which may modestly affect the modeling of the economics of the proposed projects?

A. The Commission should consider whether those factors would lead to a selection of different projects. As Mr. Michel's surrebuttal testimony explains, the IRP develops the key direction as well as the magnitude and type of resource options needed. Then during execution of the plan, specific projects are evaluated for implementation and approval. In this case, a portfolio of solar projects is being submitted for Commission approval. As Mr. Wibbenmeyer explains in his direct testimony, a multi-metric scorecard approach is employed to identify the best projects that can be executed at this time. So, to the extent there are factors that impact the economics of a proposed project, the Commission should consider whether those factors would lead to the selection of an

[46] The Vandalia and Bowling Green projects.

alternate project or portfolio of projects to implement. And that consideration should be in the context of the full project selection criterion and not just a single economic issue.

V. THE PROJECTS ARE ECONOMICALLY FEASIBLE UNDER ANY REASONABLE DEFINITION

Q. What approach does Staff take with respect to Tartan Factor of economic feasibility in this case?

A. A novel and overly narrow one. It is evident that Staff is trying to invent new standards on the fly to bolster its recommendation to reject the CCNs. Staff attempts to disassociate itself with its own past positions on economic feasibility[47] and ignores past Commission orders on the topic in an attempt to repackage arguments that were rejected in the Boomtown case as now being relevant to the Tartan Factor of economic feasibility in this case. In Boomtown, it was a major thrust of Staff's case (there, primarily focused on the Tartan Factor of "need") to argue that renewable generation projects needed to "pay for themselves," or said another way, that the economic models of the projects must show a reduction in future revenue requirements in order for the Commission to approve them (without a risk sharing mechanism). Since Staff's premise of "projects must pay for themselves" was rejected in that case, they have repackaged that theory as a requirement of "economic feasibility". I will explain below why this is inconsistent with past Staff and Commission interpretation of economic feasibility, and why such an economic litmus test is still wholly inappropriate to apply to a regulated utility in the context of a utility asset that is needed to provide service to customers.

[47] Stahlman rebuttal, p. 7 ll. 10-13

Q. What did Staff say about economic feasibility in the Boomtown case?

A. The entirety of Staff's testimony on the topic was:

> Staff considered the CCN from the perspective of the utility. For a utility, the feasibility is typically fairly certain since a proposed project is only a small portion of its current Missouri Public Service Commission regulated rate base or, in the case of a transmission project, has an (sic) Regional Transmission Organization's approval to be included in the zonal revenue requirement. For the Boomtown Project, the proposed project would only be a small portion of Ameren Missouri's regulated rate base, thus in isolation, it is likely feasible.[48]

Q. What did Staff - in fact the very same Staff witness that provided the testimony above in the Boomtown case - say about Ameren Missouri's assessment of economic feasibility in this case?

A. Staff cited a dictionary definition of the phrase economic feasibility,[49] along with definitions for economic feasibility put forward by various parties in the Grain Belt case and went on to criticize the Company for not having stated a clear definition of economic feasibility in its direct testimony in this case, and for not having explained how it meets Staff's dictionary definition.

Q. Is the Staff's interpretation of its dictionary definition of economic feasibility, which it is critical of the Company for not using in this case, consistent with the testimony Staff offered on economic feasibility in the Boomtown case?

[48] EA-2022-0245, Stahlman rebuttal, p. 1 l. 20 through p. 2, line 2. Mr. Luebbert answered one question from Judge Seyer during the hearing about project costs and made mention of Mr. Stahlman's testimony noting that "I don't know that Staff came out and said that this project is not economically feasible," going on to state that his concerns were more under the public interest factor. Tr., File No. EA-2022-0245, p. 496, ll. 5-13.

[49] Stahlman rebuttal. P. 2, ll. 11-13. To my knowledge, the Commission has never used this definition in discussion the Tartan Factor of economic feasibility before. It is "interesting" that Staff, instead of pointing back to prior Commission CCN cases where that factor was applied and discussed, grabbed a definition out of the dictionary and then, not surprisingly, claims it fits Staff's (latest) point of view on the topic.

A. No. Staff has apparently changed its position on what economic feasibility is over the last few months, and somehow expected that Ameren Missouri would guess what's in Staff's head and provide that information in this case. If Staff is right in its criticisms of the items that the Company offered as demonstrating economic feasibility in this case, then many of those same criticisms are true of both Staff[50] and the Commission[51] itself with respect to positions taken and decisions ordered in many past cases.

Q. Staff criticized the Company for not providing a workpaper supporting its assertion of economic feasibility in this case.[52] Did Staff provide a workpaper supporting its assertion that Boomtown was economically feasible in that case, as shown in the quote just above?

A. No. Apparently workpapers did not become a part of Staff's purported economic feasibility standard until this case.

Q. Staff references the discussion of economic feasibility in the Grain Belt case seemingly as a model for what the Company could or should have done in this case. Does the Grain Belt discussion support using the interpretation of the definition of economic feasibility that Staff is putting forward in this case?

A. No. Staff suggests that there was alignment among the parties to the Grain Belt case on what constitutes economic feasibility.[53] Notably that alignment includes a reference to the position of Staff's own witness.[54] The definition that was apparently

[50] See as an example Staff's position in Boomtown as described in this section of my testimony.
[51] See as an example the discussion below of factors the Commission cited as demonstrating economic feasibility in the *Report and Order* in the Grain Belt case.
[52] Stahlman rebuttal, p. 3, ll. 6-8
[53] Id. p. 2 ll. 13-14
[54] Id. p. 2 ll. 15-16

agreed upon in the Grain Belt case looked at economic feasibility similarly to what Staff suggested in the Boomtown case – i.e., that economic feasibility was viewed from the utility perspective, and was based on, as one of the parties to Grain Belt that Staff quoted put it, "the ability of a proposed investment to generate sufficient revenue to recover its costs with an adequate rate of return to make the investment worthwhile to the investors."[55] Of course in the Boomtown case, Staff essentially said the same thing when it indicated – and I am paraphrasing here – that it is plainly obvious on its face that projects like Boomtown are economically feasible because they are a relatively small part of the regulated utility's rate base, presumably suggesting that the utility could recover that revenue requirement in a manner that provided "an adequate rate of return to make the investment worthwhile to the investors".

Q. Do you agree that this is a valid way to look at economic feasibility?

A. Yes, I believe it is a valid perspective – although not the only reasonable way possible to look at economic feasibility. If this is the definition – and again, I think it is a valid one – then the projects in this case are clearly economically feasible, just as Boomtown was,[56] because they too would represent a relatively small portion of the Company's overall rate base, and the Company would be likely to have the opportunity to recover its costs in a manner that provided an adequate rate of return to make the investment worthwhile to the investor.

[55] Id. p. 2, ll. 26-28
[56] For the same reason that Boomtown was economically feasible, not *because* Boomtown was economically feasible.

Q. Why did the Company present a more complete view of economic feasibility in its direct testimony and data request responses in this case, rather than just using this "investor perspective" definition?

A. Because historically, across a variety of CCN cases, the Commission has taken a more expansive view of economic feasibility. For example, in the Grain Belt case itself, which Staff uses as a model for how economic feasibility can be considered, the Commission found that:

> …the economic feasibility of the Original Project was demonstrated by (a) a very strong corporate demand for renewable energy in PJM where users will pay a higher price; (b) the cost of generating wind energy in western Kansas continuing to drop; (c) wind speeds in western Kansas that are substantially higher than Missouri, Illinois, Indiana, and Iowa; and (d) Kansas wind generators were able to produce energy at a lower cost because of two Kansas tax incentives and the low cost to construct wind farms.[57]

There is evidence in this docket of strong corporate demand for renewables, of tax credits (federal, not state, but the same rationale applies), and that the cost of solar is lower than other resource options (analogous to the Commission's reference to the low cost of constructing wind energy in its Grain Belt decision). These indicia of economic feasibility are ignored by Staff, yet the Commission clearly finds them to be part of the economic feasibility determination.

The point is that there are multiple lenses through which one can look at economic feasibility, and the Company wanted to be as comprehensive as possible in demonstrating that, whichever lens you look through, the projects have many benefits and clearly support a finding of economic feasibility.

[57] File No. EA-2023-0017, Report and Order pp. 32-33.

Q. What do you understand Staff's standard for economic feasibility to be in this case, now that they have reduced the inquiry to a dictionary definition that suits their opposition to the projects in this case?

A. The dictionary definition that Staff puts forward suggests that the economic advantages need to exceed economic costs. I do believe that Staff's recently abandoned position on economic feasibility (i.e., its Boomtown and Grain Belt positions) could be considered consistent with this dictionary definition. It applies as viewed through the lens of the investor, which Staff and the Grain Belt participants explicitly stated that they were looking through. But Staff has changed the lens through which they are looking at costs and benefits from that investor perspective to a customer view of Staff's own characterization in this case. My read is that Staff is looking at economic feasibility as a comparison of quantified costs and benefits from the customer perspective. Although another calculated change in Staff's position in this case relative to recent past cases is that they have started to refer to this customer perspective as comparing cost versus "customer value." When Staff defines this concept of customer value, however, it looks exclusively at whether the resources "pay for themselves" exclusively through market benefits in order to determine the value to customers. In other words, Staff has changed its phrasing to frame this phenomenon of market revenues exceeding cost as "customer value" in an effort to avoid the reality of the Commission's own statement in the Boomtown Report & Order, where it clearly and unambiguously stated:

> OPC's position is that the fourth factor of economic feasibility has not been satisfied because the Project has not been shown to generate

more revenues and avoid more costs than the costs Ameren Missouri's retail customers will incur if the Company builds the Project. However, the test is whether the improvement justifies its cost.[58]

The fact that Staff now performs, under the guise of the Tartan Factor of economic feasibility, the *exact* test that OPC proposed in the Boomtown case for its recommendation related to economic feasibility, and which the Commission rejected out of hand in that case, while calling the test a measurement of "customer value" is a distinction without a difference. The Commission explicitly rejected exactly this test as a demonstration of economic feasibility just a few months ago.

Q. Is Staff's new definition of "customer value" an appropriate view of the true customer value of the projects?

A. No. It is in fact entirely inappropriate. The resources a utility invests in – whether they be associated with generation, transmission, distribution, or anything else – have value to customers because they allow the utility to *provide reliable service*. Customers obviously pay for utility service because they value it (i.e., if an investment in an asset has value to customers because of the service that it provides, that asset does not have to pay for itself; the customers will in fact pay for its prudently incurred costs). It is often said – and I agree with this – that utility service is among the most essential of services for customers. It is the foundation of our lifestyles and provides for the basic health, safety, and welfare of our society. Utility service has tremendous *value* – homes with lights, air conditioning, forced air heating, appliances that operate, etc. [59] - all of

[58] EA-2022-0245, Report & Order, p. 28-29.
[59] None of those things are "free" or bring income to the customer or reduce the customer's cash outlays. That doesn't mean they don't have "customer value."

which Staff ignores in its cost versus customer value test. And that customers value and therefore pay for service means that they pay rates that reflect the cost of the investments in assets needed to provide service, like the projects that are the subject of this case. These assets have value above and beyond the standalone impact that they have on the revenue requirement through energy and capacity market benefits. The Company is not proposing to build/acquire them as a bet that needs to pay off in the form of lower revenue requirements in order to have value. It is proposing them as a part of its plan for providing reliable service to customers, which has significant inherent value. When Staff looks at the value of the solar projects the Company is seeking approval of in this case, the only value it ascribes is essentially the market value of resource output. That is a fundamentally deficient view for valuing the projects in this case.[60]

Q. Staff argues that such a view is circular[61], meaning that any asset the Company proposed at any cost would be considered economically feasible as long as it is needed to provide service. Is Staff correct?

