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 Approval of a Subscription-Based Renewable Energy Program.	))))	File No. EA-2022-0245

REPLY BRIEF OF UNION ELECTRIC COMPANY D/B/A AMEREN MISSOURI

COMES NOW Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri" or "Company"), and for its reply brief, states as follows:

REPLY TO STAFF'S BRIEF

The Applicable Legal Standards.

Staff cites *Matter of Application of KCP&L Greater Missouri Operations,* 515 S.W.3d 754 (Mo. App. W.D. 2016) and reproduces quotes from the opinion indicating that an applicant for a CCN[1] cannot meet its burden via speculation, guesswork, etc.[2] The Company agrees with the Court of Appeal's statements, but they do not support Staff's position in this case because the Company's case does not rest on speculation or guesswork. To the contrary, it rests on the substantial and competent evidence contained in the record establishing "need" under a proper application of the Tartan Factor of need and establishing that the Project is "necessary or convenient for the public service" under Section 393.170.3, as that standard has been applied by both the Commission and the courts. That evidence is presented and discussed in detail at pages 14 – 28 of the Company's initial brief and it establishes, among other things, that the Company: (a) needs to add renewable energy resources to provide its customers with the energy they need in all seasons, (b) needs to mitigate myriad risks, including risks associated with fossil-fueled

[1] Abbreviated terms used in this reply brief have the meanings given them in the Company's initial brief.
[2] File No. EA-2022-0245, Staff's Post-Hearing Brief, p. 6.

generation and risks associated with over-reliance on MISO, which as NERC indicates, is a high risk area, and therefore may experience shortages, including during its summer peak, and (c) given the long time period required for the development and construction of renewable energy projects and the difficulty of developing viable projects, needs to not let good renewable projects pass it by.

That the evidence is based in part (as it must be) on projections about the future does not make the evidence speculative. Indeed, Staff goes on to cite the same case for the proposition that one must consider the future when advocating for (in the applicant's case) or deciding (in the Commission's case) a CCN application. Staff has presented nothing that contradicts the fact that the Company's energy position has or very soon will dramatically change from a position of substantial length (as many as 10 million MWhs per year) to little or no length (or an outright shortfall) in the near- to intermediate-term, even under "normal" or "base" planning conditions. Staff has presented no evidence that contradicts the existence of the risks the Company faces which could bring about the shortage sooner or make it even more acute. Staff has presented no evidence that contradicts the difficulty of implementing good renewable energy projects and the consequent need to not let such good projects pass by. Staff has presented no evidence that contradicts the fact that implementation of the Company's Preferred Resource Plan ("PRP"), as compared to taking the approach advocated for by Staff, is projected to save customers more than $600 million on a NPVRR basis.

Staff's Mischaracterizations of the Company's Energy Needs.

At pages 7 - 9 of its brief, Staff takes two approaches to attempting to rebut what remain undisputed facts about the dramatic shift in the Company's energy position in the past and what

that energy position will be very soon, under normalized conditions, as shown by Company witness Matt Michels Surrebuttal Testimony Figure 2, which Staff itself includes in its brief.[3]

The first approach is to mischaracterize an isolated quote from Company witness Arora, where witness Arora discussed the deliverability of energy from Ameren Missouri resources located in Illinois (in MISO Zone 4) to Missouri (in MISO Zone 5). Staff's use of the quote is misleading because it is preceded by the demonstrably false claim that "witness Aurora [sic] then states that Ameren Missouri has no concerns about MISO's role in assuring system reliability."[4] Witness Arora said no such thing. As the Company discusses at length in its initial brief, the Company is indeed – as is NERC – deeply concerned about the ability to rely on MISO. Any fair reading of the record in this proceeding demonstrates both the existence of that concern, and the validity of it.

The quoted question asked of witness Arora and his answer concerned questions from the Presiding Officer posed so that the bench could gain an understanding of whether the location of the Project in Illinois created an issue of some kind that would not exist if the Project was sited in Missouri.[5] The questions were reasonable given that Staff had raised issues about the Project's location in Illinois in Staff's rebuttal testimony. The simple point witness Arora made is that the location of the Project in Illinois does not make it less reliable than if it sited in Missouri and, indeed, due to geographical diversity benefits of dispersing resources across a wider area, the Illinois location may enhance overall reliability. But this simple point does not negate the plethora of testimony and other evidence in this case that demonstrates that there are real reliability concerns in MISO as soon as this summer, a fact also noted by witness Arora in his exchange with

[3] EA-2022-0245, Staff's Post-Hearing Brief, p. 19.
4 *Id*., p. 8 -9.
[5] Tr., p. 96, ll. 12 – p. 98, l. 12

the Presiding Officer.[6] The concerns about MISO are not concerns about the location of a given generating unit but are concerns about MISO's overall resource adequacy, as the record in this case plainly shows.

Staff's other tact to sow doubt about the Company's energy needs is to act as though Ameren Missouri is not short or nearly short energy because, according to Staff, adding the Project won't change the total MWHs Ameren Missouri purchases from MISO to serve its load.[7] Naturally that is true given that Ameren Missouri sells all of the energy it generates into the MISO market and then buys all of the energy it needs to serve its load from the MISO market;[8] that's how the market works and adding any generating unit – whether a fossil, hydro, or renewable unit –will not change Ameren Missouri's load, which is the sole determinant of how much energy is purchased from MISO. But the more Ameren Missouri generates – which it will do with the Project – the less its *net* purchases need to be. And as its net purchases go down, its "length" becomes greater (or its shortfall becomes less), thus reducing it and its customers' exposure to the market which, for reasons discussed at length in the Company's brief, is much riskier and is expected to become more risky than had historically been the case.[9]

Staff's Misplaced Fixation on the Projected NPVRR of the Project.

At pages 9 – 10 and again at pages 15 - 26 of its brief, Staff discusses the fact that most of the projected economic scenarios modeled for the Project indicate that the Company and its customers cannot build and operate the Project over its life for free (or put another way, that the Project is in most cases not projected to have a "negative cost"). But Staff goes further and beyond

[6] Tr., p. 96, ll. 4-5.
[7] EA-2022-0245, Staff's Post-Hearing Brief, pp. 8 – 9.
[8] Ex. 4, Matt Michels Surrebuttal Testimony, p. 43, ll. 18-21.
[9] As discussed later in this reply brief, Staff and OPC do not appear to be on the same page about Staff's viewpoint here, since OPC appears to clearly recognize the enhanced risk now facing the Company, both because its resources have changed dramatically, and because MISO's position has too.

the record, stating with certainty that "Boomtown's revenues will not cover its costs," a contention that no party can credibly make given the sheer impossibility of predicting hourly market prices for energy over the next 30 years or yearly market prices for capacity.[10] Regardless, the *record* in this case reflects a projected scenario where the resource would lower revenue requirement without the Program, and two scenarios where it would lower revenue requirement with the Program.[11] And there are other scenarios where the positive NPVRR results are, in relative terms given the Company's roughly $3 billion revenue requirement, quite small – with a positive NPVRR of just $8.4 million to $18.5 million.[12]

Staff's overconfident expression of certainty about how the economics of the Project will play out is largely based on its Exhibit 112, not introduced until the redirect of Staff witness Michael Stahlman when procedurally, no party could ask a single question about it, where witness Stahlman explained that he ran some projections assuming Production Tax Credits ("PTC") for the Project at the updated Project cost estimate, which he says shows that in all projected scenarios the NPVRR is positive. As squarely shown in the Company's initial brief,[13] "so what"? The Company does not intend to use the PTC, and if for some reason that were to change, will return to the Commission for further permissions, at which time an analysis using the PTC might be relevant. But on the record in this case, Exhibit 112 tells us nothing about the permission for the Project that is sought in this case.