A. Not even close. The Company has never suggested that there is no need to evaluate the cost effectiveness of its selection of resources just because they are needed. Resources – even indispensable ones - absolutely should be evaluated for cost effectiveness. However, the way to do that is not to just ask if they pay for themselves. The way to do that is to *compare them* to alternative means of providing an adequate level of service – of providing that value. And where that comparison happens in the case of valuing generating resources is the IRP. That is why it is so utterly perplexing that

[60] Lest Staff respond that "utility customers have no choice in from where they receive service", while that is true under our system of utility regulation in Missouri, that does not suggest that utility customers expect utility service to be free, or that the cost of that service is not less than the value of it to them.
[61] Sa. Lange Rebuttal, p. 13, ll. 5-19

Staff objects to using the IRP as the basis for CCN applications to construct/acquire resources. An IRP provides the opportunity to compare the economics of the different options available to the Company to meet its customers' energy needs – and the Company has used its IRP to do just that.

When I described economic feasibility in my direct testimony, I described a two-part process that ensures that these resources meet a standard that – as it turns out - is exactly consistent with Staff's dictionary definition of economic feasibility – as applied to the customer (rather than investor) perspective. I explained that the projects were consistent with the Company's preferred plan in its IRP. This is not a circular reference as Staff suggests, but rather it means that the resources are a part of a plan that has been selected through the most rigorous analysis the Company performs, and has been identified in the resource plan with the lowest Net Present Value of Revenue Requirement (NPVRR) to meet customers' needs and address significant risks, consistent with other planning objectives and the IRP rules' mandate that this metric be the primary planning criteria.[62] This process identified a level of solar generation that was a part of the least cost plan for meeting customers' needs. As witness Michels has testified, that plan actually meets customers' needs at a NPVRR that is over $700 million less than the next best alternative approach to meeting those needs that does not include the same level of renewables as the Company's plan.

Once the resource types that are needed to achieve planning objectives in the least cost manner have been identified in the PRP, the Company proceeds to step two – implementation. Now, how does the Company ensure that it is getting cost effective

[62] 20 CSR 4240-22.020(2)(B).

projects to fulfill its otherwise least cost plan? Ameren Missouri uses a thorough and rigorous Request for Proposal ("RFP") process to find the best available projects and ensure market competitive pricing for the benefit of our customers. This RFP process was described more fully in the direct testimony of Company witness Scott Wibbenmeyer. By picking the best resource types in the IRP, and the best projects available to implement those resource types in the RFP, the Company has diligently pursued meeting customer needs – providing service and the value that comes with it – in the most cost-effective manner it could, and economic feasibility is established. In fact, based on this discussion of this customer perspective of least cost planning, along with the applicability of Staff's Boomtown and Grain Belt standard that addresses the investor perspective, economic feasibility has been established exactly according to the definition Staff suggests using, both from the investor and customer perspective. Put another way, customers want their lights to come on and their air conditioners to work; they value those things and are willing to pay for them, and we've demonstrated multiple times over the past decade that providing that value via our PRP including renewables like those proposed in this case is the lowest cost way to deliver that value.

Q. As a result of Staff's misapplication of economic feasibility – suggesting that "value" must exceed cost, and that customer value only means that resources pay for themselves (rather than considering the true value that arises from the resources being useful in providing service) – Staff opines on the risks to customers of the Company making investments in the Solar Projects. Staff compares the circumstance of the Company with an Independent Power Producer ("IPP") How do you respond?

A. Staff's arguments about risk are fully recycled from the Boomtown case. They are no more compelling now that Staff has framed the risk that resources might not pay for themselves with market benefits as an issue of economic feasibility than they were in Boomtown. Staff witness Luebbert, just as he did in Boomtown, predicates his long discussion of risk on the premise of a resource that is not needed to provide service.[63] Once again, he acknowledges that when a resource is needed, it is appropriate for customers to bear the risk, saying:

> Q. Once the need is established and the project is determined to solve the established need in an economically efficient manner and to promote the public interest based upon the best information available at the time, is it reasonable for the ratepayers to assume the risk that the project selected is uneconomic?[64]
>
> A. Yes. Assuming the utility is prudent in its construction, operation, and maintenance of the project, this assumption of risk is justified because absent the load of the ratepayers, the utility would not be obligated to invest in additional

[63] Although in this case, he expands that discussion to also apply in the case of a resource that is needed but is not an economically efficient solution to meeting that need. This essentially relates to the entirety of the discussion above on economic feasibility – it asks whether the resource is a cost-effective solution to the problem being addressed. As I have already discussed, the IRP/RFP process is the appropriate means to ensure this type of economic feasibility/efficiency. Company witness Michels further addresses Staff witnesses Luebbert and Fortson's specific criticisms of the IRP that pertain to Luebbert's economic efficiency argument, demonstrating that they are without merit.

[64] By "uneconomic" it is clear Mr. Luebbert means carries a positive (cost) revenue requirement.

> resources. It is also justified, because the converse risk of not acquiring a project necessary to meet a determined essential need could also impact ratepayers through reduced reliability, higher prices, financial penalties, and failure of the utility to comply with rules or regulations.[65]

Q. Is Staff's reference to an IPP a useful comparison for understanding why Staff's risk concerns are misplaced?

A. Yes. An IPP is a company in the business of generating electricity, but which *does not have an obligation to provide service to end use retail customers*. Staff even clearly notes that as a difference between IPPs and the Company.[66] IPPs truly do rely on their resources "paying for themselves" with the market value of their output as the foundation of their business case. Staff indicates its view that an IPP would not invest in these projects because they are not projected to "pay for themselves" with market benefits. But really, isn't that the point? An IPP does not have an obligation to serve, and therefore will only invest in resources when the financial bet that they will pay for themselves with direct market revenues is very clear and compelling. They will not build resources to ensure that retail load is served – i.e., to ensure that Missouri customers have power when they most need it. The Company simply cannot outsource its obligation to serve and rely on the market to result in the development of the resources that are needed to serve load. An IPP that is not willing to build the resource would face no repercussions if retail load in Missouri went unserved. The Company most certainly would. The Company's PRP is there to help the Company to do all in its power to make sure that outcome does not happen – to make sure that its customers have the power they need, when they need it, at the lowest cost. It is not reasonable – and I would go so far to say it

[65] Luebbert rebuttal, p. 25, l. 17 through p. 26, l. 6
[66] Id. p. 21, ll. 16-17

is dangerous to the point of being downright reckless - for Staff to imply that the Company should or could realistically just sit back and assume that the market will provide the capacity and energy needed to meet its customers' needs. And if the Company did outsource its load serving obligation – and if the market did happen to deliver and provide the power needed – it could only have happened because market prices were high enough to support the IPP recovering the real costs of the investments that need to be made in the transition – and those costs would still be passed through to the Company's customers as the cost of power needed to serve them.

Q. Isn't that what MISO is there for?

A. No. MISO has no load serving obligation. It is a reliability coordinator – meaning it establishes market rules and mechanisms to ensure that Load Serving Entities (LSEs) – like the Company – develop and/or procure the resources needed to serve customers. Company witness Arora's surrebuttal testimony highlights the recent comments of a Federal Energy Regulatory Commissioner ("FERC") stating exactly this same thing in very clear terms. The FERC Commissioner strongly indicates that the onus is on the states (and obviously on the utilities in the states, like Ameren Missouri with the state's permission via this Commission) to ensure that the resources needed to serve the load in the state are developed.

VI. STAFF'S HYPER-FOCUS ON ITS NARROW FORMULATION OF "ECONOMIC FEASIBLITY" HAS NOT BEEN THE FOCUS OF THE COMMISSION'S EVALUATION OF CCN REQUESTS FOR NEW GENERATION

Q. Staff argues that the Tartan Factors are not ideally suited to CCNs for new generation. Did the Commission approve CCNs for new generation prior to the Commission's adoption of the Tartan Factor guidelines in 1994?

A. Yes, including on several occasions for Ameren Missouri. In fact, Staff included significant discussion of the Commission's evaluation of generation CCN requests pre-*Tarta*n in its briefing in File No. EA-2006-0309, where the Commission granted Aquila a specific CCN for its South Harper peaking units.[67] Staff observed that when utilities have sought CCNs for generation, "each application presents a unique set of circumstances the Commission must evaluate."[68]

Q. Did Staff provide discussion of how such evaluations should be made?

A. Yes. After pointing to the Commission's statutory authority under Section 393.170.1 (and making no reference to *Tartan*), Staff stated that "the Commission should not step into the [sic] Aquila's shoes as to management decisions nor should it require the South Harper Plant and Peculiar Substations to be the "best" solutions, but the Commission should independently determine whether each of Aquila's requests for

[67] Counsel advises that the Commission's South Harper decision was reversed on appeal on the grounds that the Commission did not have the authority to issue a CCN for a plant that was already built, but the court's reversal did not address or disturb the Commission's analysis of whether the CCN should be issued.
[68] Staff's Post-Hearing Brief, File No. EA-2005-0309, p. 2.

authority to build [the plant] are in the public interest."[69] The Staff also leaned heavily on the Commission's own discussion of how it should think about its statutory authority to decide if construction is "necessary or convenient for the public service," which the Commission had addressed in detail in an Ameren Missouri transmission line CCN case a few years earlier:

> In explaining the nature of its analysis [of CCN requests] the Commission stated the following:
>
> > **Necessary or Convenient for the Public Service**
> >
> > The Court of Appeals has said that '[f]or some reason, either intentional or otherwise, the General Assembly has not seen fit to statutorily spell out specific criteria to aid in the determination of what is 'necessary or convenient for the public service' within the meaning of such language as employed in Section 393.1700 . . ..' * * * The dominant purpose in creation of the Commission is public welfare. The administration of this authority should be directed to that purpose. In every case where it is called upon to grant a permit, or to authorize an additional service to be rendered by an authorized certificate holder, the Commission should be guided, primarily, by considerations of public interest.[70]

Q. Why do you point to Staff's discussion in the context of this case?

A. Because while on the one hand the Staff acknowledges that the Tartan Factors are not controlling and perhaps not even the best way to evaluate generation CCNs,[71] on the other hand Staff spends an inordinate amount of its testimony debating the

[69] *Id.*, p. 9. The Company's evidence does support the conclusion that the projects proposed in this docket are the "best" solution, including given that they were chosen via a competitive bidding process and were the highest ranked projects available, plus given the energy need, they are the most cost-effective means to meet that need.
[70] *Id.*, p. 6 (case citations omitted).
[71] The Commission did discuss the Tartan Factors in its South Harper decision. Notably, however, is the fact that the Commission's focus was much more on the public interest and the Commission most certainly did not apply a pay for itself test as it relates to economic feasibility.

economic feasibility factor – as I discussed in the prior section of my testimony – and spends very little of its testimony focusing on the *real* and ultimate question – the public interest, except to pound on the theme that if a generating unit won't pay for itself with market benefits, it should not be approved. And this after the Commission in its Boomtown decision flatly rejected the "pay for themselves" test as the test of economic feasibility.[72] But that clearly has not been the standard the Commission has applied, nor should it be, as the Staff recognized when the question was whether to issue a CCN for gas-fired peaking units.

Q. Would you expect that the South Harper units, a CCN for which Staff supported, would pay for themselves?

A. I can't imagine that they would. According to Staff's Prehearing Brief in the South Harper CCN docket, the units were estimated to run about 5% of the hours of the year.[73] Peaking units are by their nature higher cost units in the dispatch stack and are virtually never installed for economic reasons. Instead, they are installed to meet limited but important needs in a small number of peak hours. Ameren Missouri has several peaking units, and they most certainly don't pay for themselves. In fact, the Cost of New Entry utilized by the MISO is set to the cost of a combustion turbine and is the *maximum* clearing price for capacity, which means even if capacity market prices are at their maximum level for the *entire life* of a unit, a peaking combustion turbine would just be expected to break even.[74] But either way, that clearly wasn't the question in the South

[72] Flatly rejecting OPC's argument that economic feasibility is not shown unless the project "has been shown to generate more revenues and avoid more costs," stating "However, the test is whether the improvement justifies the cost." *Report and Order,* File No. EA-2022-0245, pp. 27-28.
[73] Staff's Prehearing Brief, File No. EA-2009-0309, p. 14.
[74] Ignoring the few hours of energy related margin per year during operation.