[10] EA-2022-0245, Staff's Post-Hearing Brief, p. 15.
[11] Ex. 9, Lindsey Forsberg Surrebuttal Testimony, p. 4, Tables 1 and 2.
[12] *Id.*, Table 1. With the Program, two of the projected cases show that the Project is projected to produce revenues greater than its costs and in two others the positive NPVRR is relatively small, just $6.8 – $12.7 million. *Id.,* Table 2.
[13] EA-2022-0245, Post-Hearing Brief of Union Electric d/b/a Ameren Missouri, p.46 – 47.

More importantly, however, is the fact that when a resource is needed – as the Project is – it should not be expected to be free, as addressed in detail in the Company's initial brief[14] Might the Project pay for itself? Yes, it might,[15] but that is not the question in this case.

The Company in no way intends to be dismissive of potential costs borne by customers for the Project, as Staff has suggested. Instead, the Company aims to be clear that it cannot guarantee an economic outcome for a 30-year asset. If anything, the facts in this case point to the Company's continued commitment to customer affordability. To name just a few ways the Company has prioritized customer affordability for the Boomtown Project specifically: the Project in question is the product of a competitive RFP which resulted in over 50 bids; the Company continues to evaluate and pursue the most lucrative tax credit options available for the Project to ensure customer costs are minimized; the Renewable Solutions Program, proposed with the Project, was designed specifically to minimize the cost and risk of the Project for all customers; and finally, the overall pursuit of the Company's PRP, which the Boomtown Project is part of, is projected to save customers more than $600 million on an NPVRR basis as compared to the approach advocated for by the Staff.

Staff's Claims that Adding Renewables Do Nothing to Reduce Reliance on Non-Renewable Resources are Not Supported by the Record.

At pages 10 – 14 of its initial brief, Staff attempts to sustain its claims that adding additional renewable energy resources does not mean that Ameren Missouri's load is served by a greener mix of energy. The Company disposed of this plainly wrong notion at pages 40 - 41 of its initial brief.[16] If Staff is right, then apparently the Commission itself has been wrong for quite some time, given

[14] *Id*., p. 13; 29 – 31; and 37 - 40).
[15] Tr. p. 213, l. 2 – p. 214, l. 10.
[16] In theory perhaps the addition of the Project alone may not change the dispatch of Ameren Missouri's fossil units but as Company witnesses Michels and Steven Wills and Sierra Club witness Shenstone-Harris demonstrate, as renewables are added in MISO the dispatch of MISO fossil units is going to be reduced.

the Commission's own recognition that adding renewable energy resources in fact does reduce reliance on fossil-fueled resources. See pages 40 - 41 of the Company's initial brief, discussing the Commission's findings, which directly contradict Staff's arguments.

The record, and common sense, supports the conclusion that with each renewable energy resource addition, Ameren Missouri also incrementally reduces it and its customers' exposure to the risks associated with coal-fired generation, and since more renewable energy sold into MISO makes the MISO energy mix greener, the energy Ameren Missouri's customers are served by also becomes greener.

As discussed in the Company's initial brief,[17] the risks that will be mitigated by adding renewables include earlier than expected retirements of coal units due to environmental requirements, additional or more protracted forced outages than assumed in base planning assumptions, forced outages that are too expensive to fix which could also force earlier retirement of existing coal units, the unavailability of coal due to rail delivery problems, or the lack of water needed to run a thermal coal unit. Realization of any one of these kinds of risks would result in lower-than-planned-for energy generation, reducing whatever length the Company projects, or exacerbating projected shortfalls.