Harper case. In approving the CCN for those units, the Commission, echoing Staff's own advice, stated:

> The dominant purpose in creation of the Commission is public welfare. The administration of its authority should be directed to that purpose. In every case where it is called upon to grant a permit, or to authorize an additional service to be rendered by an authorized certificate holder, the Commission should be guided, primarily, by considerations of public interest.[75]

The Commission went on to conclude that the:

> evidence clearly demonstrates that there is a need for the Facilities and related service that Aquila is fully qualified, from both a financial and operational standpoint, to own, operate, control and manage the Facilities. The evidence also demonstrates the economic feasibility of the project and that Aquila's ownership and operation of the Facilities and the provision of the related service through the improvements to its property will promote the public interest.[76]

The novel and stringent "the unit must pay for itself" with market benefits standard the Staff advocates for in this case was not the basis for the Commission's economic feasibility conclusion.

Q. Have generation additions for which CCNs have been approved historically been justified on the grounds that they were expected to pay for themselves?

A. Not the ones with which I am familiar. The Commission granted CCNs to the Company for its Meramec, Sioux, Labadie, Rush Island, and Callaway baseload plants, and its Taum Sauk and Howard Bend peaking plants. The Staff discusses these

[75] File No. EA-2006-0309, *Report and Order*, p. 23.
[76] *Id.*, p. 56.

and seven other generation CCNs in its briefing in the South Harper CCN case.[77] Some of those other plants are baseload units and some peaking or combined cycle units. I am confident that those plants were not built based upon speculation that they would generate revenues in excess of their costs. And as I noted, some of them are peakers, which would never be expected to pay for themselves, even today. And while I have not reviewed the dockets for all of the Ameren Missouri plants listed above, I have reviewed some of them, notably for Meramec, Sioux, Labadie, and Rush Island, and there is nothing in those case files suggesting that the Company justified them on the basis that they would be "free" and pay for themselves, that the Commission approved CCNs on that basis, or that the Staff, when it came to those fossil-fueled resources, claimed that the test in a generation CCN case is whether the resource will generate revenues in excess of its costs.

Q. Isn't it true that the CCN cases discussed above were for more "traditional" dispatchable resources added to meet a specific capacity need at a specific time, would you not?

A. Generally yes, although energy need considerations also played into the selection of resource types to deploy even then.[78] Of course, renewable units such as those that are the subject of this case were simply not commercially available at a scale relevant to utility deployment at the time.[79] But the larger question is, why should that matter? The point of reviewing the Commission's significant history of granting CCNs

[77] Staff's Prehearing and Post Hearing Briefs, File No. EA-2009-0309.
[78] For example, nuclear units would generally never be selected exclusively to meet a capacity only need, given their higher capital costs, which are generally justified by their capability to produce large quantities of energy with low variable costs.
[79] And if Staff were to try to differentiate the resources from that era from renewables, it seems to me it would further confirm what we've already said: Staff is holding renewable generation to a different standard, relegating renewable resources to second-class citizen status.

for generation units is that the question is, primarily, does the public interest justify approving the CCN? My direct testimony, this rebuttal testimony, the Commission's order in Boomtown, and many other Commission decisions respecting renewables clearly establish why approving the CCNs in this case will promote the public interest. We no longer operate in a planning environment driven primarily by snapshot views of a capacity position based on a single peak hour under normal planning assumptions. For the reasons discussed in our testimonies, especially those of Company witnesses Arora and Michels, we must plan for those peak hour snapshot capacity needs but also for our customers' energy needs, and not just under normalized conditions but under extreme conditions. We must plan by accounting for the risks posed to our fossil-fueled generation by environmental regulations. We can't put all of our eggs in the dispatchable, fossil-fueled generation basket under the planning environment we face today. And all of those factors demonstrate "need" under the Tartan Factor of need, but more importantly they most definitely demonstrate public interest, as the Commission discussed it prior to *Tartan* as well as under the Tartan Factor of need. Not to mention the other benefits of renewables that also promote the public interest, as this Commission has repeatedly recognized.

VII. STAFF'S COMMENTS ON THE COMPANY'S ECONOMIC MODELING OF THE SOLAR PROJECTS REFLECT A VEILED ATTEMPT TO PUSH POOR REGULATORY POLICY

Q. Staff criticizes the Company's economic modeling of the projects and performs some modeling work of its own to supposedly remedy some of those purported issues. Are Staff's criticisms valid and do Staff's models represent an improvement on the Company's economic modeling?

A. By and large, no and no. Company witness Michels' surrebuttal testimony responds to many of the detailed criticisms leveled by Staff, and Company witness Mitch Lansford's surrebuttal testimony identifies and demonstrates the massive foundational errors that plague Staff's failed attempt at providing its own modeling. But I will comment on some overarching issues identified by Staff where Staff either misunderstands the work the Company has already done or attempts to impose new and different standards on the modeling of resource decisions that represent poor regulatory policy.

Q. What is the first issue raised by Staff that you will be commenting on?

A. Staff argues that:

> NPVRR is not a particularly useful metric for determining whether a proposed project is an improvement justifying its cost.[80]

….and also that:

> From the perspective of a consumer, the appropriate discount rate is probably more likely the rate of general inflation, or the rate a consumer may earn through a readily

[80] File No. EA-2023-0286, Sarah Lange Rebuttal Testimony, p. 24, ll. 1-2.

> available and relatively liquid banking product like a savings account, money market account, or savings bond.[81]

These are foundational statements made by Staff, in that their implications are far reaching throughout the remainder of Staff's discussion of economic modeling. Said another way, if these statements are not true, as Staff asserts, then many of Staff's other criticisms become meaningless noise, because they are all predicated on the validity of these claims.

The quotes from Staff above are, broadly speaking, conclusory statements, with no support or validation from any authoritative source. And they are not even backed with much in the way of a stated rationale – the logic Staff bases its statements on is absent. As it turns out, Staff's unsupported assertions also fly in the face of the Commission's rules about how resource planning analysis is to be conducted. Essentially, Staff's conclusory statements are outright contradictions of the methods of analysis required by the Commission's resource planning rules, as shown in the cited rule provisions below:

> (2) The fundamental objective of the resource planning process at electric utilities shall be to provide the public with energy services that are safe, reliable, and efficient, at just and reasonable rates, in compliance with all legal mandates, and in a manner that serves the public interest and is consistent with state energy and environmental policies. The fundamental objective requires that the utility shall— …
> (B) **Use minimization of the present worth of long-run utility costs as the primary selection criterion** in choosing the preferred resource plan, subject to the constraints in subsection (2)(C);[82]
>
> …and…

[81] Id., p. 24, ll. 9-12.
[82] 20 CSR 4240-22.010 (2), emphasis added

> (B) All present worth and levelization calculations **shall use the utility discount rate** and all costs and benefits shall be expressed in nominal dollars.[83]
>
> …and…
>
> (64) Utility discount rate means the post-tax rate of return on net investment used to calculate the utility's annual revenue requirements.[84]

Q. What relevance does the customer's discount rate have on this case?

A. Consider that there is a relationship between the discount rate applied in order to determine the net present value of revenue requirement of a project and the cost of financing that investment. By way of analogy, if you were considering the present value of financing a $30,000 car over five years at 9% interest you would have to consider your other options for paying for that $30,000 car in determining your discount rate. If you have $30,000 in a savings account earning and expecting to earn 5% per year over the next five years, then it would be reasonable to conclude your discount rate is 5% - it's essentially your opportunity cost of money. Why would you pay for a 9% loan if your excess savings that could pay for the car upfront are only earning 5%? Over time, you would be financially worse off. However, if you have only $1,000 in that same savings account and rely on it in case of emergency, then it is not an alternative available to you to financing the purchase of the car. Instead, you have to consider whether there is any other way you could pay for the car. If you exhaust your options and conclude there is no other or cheaper way you can purchase the car than to finance it at 9% interest, then your discount rate cannot reasonably be 5% and instead is 9%.

[83] 20 CSR 4240-22.060 (2)(B), emphasis added
[84] 20 CSR 4240-22.020 (64). I.e., shall use the utility's weighted average cost of capital ("WACC"), which is exactly what the Company's analyses in this case used.

Q. Are customers' discount rates collectively greater or less than the Company's weighted-average-cost-of-capital ("WACC")?

A. In general, they are greater. And it is absurd for Staff to conclude otherwise. It's important to note that Staff's testimony does not ever indicate what discount rate it ends up selecting for its analysis, but a review of the relevant workpapers demonstrate that when Staff used a discount rate, Staff used 2% for this purpose, whereas much of Staff's analysis used no discount rate at all, even though clearly a dollar paid or received later is worth less than it is today. The first observation I would make with respect to Staff's selection of discount rates is that not all customers that are served by the Company, and who are therefore impacted by resource planning decisions, are residential customers. I am almost certain that the majority of business customers that are served by the Company have a very real cost of capital, (likely as high or higher than the Company's in most cases[85]) and would prefer the Company to reflect a meaningful discount rate in our analysis that more closely acknowledges their opportunity cost of money. They would almost certainly rather pay lower rates today even if there is a carrying cost that causes financing costs tomorrow, as long as those carrying costs are at an interest rate, like the Company's WACC most likely is, that is less than their opportunity cost of money. However, Staff appeared to ignore these likely concerns of business customers, inasmuch as the perspective reflected in its testimony almost certainly considered exclusively a *residential* customer perspective. But Staff's own

[85] Given that much of the Return on Equity testimony I have read over the years in rate cases indicates that a utility stock's "beta" is less than 1, suggesting that utilities have risk below the market average and therefore a lower required return from investors than riskier stocks (i.e., the cost of capital for businesses like many of the Company's customers), and also given that small businesses likely cannot access capital on as favorable terms as larger enterprises like a utility due to issues of scale.

testimony goes on to acknowledge the very reason that 2% is also wholly unreasonable to consider as a reflection of a residential customer's discount rate, or opportunity cost of money. Staff states:

> Q. Do ratepayers experience opportunity costs?
>
> A. Yes. Every dollar spent on a utility bill is a dollar that the ratepayer is not using for another purpose, be that paying towards a mortgage, avoiding consumer debt, investing, or spending as desired.[86]

Given Staff's statement about what comprises residential customers' opportunity costs, I cannot understand why Staff could possibly consider 2% as a relevant customer discount rate. Over the past few weeks, the average 30-year mortgage rate has fluctuated roughly between six-plus percent to nearly 8 percent. Consumer debt (such as credit card debt) that Staff cites is almost certainly much, much higher than that. How 2% could possibly be considered the appropriate residential customer discount rate is beyond me. Would a residential customer rather pay higher utility costs today to avoid carrying charges at the utility's discount rate of roughly 6-7% when it could use those dollars today to pay down their mortgage or credit card debt at a percentage interest rate in the upper teens to lower twenties – or even to simply make ends meet? Certainly not.

All of that said, whatever the Company's customers' discount rates are, they are. But just pausing for a moment to give any level of critical thought to this issue suggests that it would simply be poor regulatory policy for the Commission to allow the Company to finance its investment in *any* capital project if customers' collective discount rate truly was less than the utility's WACC. A customer discount rate less than the Company's WACC would signal a customer preference to pay for all of the Company's capital

[86] File No. EA-2023-0286, Sarah Lange Rebuttal Testimony, p. 46, ll. 16-19

investments up front instead of over time, in order to avoid ever paying financing costs that, under Staff's view, are higher than their opportunity cost of money. Taken to the extreme, this would mean it would be palatable for customers to pay for the entirety of the Company's approximately $11 billion in unrecovered rate base immediately rather than depreciating it over 30 or 40 years for ratemaking purposes and incurring financing costs at the utility's WACC - let alone the approximately $1 billion investment contemplated in this case. And in a less extreme case but for conceptually similar reasons, if Staff's view on customer discount rates were correct, it would *always* be in customers' interests to have relatively higher depreciation rates applied to utility investments than lower depreciation rates. Higher depreciation rates increase current period revenue requirements (and rates), but reduce the financing costs that customers would pay over time at the utility's WACC.

Over the past decade I've been part of numerous rate cases and listened to customers' concerns about the burden requested rate increases could have on their lives. Never have I heard a willingness from customers, or really any party to any case – including Staff – to accept greater rate increases in the short run in order to defray the Company's carrying costs, especially of any magnitude that would equate to a meaningful portion of the Company's approximately $11 billion investment in its rate base. If customers or Staff did have this preference – i.e., if Staff actually believed that what they are saying in this case is true about customers' discount rates - it would be routine for them to advocate for *higher* depreciation rates in rate cases, which anyone that has participated in a utility rate case in Missouri recently knows they rarely if ever do.

Q. Has the Commission recently acknowledged the link between the source of financing and discount rate used in a net present value analysis when determining the financial impact of a Commissions decision on customers?

A. Yes. In File No. EO-2022-0040 the Commission considered what, if any, savings will be delivered to customers if certain costs were securitized, as compared to recovered via traditional ratemaking and did so by comparing the net present value of revenue requirement of securitization versus the traditional ratemaking approach. Net present value comparisons were required by statute and presented to the Commission by various parties. For the capital investments that would otherwise be included in rate base, the Commission found that the utility's WACC was the appropriate discount rate to use in determining the relative impact on customers. In fact, Staff's own witness in that case recommended the use of the utility's WACC for this application, citing the "WACC may be a useful reference point to help serve as a proxy for the customer cost of capital."[87]

[87] File No. EO-2022-0040, Mark Davis Rebuttal Testimony, p. 5, ll. 4-5.

Q. Another of Staff's criticisms of the Company's economic modeling – as well as an inclusion in Staff's suggestions for supplemental testimony it would like the Company to file – relates to consideration of the impact of various regulatory mechanisms such as the Company's Fuel Adjustment Clause ("FAC"), Plant in Service Accounting ("PISA"), and the Renewable Energy Standard Rate Adjustment Mechanism ("RESRAM").[88] Would updating Mr. Michels' project modeling, found in Schedule MM-D15 in his direct testimony, to account for the FAC, RESRAM, and PISA result in increased costs to customers as Ms. Lange argues?

A. Absolutely not. Staff's criticism is predicated on their statement that the Company's modeling assumed annual rate cases.[89] That is simply not true. The Company's project modeling did not assume rate cases at all. Rather, it simply reflects the costs that the utility incurs – its revenue requirement - in each future year arising from the projects (no more no less). It has nothing to do with what costs would be reflected in rates to customers, and when that would happen. This concept is often referred to as "perfect ratemaking" because the net costs incurred by the utility are assumed to be exactly the same as those borne by customers. Said another way, perfect ratemaking allows for an assessment of *what* the costs are*,* not *which party bears them*. Staff witness Lange demonstrates an awareness of this concept by using it on page 19 of her rebuttal testimony in this case.[90] Despite Ms. Lange's awareness of the concept, she incorrectly

[88] File No. EA-2023-0286, Sarah Lange Rebuttal Testimony, p. 18, ll. 23-24 and p. 21, ll. 6-12.
[89] File No. EA-2023-0286, Sarah Lange Rebuttal Testimony, p. 21, ll. 7-9.
[90] Page 24 lines 14-18 emphasis added "Consider the following simple examples. Under each of these scenarios, the costs and the benefits over the life of the project are equal to exactly $2,000. In our first example, every year of the project's life, the regulated revenue requirement is exactly $100 higher than it would have been without the project, the project provides exactly $100 of value to ratepayers, and we will assume *perfect ratemaking* and no regulatory mechanisms."

diagnosed the Company's project modeling as portraying the effects of annual rate cases. It is unreasonable to conclude that incorporating the FAC, RESRAM, PISA, and rate case timing in a model of the NPVRR using the utility's WACC as the discount rate, of the project economics could possibly result in increased cost experienced by customers as compared to perfect ratemaking. Instead, a fundamental understanding of these mechanisms reveals that they each track and recover or refund the impacts of regulatory lag that would otherwise exist *only between rate cases*. Under the perfect ratemaking analytical paradigm that includes no rate cases, regulatory lag does not exist. In order for it to be reasonable or necessary to model the customer cost from these regulatory mechanisms, one would first need to model the customer benefit created by regulatory lag between rate cases that causes the need for these mechanisms in the first place, and which results in customers not paying the full revenue requirement reflected in perfect ratemaking through base rates set in rate cases. Staff makes the entirely unbalanced argument to *add* the costs of regulatory mechanisms without considering the regulatory lag customer benefits that gave rise to them, which *reduce* costs to customers as compared to the perfect ratemaking used in our modeling. I would characterize this as Staff suggesting the addition of phantom costs into the analysis. I would note, however, that this is one reason that it was important to discuss the unreasonableness of Staff's suggestions related to the proper discount rate to use for NPVRR analysis earlier in this section of my testimony. Staff may argue that PISA would add costs to their "customer discount rate view" or their entirely undiscounted view, because PISA results in the deferral of costs relative to the perfect ratemaking view - i.e., customers pay less than what the Company modeled upfront - which causes some incremental financing costs

later. All of these impacts mathematically wash out on a present value basis when discounting at the utility's WACC as the Commission IRP rules require. An artificially depressed customer discount rate for the present value analysis, as Staff put forward, would create the appearance of higher costs due to the existence of financing costs in PISA at an interest rate higher than the assumed customer discount rate. When all of the analysis is appropriately conducted with the utility WACC as the discount rate, consistent with the Commission's resource planning rules, any impact of PISA – other than the 15% of capital cost regulatory lag that goes unrecovered – largely becomes irrelevant noise in the analysis. The qualification I just mentioned is in fact evidence that customers will bear *less* cost under PISA than they would under perfect ratemaking. That is because 15% of qualifying costs under PISA *are not tracked at all*. So underneath the noise, PISA results in a slight *customer benefit* relative to the perfect ratemaking reflected in Mr. Michels' original analyses.

Q. Why is perfect ratemaking not only a reasonable assumption for the purposes of this case, but the only proper way to perform economic analysis of new resources?

A. Perfect ratemaking analysis allows the Commission to focus on assessing the actual costs of the resources without getting into a debate about which party – customers or shareholders - will bear them. Isn't that what the goal of selecting resources should be, to find the lowest costs option for the mutual benefit of all parties? The Commission's duty to balance the interests of customers and shareholders means that it should be looking out for both of these parties when it can reasonably do so. The only way to effectively look out for the collective interest is to pick the lowest cost resource

that will meet the identified need, and the NPVRR under perfect ratemaking tells us *exactly* that. Whether regulatory lag will cause the Company to bear more of the cost, or whether regulatory lag mitigating mechanisms will cause the customers to bear more of the costs (they won't, they just level the playing field to bring things closer to perfect ratemaking since under perfect ratemaking, customers bear *all* the prudently incurred costs) is a question for ratemaking policy and rate cases, not for resource selection. It would be decidedly poor regulatory policy for the Commission to pick a resource with a greater NPVRR than another option – a higher cost resource – simply because some idiosyncratic outcome of the regulatory process could stick shareholders with more of that cost through regulatory lag. And it is this poor policy that Staff's preferred modeling approach, if adopted, would promote.

Another reason that explicit consideration of the ratemaking mechanisms like PISA, RESRAM, and the FAC in the economic modeling in resource planning analyses would be poor regulatory policy is that it could lead to perverse outcomes, where the intent of Missouri law that is passed to establish a utility ratemaking mechanism as a means to promote a certain type of investment would be potentially thwarted by Staff's economic paradigm that disfavors resources that are not subject to enough regulatory lag in an apparent effort to shift costs from customers to shareholders. Consider the RESRAM, which addresses regulatory lag on certain renewable resources, but not on many potentially competing resource types. RESRAM became a part of Missouri law at the same time that the Renewable Energy Standard ("RES") was passed, requiring utilities to include a certain proportion of renewable resources in their generation mix. The solution to regulatory lag that is RESRAM seems to pretty clearly to have been

designed to align the utility's incentive to invest in renewables with the policy direction that was being established in the law to promote renewables. Under Staff's theory, consider how the following scenario would play out. The law encourages investment in renewables in part by aligning the utility's incentive with a mechanism that reduces the regulatory lag it experiences when it invests in them. Staff adds "the impact of RESRAM" into a model of the economics of a renewable resource. As a result, that resource appears more expensive than some other resource option that is prone to greater effects from regulatory lag. Staff then argues that the renewable resource is not economically feasible, or economically efficient, but only because customers never pay for the full cost of the alternate resource that causes the Company to experience the full brunt of regulatory lag with no favorable regulatory treatment. If the Commission acts on Staff's theory, it selects the alternate resource to the one the law was there to promote, because the law gave the utility adequate recovery of the cost associated with regulatory lag in order to promote it. That literally makes no sense and represents poor policy.

Q. Does the same concern exist with respect to Staff's fixation on PISA?

A. Yes. Even Staff seems to acknowledge that the legislature intended for PISA to encourage the Company to make certain investments, saying:

> Q. Does Ameren Missouri have *statutory incentives* to pursue capital intensive projects?
>
> A. Yes. Ameren Missouri's PISA participation is *intended* to incent capital cost spending that Ameren Missouri would not undertake absent the PISA treatment.[91]

Staff clearly indicates its understanding that PISA represents an *incentive* that is provided to the Company in state law, and that that incentive is intentional (*intended*).

[91] Sa. Lange rebuttal, p. 73, ll. 3-6, emphasis added.

Rather than calling it an incentive, I would characterize it as the removal of a disincentive to invest. But semantics aside, the effect is the same. And incentives exist to promote particular actions and outcomes. Certainly, the legislature did not remove that disincentive or create that incentive by accident. It surely did so with eyes wide open, based on its desire to drive investment in useful infrastructure in the state for the benefit of customers and communities. And the fact that PISA applies to investments in renewables but not to other forms of new generation demonstrates that this policy tool was being used at least in some part to promote renewables relative to other forms of generation. But again, as in my RESRAM example above, Staff's apparent desire to make resource decisions based in part on an assessment of what costs can be shifted from customers to shareholders through regulatory lag is squarely in play here. Although frankly, this example is even far more realistic, because in the case of RESRAM, which only applies to resources that are explicitly needed for the purposes of meeting the renewable energy targets contained in the RES, other types of resources would really not be viable alternatives to renewables to meet the RES need. My RESRAM example was admittedly more of a theoretical one. But PISA applies to all renewables, including those that are not needed explicitly to meet the RES requirements, and which might be, and are in the context of the IRP, in competition with other forms of generation that would not be eligible for PISA.

So again, application of Staff's preferred modeling approach would penalize the very resource that the statute singled out to create an incentive (or remove a disincentive) for utilities to invest in, relative to resource types that were explicitly excluded from the PISA statute (e.g., new coal, nuclear, and gas-fired generation). Again, Staff's approach is

effectively an end run around the policy set forth in Missouri law. And again, this makes for poor regulatory policy. It should be completely clear at this point that Staff's desire to introduce ratemaking complexity into resource decisions is fundamentally the wrong approach. Resources should be selected because they are truly the lowest cost resource, not because the vagaries of the ratemaking process cause more of the costs of one resource type versus another to be shifted between two parties, both of whose interests the Commission is there to consider and protect. But further, ratemaking incentives created by state law should not be turned into the reasons to reject the very resources that are the subject of those statutory incentives. Staff's modeling suggestions are simply bad policy.

Q. Has the Company used perfect ratemaking analytical paradigm in its past IRPs and CCN applications?

A. Yes. It has been Ameren Missouri's practice in every IRP and CCN application it has ever filed with this Commission,[92] and while I cannot say I have specifically reviewed each IRP and CCN application that every investor-owned electric utility in the state has ever filed, I am confident none of them ever layered rate case timing, regulatory lag, and lag mitigating ratemaking mechanisms into their economic analyses. And until this case – Staff has *never* alleged a deficiency or concern in a Company IRP case or used as a reason to reject a Company CCN application, the lack of such modeling.

[92] Certain energy efficiency analyses have included consideration of regulatory lag in order to demonstrate the need to align the Company's incentives with its customers' incentives as described under MEEIA, but the analysis of NPVRR in IRPs and CCNs has always been based on perfect ratemaking.

Q. What would result if the Company were able to recover amounts from customers in excess of those that result from perfect ratemaking?