The fact that the Company plans to add a combined cycle gas plant in 2031 (effectively replacing Sioux's capacity) does not negate the risk mitigation provided by adding the Project specifically, and renewable generation more generally. Nor does it negate the fact that a combined cycle gas plant is a significantly cleaner fossil resource than the coal plant it will effectively replace, since the gas plant will emit nearly 2/3 less carbon per MWh as compared to the Sioux Plant.[18]

[17] EA-2022-0245, Post-Hearing Brief of Union Electric d/b/a Ameren Missouri, p. 15 – 21.
[18] Ex. 3, Matt Michels Direct Testimony, Sch. MM-D2, p. 13.

Staff's claim that it is "hard to square" adding both renewable resources and a combined cycle unit in 2031 may have a superficial, rhetorical appeal to it, but it is not backed-up by the facts reflected in the record of this case. The record is replete with evidence that adding renewables to gain zero-marginal cost energy, and adding the combined cycle plant primarily as a capacity resource to support reliability when renewables are not generating or are generating less, will indeed make the Company's fleet greener, and will indeed support providing a greener mix of energy to its customers as compared to its generation mix and the mix of the energy acquired to serve its load today.

Staff's Final Point, that is Its Speculation that Adding the Project May Be a Waste, Distorts the Evidence in this Case.

Paradoxically, at pages 17 – 20 of its initial brief, Staff seems to support the idea that dispatchable resources need to be part of the Company's generation portfolio – and the Company agrees – but then posits that adding renewables and a combined cycle plant in 2031 is a waste. For several reasons, Staff's contention reflects a severe distortion of the evidence in this case.

First, the Company is only marginally long after the addition of the combined cycle unit if the Company is not able to add renewables, The chart Staff itself reproduces shows this.[19] Second, the length is not significant, just 2 – 3 million MWhs per year as compared to Ameren Missouri's historical length of as many as 10 million MWhs or more, and it is transient, becoming a shortfall just a few years later.

Third, this relatively small length exists under base or normal planning assumptions, but not in the case where extreme weather causes loads to spike, or makes other generation unavailable, or if the Company's remaining coal plant post-2030 (Labadie) does not "live" as long as planned, or has its generation constrained by environmental regulation, or can't get the coal it

[19] EA-2022-0245, Staff's Post-Hearing Brief, p. 19.

needs, etc. Fourth, even if Labadie's energy generation is not constrained as compared to planned generation in the base-case planning scenario, and even if the Labadie units operate as long as currently planned, once two Labadie units retire in 2036, the Company will be short again by 5 million MWhs or more, that is, absent adding renewable energy resources as planned. And finally, while reducing carbon emissions is not the primary reason the Commission should approve the Project, this Commission itself has expressly recognized that reduced emissions *are* a benefit of renewable generation, and that adding this consequently supports the public interest (and this is aside from the risk mitigation zero-fuel cost renewables add against carbon or other environmental regulation, a benefit this Commission has also recognized).

REPLY TO OPC'S BRIEF

While appreciating the fact that the Company indeed does have near-, intermediate-, and long-term energy needs, OPC nonetheless essentially claims that adding renewable energy resources shouldn't be a part of meeting those needs. It is pure folly to think that Ameren Missouri or any utility for that matter is going to meet all its customers' energy needs with only dispatchable (i.e., fossil-fueled) generation over the intermediate- to long-term. As discussed at pages 11 - 12 of the Company's initial brief, certainly many similarly situated utilities and their regulators beg to differ.

OPC also ignores what the record in this case has to say on the question. The Company's 2022 PRP discusses in detail reliability analyses conducted by Astrape' Consulting, specifically, analyses that examine loss of load expectation ("LOLE") with various generation mixes at certain points in time.[20] LOLE is a commonly-accepted planning standard, used by utilities and RTOs alike, with the typical goal being to have resources that produce an annual LOLE of 0.1, i.e., load

[20] Ex. 3, Matt Michels Direct Testimony, Sch. MM-D2 Part 2, pp. 13 – 20.