A. The Company's return on equity derived from its financial results would exceed its authorized return on equity.

Q. Is the Company earning more than its authorized return on equity?

A. No. The statutory FAC surveillance reporting is designed to monitor this relationship and the results for calendar years after the Company adopted PISA in the third quarter of 2018, as shown in Table 1 below, clearly show the Company is not achieving its authorized earnings. In fact, in most scenarios the Company will struggle to achieve its authorized return given the regulatory construct in which it operates.[93]

Table 1 – Earned ROE as Reported in Ameren Missouri FAC Surveillance

Year	Return on Equity[94]
2022	8.59%
2021	7.23%
2020	8.43%
2019	9.24%

Q. Staff also criticizes the Company's modeling of Investment Tax Credits ("ITCs")[95] as not being consistent with how they "will likely be reflected." How will ITCs be treated in future rate reviews?

[93] There are scenarios where the Company may earn at or above its authorized return, e.g., if there were prolonged hot weather in a period driving significantly higher sales, or some out of the ordinary revenue or cost savings were to show up but systematically under the current circumstances this will not be the case most of the time.

[94] Relating to 2019, the Commission Ordered that an implicit return on equity of between 9.2% and 9.7% was reasonable in light of the overall settlement in File No. ER-2016-0179. Although the rate cases relating to 2020 through 2022 were settled via black box settlements, Staff's point estimate return on equity recommendations were 9.25% in File No. ER-2019-0335 and 9.50% in File No. ER-2021-0240, while the Company's recommendations were higher. At no time during this period has any party alleged the Company was earning more than its authorized return or more than its cost of equity.

[95] Sa. Lange Rebuttal, p. 21 ll. 12-14.

A. This is yet to be determined and I was clear on this point in my direct testimony. Moreover, as I have discussed above, how things are treated in rate reviews should not be a part of the decision-making process with regards to what resources to pursue. The Commission should focus on the lowest cost resources – those with the lowest NPVRR – for the mutual benefit of *all* interested parties. As I detailed previously, the Company's project modeling, including the modeling of the ITC, reflects perfect ratemaking. This assumption allows the Commission to focus on the economics of the projects, rather than the complexities of the current regulatory framework, and obviates the need to make any assumption about "how they will likely be reflected".

Of course, as Staff Witness Jane Dhority testifies, the RESRAM or IRA tracker will "ensure that all of the tax credits arising as a result of the IRA will benefit ratepayers in the form of lower rates rather than be lost due to regulatory lag."[96] This is not an insignificant benefit for customers – it is in fact potentially massive. The Company voluntarily agreed in settling its recent rate review, File No. ER-2022-0337, to adopt a mechanism that ensures the entire value of ITCs (or Production Tax Credits ("PTCs") should the Company find that option to be more beneficial to customers when an election of the form of tax credits must be made) will be passed on to customers, eliminating the negative customer impacts of regulatory lag. The Commission's focus, for purposes of this case, should be squarely on that point – *customers will receive the tax credits*. How and when that happens can be determined in a future rate case and has nothing to do with resource selection. And whether the tax credits are provided to customers quickly, or over time, the NPVRR of the Solar Projects will be unaffected over the project life when

[96] EA-2023-0286, Jane Dhority Rebuttal Testimony, p. 19, ll. 10-12.

properly using the utility WACC as the discount rate for the analysis. This is another circumstance where Staff's modeling concerns amount to nothing but noise.

VIII. STAFF'S RISK SHARING AND MEEIA PROPOSALS ARE WHOLLY INAPPROPRIATE

Q. Despite Staff's primary recommendation to reject the Company's request for four CCNs for the Solar Projects, Staff also provides secondary recommendations that it suggests the Commission adopt if it should choose to approve the CCNs. Please discuss some of Staff's key recommendations.

A. Staff, in a full repeat of its position from Boomtown, recommends a risk sharing mechanism where the Company's shareholders would become responsible for certain costs if the resource does not "pay for itself" with market benefits. That suggestion is every bit as inappropriate now as it was in the Boomtown case, and the Staff's recommendation should *again* be rejected out of hand. The best description of the reason that the suggestion should be rejected was, ironically, very well-articulated by Staff itself in its rebuttal testimony. I already referenced this Staff testimony in the earlier section of my testimony dealing with economic feasibility, but I will reproduce it here for convenience:

> Q. Once the need is established and the project is determined to solve the established need in an economically efficient manner and to promote the public interest based upon the best information available at the time, is it reasonable for the ratepayers to assume the risk that the project selected is uneconomic?[97]
>
> A. Yes. Assuming the utility is prudent in its construction, operation, and maintenance of the project, this assumption of risk is justified because absent the load of the ratepayers, the utility would not be obligated to invest in additional

[97] By "uneconomic" it is clear Mr. Luebbert means carries a positive (cost) revenue requirement.

> resources. It is also justified, because the converse risk of not acquiring a project necessary to meet a determined essential need could also impact ratepayers through reduced reliability, higher prices, financial penalties, and failure of the utility to comply with rules or regulations.[98]

This statement by Staff aptly conveys a foundational premise of utility regulation. Utilities with an obligation to serve customers must be afforded the opportunity to recover their prudently incurred costs of providing that service to their customers – including a reasonable rate of return on investments. In light of this principle, to suggest that an asset that is needed to provide service should be required to pay for itself is frankly nonsensical. Rational investors would not provide the capital needed by a utility for investments that are subject to such standards. Risk sharing proposals like this are particularly egregious given the asymmetry of that sharing, given that rate-regulated utilities do not have access to "the upside" if investments turn out better than expected because no regulatory commission would (or should) allow a utility to systematically earn more than its cost of capital on the rate base in which it has invested. And this is why, as I stated earlier, I view Staff's recommendation as proposing to create a second-class status for renewable resources relative to every other investment a utility makes.

[98] File No. EA-2023-0286, J. Luebbert Rebuttal Testimony, p. 25, l. 17 through p. 26, l. 6

Q. In the Boomtown hearing, you provided an analogy on this topic related to other equipment needed by the utility to provide service – specifically using a distribution transformer as an example. Staff tries in its testimony to distinguish the Solar Projects in this case from that transformer.[99] What do you make of Staff's attempt?

A. Staff is flat out wrong– simply put, they draw a distinction without a difference. Staff's suggestion could be paraphrased, "but the distribution transformer is needed *even more* than the solar plant is needed", effectively confirming my earlier characterization of Staff affording first class status to some utility investments (e.g., the transformer) and second-class status to renewable resources when it comes to utility cost recovery. I would also first note that I do not even accept Staff's premise that the transformer is inherently more indispensable than a generating facility, despite Staff's uncited claim that the Company has somewhere in this case admitted that.[100] But the larger point is that need is need. If the Commission finds that the Solar Projects represent "an improvement *justifying* their cost," which is exactly what it found about the similarly situated Boomtown facility, then the utility must have a reasonable opportunity to recover those *justified* costs, assuming they are not found to be imprudently incurred.

[99] File No. EA-2023-0286, J. Luebbert Rebuttal Testimony, p. 27, ll. 10-22.
[100] Id. p. 27, l. 23. It didn't, nor does Staff cite this so-called admission in its testimony because it doesn't exist.

Q. Why do you do not accept Staff's premise that the transformer in your analogy from the Boomtown hearing is more indispensable than the Solar Projects. Can you elaborate?

A. It is impossible to provide service without having plants that generate electricity, just as it is impossible – given the configuration of the system and the need to adjust voltages of electricity to efficiently move it over long distances – to provide residential service without transforming the voltage to something that can be used in customers' homes. Both are ultimately indispensable. And both are selected by picking the most cost-effective investment alternative that has been identified to meet the need or needs.

Q. Staff goes to some lengths to describe the specific design of a risk sharing mechanism that the Commission could order that would satisfy Staff's conditions.[101] Do you have any comments on the particulars of that mechanism?

A. No. The mechanics of the risk-sharing mechanism are irrelevant. To be clear, if the Commission orders such a mechanism, that is tantamount to the Commission rejecting the Company's application for the CCNs, as far as the Company is concerned. The Company would not pursue the projects under such a framework. We are interested in building the new fleet that our customers need in order to have reliable service as the old fleet – the coal fleet – steadily declines and retires, not in betting on the market. I do not have any recommendations for the details of Staff's risk sharing mechanism, because I do not see how it might ever come to be used.

[101] File No. EA-2023-0286, Sarah Lange Rebuttal Testimony, p. 77, l. 4 through p. 81, l. 7.

Q. Please turn to discuss Staff's proposal for a moratorium on Earnings Opportunities for the Company's energy efficiency and demand response programs run under the Missouri Energy Efficiency Investment Act ("MEEIA").

A. Staff's recommendation is misplaced by being brought up in a generation CCN case, as opposed to a MEEIA filing where the Earnings Opportunity is a proper issue. But beyond that it is irrational, as well as, counsel advises me, possibly illegal absent the Commission rejecting continued energy efficiency programs at Ameren Missouri.

Q. What makes you say it is illegal?

A. While I am not a lawyer and would defer to counsel to ultimately weigh in, I can say that the MEEIA legislation itself requires:

> 3. It shall be the policy of the state 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. **In support of this policy, the commission shall**: (1) Provide timely cost recovery for utilities; (2) Ensure that utility financial incentives are aligned with helping customers use energy more efficiently and in a manner that sustains or enhances utility customers' incentives to use energy more efficiently; and (3) **Provide timely earnings opportunities associated with cost-effective measurable and verifiable efficiency savings.**[102]

Again, I am not a lawyer, and the law is what it is, but I thought it relevant to highlight the clarity that the law provides related to the Commission's obligation to provide Earnings Opportunities.

[102] Section 393.1075, RSMo (emphasis added).

Q. Regardless of the legal question, why is Staff's proposal irrational?

A. It purports to impose a standard that could never be met by any utility and would render the concept of Earnings Opportunities in Missouri obsolete. Staff says that:

> If the Commission continues to permit Ameren Missouri to pursue generation-related earnings opportunities, it is not reasonable for Ameren Missouri to be compensated for avoiding generation-related earnings opportunities [through MEEIA].[103]

This seems to be a truly incredible position for Staff to take. There's no question in my mind that demand-side management ("DSM") programs are valuable tools in utility resource planning, and they can be - and are - used to *reduce* the amount of investment needed in supply-side resources. But I never imagined that – as Staff pretty clearly implies in its standard - if we only do enough energy efficiency, we could or should be able to eliminate *all* future investments in, and therefore earnings from, supply-side resources, while five gigawatts of coal generation systematically retires. Of course, I never imagined that because it is patently absurd to think that the need for *any* new supply-side resources can be entirely eliminated by DSM programs, and the Company could avoid pursuing any new generation throughout the energy transition as it would be required to do under this standard.

As the system experiences a meaningful level of plant retirements, like we are seeing now and into the planning horizon with our coal plants, new plants still need to come online to serve load. But as should be obvious, if the amount of load that needs to be served is relatively higher or lower as a result of running DSM programs or not running them, the amount and timing of new supply-side resources needed will be

[103] File No. EA-2023-0286, Sarah Lange Rebuttal Testimony, p. 85, ll. 7-10.

different – the level of investment will be different - the "generation-related earnings opportunity", as Staff puts it, will be different.

I have little doubt that if the Company had not been running DSM programs for the last decade, that we would already need to have had some amount of new generation online to meet the much higher level of customer demand that would exist. And it's also a very reasonable expectation that we would be seeking even more CCNs for additional future plants than we are currently pursuing. Said another way, the Company's generation investment, and therefore potential earnings associated with that investment, would be higher than it currently is. And the Earnings Opportunity that the Company has received through its MEEIA programs have compensated the Company for exactly that forgone opportunity.

Q. Staff spends a significant amount of time exploring historical trends in the Company's generation plant related rate base and total installed capacity.[104] Is this a useful analysis for assessing whether forgone earnings have been experienced?

A. No, not at all. Foregone earnings analyses, like many analyses associated with energy efficiency are complicated, as they require the evaluation of a counter-factual scenario. What would have happened "but for" the program? That is why so much effort goes into the evaluation of program impacts. Whether generation investment has increased or not, the relevant question is what would generation have been, and what would it be expected to be in the visible future, if not for the load reductions that have arisen from the existence of the programs - not how has net rate base changed over the

[104] File No. EA-2023-0286, Sarah Lange Rebuttal Testimony, p. 83, l. 3 through p. 85, l. 3.

last year or five years. Actual experienced rate base change is a poor and very blunt measure for analyzing this issue anyway, as changes could be associated with, for example, environmental projects at plants that add rate base but do not change, or maybe even slightly reduce, capacity. And certainly, rate base would be impacted as old and highly depreciated plants retire and are replaced with newer, undepreciated plants. That does not mean that we do not have less generation than we would have if our load was significantly higher.

Q. Ms. Lange discusses her experience and testimony from the case that resulted in the approval of the Company's "MEEIA Cycle 2", File No. EO-2015-0055. What is your response to her discussion of that case?

A. I was also involved heavily in that case. Staff explains what resource planning assumptions underpinned the modeling of generation deferrals used to assess the amount of Earnings Opportunity the Company was eligible for as a result of the case. That modeling was based on the Company's then current IRP. But the Company's application in that case also made it clear that:

> As anticipated in Ameren Missouri's 2012 MEEIA report, over time the changing landscape of resource planning (avoided costs, environmental pressures, load growth, capacity needs and myriad other factors) can cause significant changes in the value of the deferred earnings. Similarly, we would also observe large impacts in the results if the preferred supply side resource were to change to a more or less expensive technology. All of that being said, Ameren Missouri recognizes that due to the inherent variability of this analysis, one cannot take its results as the sole determinant of the necessary performance incentive for the proper utility incentive. It is also clear that any time the preferred resource plan changes, it will have an impact on utility earnings. However, utilities are not afforded the opportunity to earn based on the most attractive resource to utility management. Even with the context and

> caveats described above, it would be erroneous to ignore the IRP analysis as it represents the most comprehensive look at the existing incentive structure embedded in current regulatory practices. If, as MEEIA requires, an earnings opportunity is to be afforded utilities when implementing energy efficiency programs, the IRP earnings analysis must be considered, along with other available data points, in order to arrive at a reasonable incentive opportunity.[105]

Clearly it was recognized that the current IRP was not "set in stone" and that the exact resources that were the subject of the analysis were not guaranteed to be the exact resources that would be deferred to the exact dates to which the analysis assumed that they would be deferred. But it was recognized that that analysis was representative of the best available assessment of the earnings incentive that was relevant to the Company's decision to pursue energy efficiency *at that time*. And the reality is that the preferred plan did change materially from the plan at the time based on the changing landscape of resource planning, as noted in this excerpt from the 2016-18 MEEIA plan. None of that means that the Company has not invested and is not investing in fewer supply side resources than it would be if the load was higher by the amount of savings from the Company's MEEIA programs.

Q. You've mentioned that several times. Can you quantify the difference in load that resulted from the implementation of MEEIA programs over the last approximately decade?

A. Yes. Figures 2 and 3 respectively show the cumulative savings associated with the Company's MEEIA programs from 2013 through 2022 based on the final

[105] File No. EO-2015-0055, 2016-18 Energy Efficiency Plan, pp. 40-41.

evaluated savings as part of the evaluation, measurement, and verification processes in the MEEIA dockets.

Figure 2 – Cumulative MEEIA Energy Savings – 2013-2022

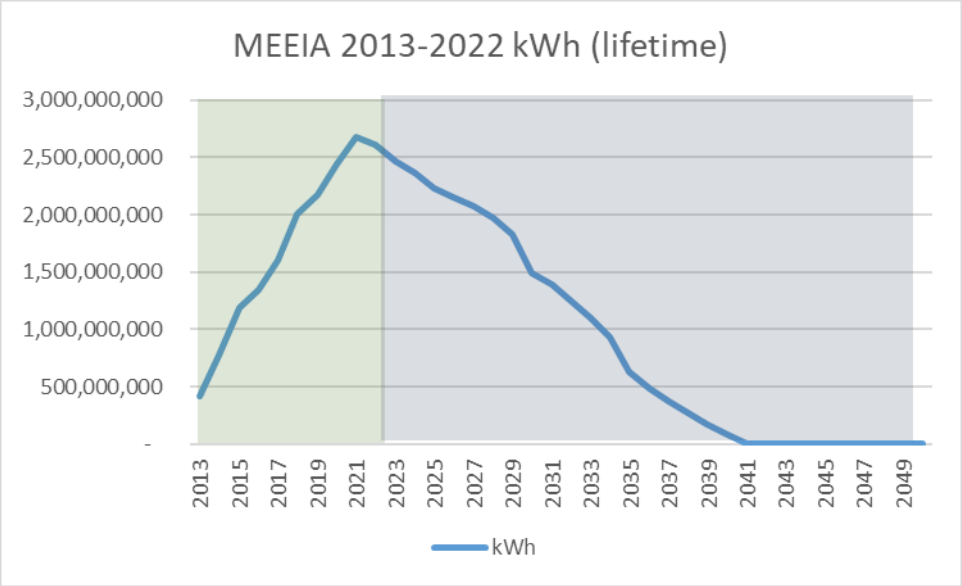
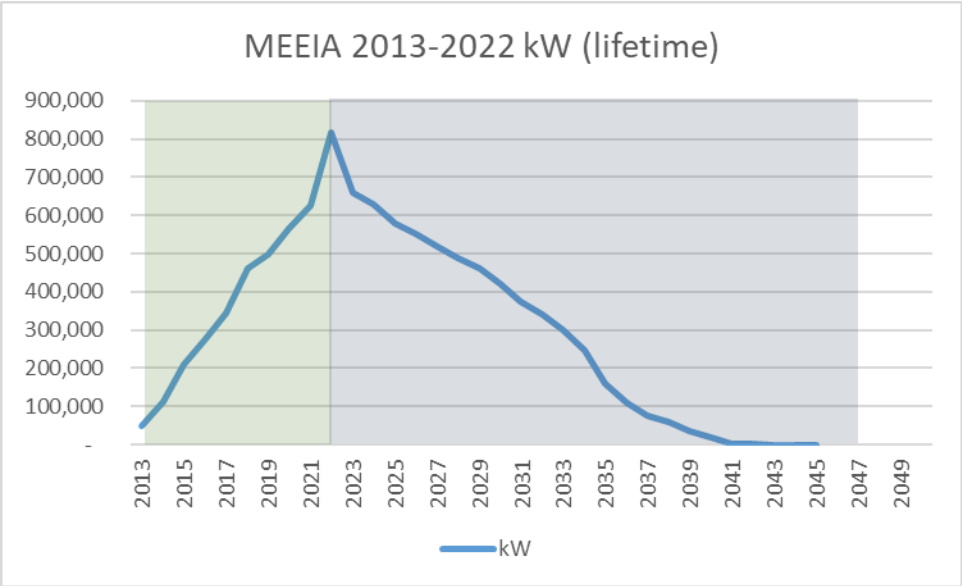


Figure 3 Cumulative MEEIA Demand Savings



Figures 2 and 3 demonstrate that the Company has achieved over 2.5 million kWh of annual energy savings and over 800 MW of demand savings as of 2022. Those energy savings represent more annual energy savings than the entirety of the expected

energy output of the Solar Projects proposed in this case, and based on normalized loads from the Company's most recent rate review (File No. ER-2022-0337) of 30.87 billion kWh, account for an 8.5% reduction in total annual energy consumption by the Company's customers. The demand savings represent an 11.3% reduction in the Company's peak demand, also based on normalized peak loads from File No. ER-2022-0337 of 7,275 MW. It should be readily apparent that, *but for* the Company's MEEIA programs, the resources needed to meet the Company's energy and capacity requirements going forward would be substantially greater, and there is a high likelihood that either additional energy resources would have already been constructed, or that this case would have been substantially larger with even more renewable projects and capacity than it has.

IX. RENEWABLE SOLUTIONS PROGRAM

Q. Staff Witness Benjamin Burton recommends cost and revenue tracking associated with each Solar Project if they are utilized for the Renewable Solutions Program ("RSP"). Do you have any issues with these additional requirements?

A. No. While there are no concrete plans for these projects to be part of the RSP at this time, if one or more of these projects do become part of the RSP in the future, the Company will complete the required record keeping requirements that were contemplated and ordered in the Boomtown Solar CCN report and order.

Q. Will the Company inform the Commission if and when any of these solar projects are utilized for future phases of the Renewable Solutions Program?

A. Yes, it will have to do more than inform the Commission. It will be required to make a tariff filing in order to gain approval of tariff rates applicable to the new phase of the Program.

Q. Do you anticipate that any of the projects are *likely* to be used for the RSP?

A. Yes. One of the few criticisms Staff made of the Company in its discussion of the Solar Project economics that has at least some validity is Staff's observation that the Company did not contemplate any economic value of the Renewable Energy Credits ("RECs")[106] that will be generated by the Solar Projects. To be clear, the impact of recognizing REC value can only result in improvements (i.e., reductions) in the Company's calculation of the impact of the Projects on future revenue requirements. The Company views not including a value for RECs as just making an overly conservative assumption in its case. But for the same reasons that Staff expects that such a quantification could have or should have been made – the obvious economic value that exists for as long as the market exhibits a demand for RECs - it is likely that the Company will use at least some of the Solar Projects within the recently approved RSP to both help meet its customers' demand for renewable energy solutions to meet their businesses' sustainability goals, as well as to reduce the revenue requirement of the Solar Projects to the benefit of all customers.

[106] File No. EA-2023-0286, Sarah Lange Rebuttal Testimony, p. 22, ll. 25-26.

X. RENEWABLE ENERGY STANDARD

Q. Staff Witness Jane Dhority recommends that the Company notify Staff if any of the Solar Projects are utilized for the Renewable Energy Standard compliance. Do you have any issues with Staff's position?

A. No. There are no current plans for these projects to be part of the Company's Renewable Energy Standard compliance. If one or more of these projects do become a dedicated asset for Renewable Energy Standard compliance, the Company is willing to notify Staff and the Commission within this docket.

XI. TAX STRATEGY

Q. Has the Company decided on a specific tax strategy for these solar projects?

A. No. Currently the Company has not determined the most effective tax strategy that is beneficial to customers, although its analyses, at present, suggest the ITC is likely the most favorable strategy. I discussed the reasons why that is the case in my direct testimony.

Q. Can you summarize Staff's recommendation for the tax strategy of the solar projects?

A. Staff Witness Jane Dhority recommends that the Company utilize the tax strategy most beneficial to customers, notify Staff within this docket of which tax strategy the Company elects to utilize for each Solar Project, and provide Staff with an analysis during a rate case proceeding that demonstrates that the tax strategy elected by the Company for each Solar Project is indeed the most beneficial to customers.

Q. What issues do you have with these additional requirements?

A. The Company will of course endeavor to use the best tax strategy for the customers based upon the current rules and interpretations of the tax code, and the specific characteristics of each Solar Project. It is noteworthy that "the best tax strategy" is not defined by Staff and will require multifactor considerations. For instance, the implication of "best" is the least cost, however it is worth mentioning that the ITC and PTC have different risk profiles with regards to certainty of the tax credit amount, which must also be considered. That said, the Company is willing to notify Staff and the Commission when a decision is made.

However, the nature of Staff's request for analysis of the Company's decision in a subsequent rate case is not entirely clear to me. If Staff is suggesting that the Company provide the analysis that supported its decision, and which represents the Company's justification of the prudence of the election it made, the Company is agreeable to that. But to the extent that Staff is suggesting an after-the-fact evaluation of whether it turned out to be the most advantageous choice that could have been made, there is no valid reason to require such an ex-post evaluation of the decision in a rate case. The only outcomes of doing so would be to either 1) to satisfy idle curiosity, or 2) enable inappropriate hindsight-based disallowance recommendations from an opportunistic stakeholder. The prudence of the Company's tax strategy election must be evaluated based on information that is known or reasonably knowable at the time the decision must be made, and the Company is happy to provide such information as supports a review with that objective. A postmortem on how things turned out should not be required, as it will be irrelevant to ratemaking considerations in future cases.