is lost on 1 day every 10 years.[21] Case 1 shows that a generation portfolio with about 1,200 MW of solar in it as of 2025 has a better LOLE (0.7) than does a portfolio in that year that lacks additional solar generation (Case 2, with a LOLE of greater than 1.0, 1.2).[22] And when the planned combined cycle unit comes online about 2030, coupled with a total of 3,100 MW of renewable generation (i.e., adding 1,900 MW of renewables post-2025 through 2030), the analysis shows a LOLE of just 0.3.[23] Absolutely following the Company's plan and adding the combined cycle unit in 2030 contributes to that 0.3 LOLE as do the additional solar resources. As Company witness Michels testified, the Astrape' reliability analysis "indicates a reliability benefit from the addition of solar generation over the next few years."[24]

None of this is surprising. As Sierra Club discusses in its initial brief (and as the Company also addressed in its initial brief), new solar generation does provide some capacity in the winter, does generate energy in the winter, and to use Sierra Club's words, will "indisputably improve the reliability of the grid in the summer, which remains the season of risk."[25]

Contrary to the suggestion otherwise by OPC in its initial brief, adding renewable resources, including the Project, is not inconsistent with relying on the Company's remaining fossil-fueled units as backstops for reliability the next several years, then adding a combined cycle plant in 2030, while meeting more and more of the Company's energy needs over time with zero-marginal cost renewable energy resources.

Two other points made by OPC in its initial brief bear a brief reply. At page 10 of OPC's initial brief, OPC completely departs from the record suggesting to the Commission that it need

[21] *Id.*, p. 14.
[22] *Id.*, p. 15 - 16. Specifically, compare the LOLE row in Table 3 for Cases 1 and 2.
[23] *Id.,* p. 16. LOLE Row in Table 3, Case 3.
[24] *Id.*, p. 14, ll. 13-15.
[25] Sierra Club Initial Brief, p. 5. As discussed in the Company's initial brief, NERC specifically points to the riskiness in MISO as soon as summer 2023. Company's Initial Brief, pp. 4 - 5.

not worry, Ameren Missouri will be able to get all the solar facilities it needs later because landowners are all too eager to provide the land. And, OPC goes on to in effect say don't worry, there are lots of projects in the MISO queue. Aside from the Commission's complete inability to rely on OPC's extra-record speculation is the fact that the evidence that *is of record* proves OPC's speculation is wrong.

As discussed at pages 23 - 24 of the Company's initial brief, finding and implementing good projects is hard and time-consuming. It may have been easy for OPC to make up its claims from the 6th Floor of the Governor Office Building, but the reality in the real world is much different.

REPLY TO OMISSION IN STAFF'S AND OPC'S BRIEFS

Staff and OPC Continue to Wrongly Disregard the Economic Development Benefits of the RSP and Project.

In their briefs, Staff and OPC never address or even mention the evidence of economic development benefits of the RSP and Project presented by the Company. As the subheadings in Staff's brief indicate, Staff views and describes the need and in the public interest within narrow confines of "Energy Shortfall," "Justifying Cost," "Continuing Need for Non-Renewables," "Corporate Renewable Goals," "Revenues vs. Costs," and "Waste." Similarly, OPC's brief ignores the evidence on economic development benefits presented by the Company.

Staff and OPC's continued disregard of the RSP's and the Project's economic development benefits is "short-sighted."[26] As the Company's Senior Director of Economic, Community and Business Development concludes:

> Missouri's economy, which certainly includes the energy sector, does not operate in a vacuum nor does it stay neatly tucked within the borders of our state. Rather, our state, from our smallest communities to our largest metro areas, is competing on a global stage for jobs and investment. Today's economy and its energy needs

[26] Ex. 6P, Robert Dixon Surrebuttal Testimony, at p. 20, l. 16.