Q. Does this conclude your surrebuttal testimony?

A. Yes, it does.

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
Findings of Fact	Pg. 6, Para. 7	Sierra Club recommends that the Commission grant a CCN for the Project arguing that the Project economically meets Ameren Missouri's energy needs, reduces the risk of market energy and fossil fuel price volatility, and diversifies the Company's generation fleet.	Economically meets Ameren Missouri energy needs.	Yes	Michels Direct, p. 55, l. 7 -13 (incl. Table 2); Arora Direct, P. 6, ll. 7-8
			Reduces risk of market price and fuel volatility.	Yes	Michels Direct, p. 55, l. 14 to p. 57, l. 6 (incl. Table 3); Arora Direct, P. 5 line 22 - P. 6, l. 6
			Diversifies generation fleet.	Yes	Arora Direct, P. 6, ll. 18-21
Findings of Fact	Pg. 7, Para. 11	In August of 2020, Ameren Missouri issued a request for proposals (RFP) for solar and wind generation projects that could begin producing energy during the period of 2022-2024 and under which the Company could acquire the solar or wind project companies though a BTA. In response to the RFP, 16 bidders submitted 51 project proposals with an aggregate capacity of approximately 9,000 MW. The Boomtown Solar Project resulting from the RFP process would be an addition to Ameren Missouri's generation portfolio.	Resources resulted from an RFP process	Yes, for Cass County and Split Rail Projects in their entirety, and for the EPC contract for Vandalia and Bowling Green	Wibbenmeyer Direct, P. 21, ll. 7 to p. 29, l. 16
Findings of Fact	Pg. 8, Para. 15	The solar panels installed as part of the facility have a 30-year useful life with a 0.5% degradation of generating capacity per year.	30-year useful life	Yes	Wibbenmeyer Direct, P. 10, ll. 13-15
			Degradation 0.5%/yr	Yes	Michels direct Schedule MM D14 HC

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
Findings of Fact	Pg. 9 Para. 20	Ameren Missouri sells all of the energy that it generates into the MISO grid and then purchases from MISO the energy it needs to meet its load. Historically, the Company has annually generated more electricity than is required to meet its customers' load (at times, in excess of 10 million megawatt hours annually), allowing it to sell the excess generation to MISO and pass those revenues on to its ratepayers in the form of reduced rates. Like Ameren Missouri, MISO has also historically maintained a positive buffer – that is, its members, as a group, have generated electricity beyond what its members' customers have used each year. However, like Ameren Missouri, other MISO members are also transitioning from dispatchable fossil-fuel resources to a much greater reliance on renewable resources. Therefore, relying on the MISO market during peak system load periods becomes a riskier proposition than in the past.	Historically, AMMO has generated more energy annually than its load uses – at times, more than 10 MM MWh, allowing sale of excess and passing revenues back	Yes	Arora direct, P. 14 l. 17 - P. 15 l. 6 including footnote 20
			MISO is transitioning to much greater reliance on renewables	Yes	Arora direct, P. 19 ll. 6-9
			Relying on MISO at peak is more risky that in past	Yes	Arora direct, p. 19 ll. 9-10; Michels Direct, p. 13, l. 21 to p. 14, l. 5; p. 15, l. 11 to p. 18, l. 10
		When it comes to resource adequacy, the North American Reliability Corporation's (NERC's) 2022 Long-Term Reliability Assessment classifies MISO as a "high-risk" area, where "shortfalls may occur at normal	MISO high risk, per NERC	Yes	Arora direct, p. 19, ll. 14-18; Michels Direct p. 18, ll. 1-10.

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
Findings of Fact	Pg. 10, Para. 21	area, where "shortfalls may occur at normal peak conditions." The report assesses MISO's anticipated capacity reserves as "alarmingly low," possibly falling below an acceptable level as soon as the summer of 2023. If Ameren Missouri is able to execute its PRP, which includes the Project, it should have sufficient resources every year long-term and the Company would be expected to be a net seller of electric energy at levels roughly equivalent to what it has seen historically.	MISO reserves alarmingly low	Yes	Arora direct, p. 19, ll. 14-18; Michels Direct p. 18, ll. 1-10.
			To execute its PRP, Ameren Missouri needs to have resources so it is a net seller at levels roughly in line with history	Yes	Arora direct, p. 15, ll. 7-19; Michels Direct p. 32, ll. 1 - 10
Findings of Fact	Pg. 10, Para. 22	Ameren Missouri has determined that new renewable generation is the most affordable energy resource to replace retiring coal-fired generation plants.	Ameren Missouri has determined new renewable energy is the most affordable energy resource to replace coal	Yes	Arora direct, p. 6, ll. 7-8; Michels Direct, p. 9, l. 21 - p. 10, l. 8 (incl. Figure 2); Michels Direct, p. 55, l. 7 -13 (incl. Table 2)
Findings of Fact	Pg. 10, Para. 23	The 2022 PRP produces the lowest net present value of revenue requirement (NPVRR) among the alternative resource plans considered by Ameren Missouri across a range of scenarios. The 2022 PRP -- which includes the Project, along with other future renewable energy additions, energy storage systems, and the natural gas-fired combined cycle plant -- is projected by the Company to meet the needs of its customers at an NPVRR that is over $600 million lower than if the Company replaces fossil-fuel generation capacity as each existing fossil-fuel generation plant is retired.	2022 PRP produces lowest NPVRR - $600MM lower than if we replace as and when coal retires	Yes, NPVRR PRP advantage is approximately twice as large in this case at approximately $1.2 billion	Michels Direct, p. 55, l. 7 -13 (incl. Table 2)

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
Findings of Fact	Pg. 11, Para. 24	The Project will support Ameren Missouri's plan to transition its generation fleet from aging coal-fired generation to clean energy resources, with significantly greater reliance of renewable energy resources.	Supports Ameren Missouri's plan to transition	Yes	Arora direct, p. 5, l. 10 to p. 8, l. 13
Findings of Fact	Pg. 11, Para. 25	Successful renewable energy projects take five to eight years to reach commercial operation. Among other risks to successfully developing a renewable energy project, Ameren Missouri loses good projects due to constructability issues or competition from large technology firms outside of the Company's service area for the best available renewable projects.	Renewable projects take 5-8 years	Yes	Arora direct, p. 6 ll. 26-27
			Lose good projects due to constructability issues or competition for them	Yes	Arora direct, p. 6 l. 26 - p. 7 l. 3
Findings of Fact	Pg. 11, Para. 26	The U.S. Environmental Protection Agency has published proposed revisions to the Cross-State Air Pollution Rule that focus on ozone season emissions. If implemented, the rule could potentially limit the generation of Ameren Missouri's coal-fired units during the summer months, absent investment in expensive pollution control equipment. Significant generation from solar resources, such as the Project, during the summer months would provide a large measure of mitigation.	CSAPR could potentially limit generation from coal; solar mitigates risk of this happening	Yes	Michels direct, p.33 l. 21 - p. 34. l. 3

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
Findings of Fact	Pg. 11, Para. 27	Ameren Missouri will have a need for winter capacity in 2026 that it has determined can be met with new solar resources, which are assumed to provide reliable capacity of 11% of rated output during the winter season.	Ameren Missouri has a winter capacity need; solar can help meet (11% accreditation)	Yes, but capacity accredition updates have occurred which changed initially to 5% with recent indications that it may now be moving up to 12%-plus	Michels direct, p. 50 Table 1 as reference to 5% accreditation, Michels surrebuttal, p. 77, ll. 16-19 for reference to potential increase in future winter accreditation.
Findings of Fact	Pg. 12, Para. 28	Under Ameren Missouri's 2022 PRP, the Company is planning to add the amount of new capacity resources that are necessary to meet its capacity resources in all seasons. The Company's summer generating capacity position will be above what is anticipated to meet load and reserve margin requirements in all years, but those resource additions are necessary to ensure reliability in the winter season. Under the 2022 PRP, the summer capacity position is anticipated to be less than 500 MW of capacity beyond load and reserve margin requirements by 2040. In the meantime, the Company can sell excess capacity into the MISO market and use those revenues to reduce costs to customers.	PRP is to meet capacity in all seasons; summer will be above load and PRMR but need that level of capacity to cover winter	Yes	Michels direct, p. 50, ll. 10-13
			By 2040, summer expected to be below load/PRMR by 500MW	Yes	Michels direct, p. 47, Figure 25
			Can sell excess capacity into MISO to reduce costs to customers	Yes	Michels direct, p. 19, ll. 1-4; p. 50, ll. 13-16
		Waiting to add renewable resources could result in Ameren Missouri falling short of meeting energy needs or requiring the rapid deployment of less beneficial resources	Waiting to add renewable resource could result in falling short of energy needs	Yes	Arora direct, p. 36 l. 22 - p. 37, l. 4

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
Findings of Fact	Pg. 12, Para. 29	deployment of less beneficial resources, particularly if viable renewable energy projects are limited, transmission constraints cause delays or higher costs, or financing rates are higher in the future when transitioning from fossil-fuel generation.	Waiting to add renewable resource could result in having to rapidly deploy less beneficial resources, particularly if viable projects are not available, there are transmission constraints, costs are higher, or financing costs are higher	Yes	Arora direct, p. 7, Footnote 10; Michels Direct p. 54, l. 21 to pl 55, l. 2.
Findings of Fact	Pg. 12, Para. 30	Analysis by Ameren Missouri of its peak days for each summer and winter month from 2019 through 2021 showed that, without the coal-fired Meramec Energy Center (retired at the end of 2022) and Rush Island Energy Center (scheduled for retirement by the end of 2025), the Company would have had to purchase more energy than it generated to serve its native load. On four of the 18 peak days, the estimated added costs to purchase the needed energy to serve its native load would have beenover $1 million for each of those four days, with one peak day in February of 2021 (during Winter Storm Uri) estimated at over $9 million for that day alone.	Analysis of 2019 – 2021 with Meramec and Rush Island gone showed Ameren Missouri short on annual energy; on 4 of 18 peak days added costs more than $1MM per day; one day more than $9MM	Yes	Michels direct, p. 56 l. 6 - p. 57 l. 6
Findings of Fact	Pg. 13, Para. 31	Legislative changes considered by the U.S. Congress in the last two years could significantly change energy policy and "drive the need for an imminent and significant expansion of renewable energy resources within an uncomfortably short timeframe."	Legislation considered by Congress could significantly change energy policy and drive need for imminent and significant renewable expansion	Yes	Arora direct, p. 6 ll. 9-14
Findings of Fact	Pg. 13, Para. 34	Using federal investment tax credits (ITCs), 30% of project costs may be claimed as a credit against income.	ITC provides 30% tax credit	Yes, 40% for some	Arora direct, p. 38, ll. 1-19; Wibbenmeyer Direct Table 2, p. 6.