> are vastly different from that of over 100 years ago when our company was first formed, and vastly different from even just a decade ago. **Our economic development efforts must keep pace with what the economy is demanding because there are real consequences for individual Missourians.**
>
> Clearly, our large customers and other businesses around the country desire renewable energy generation programs. These customers are some of the largest employers in our state. They provide jobs for literally hundreds of thousands of Missourians, they bring capital investment to communities, and they allow utilities to more efficiently use their infrastructure and cover their large, fixed costs benefitting other Ameren Missouri's customers and people across the state.
>
> Many of these customers have established corporate goals to pursue clean energy and other sustainability initiatives. **We know that access to clean, reliable, and affordable energy is a driving factor in where they will make future investments of capital and create jobs. Approving Ameren Missouri's requests in this case helps to bring those jobs and investment to our communities here in Missouri.**[27]

Staff's and OPC's disregard of a driving factor for future jobs and investment in our state is baffling, and the Company's evidence remains unrebutted by Staff and OPC.

REPLY TO MIEC'S BRIEF

MIEC's Argument for Reduction of the RSP Rate to Reflect PTCs Is Moot.

In MIEC's initial brief in this case, MIEC argues that Ameren Missouri's RSP rate should be adjusted downward to reflect the lower costs of the Project associated with the availability of the Production Tax Credits ("PTCs") under the Inflation Reduction Act.[28] MIEC's argument is moot for two reasons.

First, MIEC's witness Maurice Brubaker materially clarified MIEC's rate reduction request during the evidentiary hearing. Judge Seyer specifically asked Brubaker about the request, and the pertinent exchanges are set out below:

> Q. Okay. On page six in your direct testimony, you -- you assert that -- that due to improved economics resulting from the change in the -- from the Investment Tax Credit plan to the Production Tax Credits plan, it would result -- well, it would

[27] Id. at p. 22, l. 22 – p. 23, l. 15 (**emphasis added**).
[28] MIEC's Initial Reply Brief, at pp. 9 – 10.

result in improved economics that should pass through to the subscribers. Is that -- I'm kind of --

A. Essentially.

Q. -- I'm kind of clumsily saying this.

A. Let me try?

Q. Yeah.

A. Basically I was recognizing that the pricing for the subscription charge in the first place was tied to the cost of the project.

Q. Okay.

A. And so when the cost of the project came down, I thought it would be equitable to recognize that in the level of the subscription charge. That was the basis for -- for that recommendation.

Q. And so do you still maintain that same position today?

A. Subject to what the final economics of the project are. If it turns out that the economics of the project are going to go above what the original charge would have been, then no, I would not -- not be there.

Q. Okay. And like you said, you were here yesterday and heard testimony that project costs have increased, correct?

A. Correct.

Q. And so should those increased project costs pass onto the subscribers?

A. I don't think automatically. Because the subscription price, although tied initially, the basics -- basis for the contract is those charges. And so it's really kind of an obligation on the part of both parties to honor that. And since -- since it's not based on cost-of-service but based on what people will pay for them, I thought it would still be equitable to recognize that unless the cost of the project goes up above what it originally was.

Q. Who -- who in your opinion -- I say who -- should cover those increased project costs? Would it be the ratepayers?

A. The ratepayers. The ratepayers get all the -- all the direct benefits. The ratepayers get the capacity value and the energy value out of the project. The subscribers are

> only getting the intangible benefits in the form of the renewable attributes, which are produced at zero costs.[29]

Thus, since the project costs have increased, MIEC clarified that the current contract, and its current rates/charges, should be honored.

Second, as discussed above, given that it is not anticipated that PTCs will be utilized at all, MIEC's argument for a reduction of the RSP rate to reflect PTCs cost savings is moot.

Respectfully submitted,

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[29] Tr. at p. 298, l. 9 – p. 300, l. 9.

CERTIFICATE OF SERVICE

The undersigned certifies that true and correct copies of the foregoing was served on counsel for all parties of record in this docket via electronic mail (e-mail) on this 17th day of March, 2023.

/s/*James B. Lowery*
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