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
Findings of Fact	Pg. 14, Para. 35	The federal production tax credits (PTCs) are a credit against income per kilowatt hour generated.	PTC credits against income per kwh generated	Yes	Arora direct, p. 38, ll. 1-19
Findings of Fact	Pg. 16, Para. 41	Access to renewable energy generation is increasingly vital to a region's competitive economic development. Offering its larger customers an option to purchase renewable energy is one way for Ameren Missouri to help prevent these customers from leaving, or seeking to expand outside, the Ameren Missouri service territory.	Access to renewable energy increasingly vital to region's economic development	Yes	Wills direct, p. 12 ll. 13-16 and Dixon surrebuttal
Findings of Fact	Pg. 16, Para. 42	Surveys in the latest edition of a prominent economic development trade publication showed that 74% of corporate respondents indicated that access to renewable resources was either very or somewhat important to their company, and 91% of site consultant respondents indicated that access to renewable energy resources was either very or somewhat important to their clients' location decisions. Real business investment decisions are being made based on renewable energy access, and states that can provide access to renewables are succeeding in some of the largest economic development opportunities in the country.	Surveys demonstrate that renewable energy is important to economic development and local business	Conceptually, yes	No new evidence presented in this case, but concept applies equally

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
Findings of Fact	Pg. 17, Para. 43	Solar and wind generation are dependent on weather conditions, which vary by geographic location. Although Ameren Missouri anticipates having the majority of its future solar generation in Missouri, the Project would be located in Southern Illinois. If Missouri is cloud covered, but Southern Illinois is sunny, the Boomtown Solar facility would be producing power, aiding the Company's reliability of service via geographical diversity.	Solar and wind dependent on weather – if Missouri is cloud covered southern Ill may be sunny – adds to geographical diversity	Yes	Arora direct, p. 23 l. 19 - p. 24 l. 7
Findings of Fact	Pg. 17, Para. 44	Solar generation produces no emissions of carbon dioxide. The Project supports Ameren Missouri's goal of net zero carbon emissions by 2045, with reductions in carbon emissions of at least 60% by 2030 and 85% by 2040, compared to 2005 levels.[71] Many of the Company's large customers have similar goals.	Solar – no CO2 emissions	Yes	Michels direct, p. 13, ll. 20-21
			Support Ameren's goal	Yes	Michels direct, p. 5, ll. 13-15
			Supports customer corporate goals	Yes	Wills direct, p. 12 ll. 17-19 and Dixon surrebuttal
Findings of Fact	Pg. 17, Para. 45	Renewable generating resources, such as the Project, are insulated from the price volatility risks associated with fossil-fuel generation because they do not require any fuel to operate. Once installed, these resources rely on free solar or wind resources to produce electricity.	Renewable resources insulated from price volatility risks that fossil generation has	Yes	Michels direct, p. 56 l. 6 - p. 57 l. 6
			Once installed, free solar and wind resource	Yes	Michels direct, p. 13, ll. 20-21

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
Findings of Fact	Pg. 17, Para. 46	The large-scale expansion of renewable resources, such as the Project, provides significant risk mitigation to Ameren Missouri's generation portfolio, particularly with respect to the potential for additional environmental regulations, changes in climate policy and carbon dioxide prices, and other factors that may significantly affect the operating costs and benefits of the Company's existing coal-fired resources.	Large-scale renewable expansion provides significant risk mitigation against potential environmental regulations, changes in carbon policy, changes in CO2 prices, and other factors that could affect operating costs and benefits of coal	Yes	Arora direct, p. 6, ll. 9-14; Michels Direct, p. 54, l. 16 to p. 59, l. 6
Conclusions of Law	Pg. 24, Para. G	While the *Tartan* factors are frequently cited in Commission decisions regarding applications for certificates of convenience and necessity, they are merely guidelines for the Commission's decision, and are not part of the legal standard set forth by the controlling statute. Moreover, the *Tartan* decision concerned an application for a certificate to provide natural gas service to a particular service area. As a result, the described factors are not precisely applicable to Ameren Missouri's application to construct the Boomtown Solar Project. Nevertheless, they provide some guidance and are specifically referenced in the list of issues set forth by the parties for resolution by the Commission.	Tartan Factors are merely guidelines; not part of the legal standard	No indication that the Commission's views have changed	n/a

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
Conclusions of Law	Pg. 24, Para. H	It is the public policy of this state to diversify the energy supply through the support of renewable and alternative energy sources. The Commission has also previously expressed its general support for renewable energy generation because it provides benefits to the public.	Policy of state to diversify energy supply through support of renewables	No indication that the Commission's views have changed; subsequent Commission decision issued after this case was filed confirms that this remains true	n/a
			Commission has previously supported renewables because of its benefits to the public	Yes, and recently did so again	n/a
Conclusions of Law	Pg. 26, Para. M	Per 20 CSR 4240-22.010(2), "[t]he fundamental objective of the resource planning process at electric utilities shall be to provide the public with energy services that are safe, reliable, and efficient, at just and reasonable rates, and in a manner that serves the public interest and is consistent with state energy and environmental policies."	Fundamental objective of resource planning is to provide service in a manner that serves the public interest and is consistent with state energy and environmental policies	IRP Rules Continue to reflect this objective	n/a

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
		Ameren Missouri is in the process of replacing its fossil-fuel generating fleet. The Company has determined that new renewable generation is the most affordable energy resource to replace retiring coal-fired generation plants. Both Staff and OPC object to granting the CCN based on need. Staff presented evidence that the need to replace coal-fired generation will not occur until Rush Island is retired in 2026 and other coal-generating plants are retired in subsequent years. OPC took issue with the replacement of dispatchable generating capacity with non-dispatchable renewable resources.	Need to replace retiring coal resrouces	Yes	Numerous references cited above in connection with findings of fact
Decision	Pg. 27-28, Need for Service	However, Ameren Missouri presented convincing evidence that renewable energy projects take five to eight years to develop and implement, that good projects are hard to come by, and that tax credits for renewable generation that will lower the cost of constructing new generation are available now. Thus, Ameren Missouri cannot wait until a coal-fired generation plant is retired to begin the process of replacing its capacity.	Ameren Missouri presented convincing evidence that it takes 5-8 years to implement renewables, good projects are hard to come by, and tax credits available now lower the cost. Thus, Ameren Missouri can't wait	Yes	See above references in connection with findings of fact

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
		Further, Ameren Missouri presented evidence that the Project will provide needed energy in the summer, when both the Company and MISO need it most, at the lowest cost among available options. In addition, Ameren Missouri projects that new solar resources, including the Project, can meet winter capacity by 2026, when a shortfall is otherwise anticipated. Therefore, the Commission finds that there is a need for Ameren Missouri to build the Boomtown Solar Project.	Projects will provide needed energy in the summer, when the Company and MISO need it the most, at the lowest cost among available options	Yes	See above references in connection with findings of fact
			New solar can meet winter 2026 needs	Yes	See above references in connection with findings of fact
		The Project adds capacity and will generate renewable energy that is needed -- particularly during peak summer demand.	Adds capacity and will generate energy when needed, particularly during summer peak	Yes	See above references in connection with findings of fact
		OPC's position is that the fourth factor of economic feasibility has not been satisfied because the Project has not been shown to generate more revenues and avoid more costs than the costs Ameren Missouri's retail customers will incur if the Company builds the Project.111 However, the test is whether the improvement justifies its cost.	Test of economic feasibility is not whether project will generate more revenues than its costs; test is whether the improvement justifies the cost	No indication that the Commission's views have changed	n/a
		By 2026, the Company will need capacity to meet MISO requirements for capacity due to impending retirements of its coal-fired	By 2026 the Company will be short of its capacity needs, and the project helps meet the shortfall in both summer and winter	Yes	Michels direct, p. 46 Figure 22

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
Decision	Pg. 28-30 Economic Feasibility	impending retirements of its coal-fired generation plants. The Project helps meet that capacity need – including peak summer and peak winter periods. Renewable generation is the most affordable energy resource to replace coal-fired generation plants. This project will also produce energy during peak times to serve customers. This means Ameren Missouri should not have to buy energy to meet its peak needs off the market at peak demand when costs are higher. However, the amount of savings are not quantifiable yet. Waiting to add renewable generation resources until coal-fired plants are retired and capacity need is immediate would put Ameren Missouri at risk of being unable to meet its customers' load at peak times. Like Ameren Missouri, MISO is no longer long on capacity, especially in peak summer months. The Company can no longer count on the MISO market as a source of low cost energy to meet its peak load. Delaying development of renewable generation also exposes the Company to the risks of transmission constraints and higher financing rates in the future.	Renewable energy is the most affordable energy to replace coal	Yes	See above references in connection with findings of fact
			The project will produce energy during peak times, offsetting need to buy energy at peak when prices are higher, but can't quantify these savings	Yes	See above references in connection with findings of fact
			Waiting to add renewables until coal is retired risks not being able to meet peak loads.	Yes	See above references in connection with findings of fact
			MISO is no longer long capacity	Yes	See above references in connection with findings of fact
			Ameren Missouri can no longer count on MISO as source of low cost energy during peak	Yes	See above references in connection with findings of fact
			Delaying renewables exposes Company to risks of transmission constraints and higher future financing costs	Yes	See above references in connection with findings of fact
		The Project results from a competitive RFP process in which Ameren Missouri used due diligence in selecting a developer. The Company and the developer reached an arms-length agreement on a contract to build and transfer ownership of the Project. Thus, the Project is being acquired at fair market value.	Project resulted from competitive RFP process	Yes	See above references in connection with findings of fact
			Arms-length deal and thus fair market value acquisition	Yes	See above references in connection with findings of fact

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
		Tax credits are currently available to reduce the cost of the Project that may not be available in the future. In addition, it is anticipated that the Project will generate excess energy that can be sold into the MISO market, further reducing the Project's cost. The Commission finds the Project economically feasible.	Tax credits are available now, but might not be available in the future	Yes	See above references in connection with findings of fact
			Project will generate excess energy that can be sold into the market	Yes	See above references in connection with findings of fact
		Ameren Missouri presented evidence that electric utilities compete for scarce resources when seeking to secure renewable facility siting, permits, and equipment. Project development can take years, and if a project is optioned, the failure to timely execute on that option allows other interested parties to acquire the site, equipment, and permits. The Company also presented evidence that it is not feasible to wait until a projected shortfall is about to occur before adding renewable resources, given the implementation timeline for renewable projects and the limited availability of suitable projects.	Electric utilities must compete for scarce resources when seeking to acquire renewables	Yes	Arora Direct, p. 6, l. 22 to p. 7, l. 3
			Renewable project development can take years and can be lost to other parties if options are not timely executed.	Yes	Arora Direct, p. 6, l. 22 to p. 7, l. 3
			It is not feasible to wait until a projected shortfall is about to occur to begin adding renewables.	Yes	Arora Direct, p. 6, l. 22 to p. 7, l. 3

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
Decision	Pg. 30-31 Promotes the Public Interest	The recent retirement and planned retirement of three of Ameren Missouri's four coal-fired generation facilities by 2030 will change the Company from, historically, having a long buffer on both energy and capacity to having a shortfall as soon 2024. Ameren Missouri presented evidence that, if it is able to execute its Preferred Resource Plan, which includes the Project, it should have sufficient resources every year long-term, and the Company would be expected to be a net seller of electric energy at levels roughly equivalent to what it has seen historically.	Retirement by 2030 of ¾ of the Company's coal plants will change Company from being historically long to short as soon as 2024	Change to planned retirement of Sioux plant changes the date for 3/4 of plants' closure to 2032	2023 IRP PRP
			Execution of the Company's PRP will let it be a net seller at roughly historical levels	Yes	See above references in connection with findings of fact
		The evidence presented shows that, by acting to add renewable resources now, Ameren Missouri will avoid possible (1) deployment of less beneficial resources that might occur due to limited availability of viable tax credits, (2) transmission constraints causing delays or higher costs, and (3) higher future financing rates. Adding renewable energy generation in place of fossil fuel generation provides a hedge against risks associated with power prices, carbon prices, and fuel prices.	Acting now avoids the potential need to deploy less beneficial resources that might not have tax credits	Yes	See above references in connection with findings of fact
			Acting now avoids potential for transmission constraints to cause delays or higher costs	Yes	See above references in connection with findings of fact
			Acting now avoids potential for higher future financing costs.	Possibly	N/A
			Adding renewables hedges against risks associated with power prices, carbon, fuel prices	Yes	See above references in connection with findings of fact
		The Project has economic development benefits. Demand for clean, reliable, and affordable energy is an increasingly important	The project has economic development benefits.	Yes	See above references in connection with findings of fact

R&O Section	R&O Page/Paragraph Reference	R&O Text	Issue Summary	Applies to Solar Projects in this case?	References / comments
		affordable energy is an increasingly important factor in determining where businesses locate new jobs and investment. Missouri is competing with other states for new jobs and investment from businesses that have large energy demand and a need for renewable energy resources. Customer preferences for renewable energy and corporate sustainability goals by Missouri's large employers for their energy needs should not be dismissed.	Demand for renewables is an increasingly important factor in business locations and jobs	Yes	See above references in connection with findings of fact
			Missouri competes with other states for jobs and investment	Yes	See above references in connection with findings of fact
			Customer preferences for renewables should not be dismissed	Yes	See above references in connection with findings of fact

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for a Certificate of Convenience and Necessity for Solar Facilities	)))	EA-2023-0286

AFFIDAVIT OF STEVEN M. WILLS

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

Steven M. Wills, being first duly sworn on his oath, states:

My name is Steven M. Wills, and hereby declare on oath that I am of sound mind and lawful age; that I have prepared the foregoing *Surrebuttal Testimony*; and further, under the penalty of perjury, that the same is true and correct to the best of my knowledge and belief.

/s/ Steven M. Wills
Steven M. Wills

Sworn to me this 14th day of December, 2023.