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**MISSOURI PUBLIC SERVICE COMMISSION**

**FILE NO. EA-2025-0239**

**DIRECT TESTIMONY**

**OF**

**AJAY K. ARORA**

**ON**

**BEHALF OF**

**UNION ELECTRIC COMPANY**

**D/B/A AMEREN MISSOURI**

**St. Louis, Missouri  
August, 2025**

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1                               **I.       INTRODUCTION & SUMMARY OF TESTIMONY**

2           **Q. Please state your name and business address.**

3           A. Ajay K. Arora, Union Electric Company d/b/a Ameren Missouri ("Ameren  
4 Missouri" or "Company"), One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri  
5 63103.

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

7           A. I am a Senior Vice President and the Chief Development Officer for Union Electric  
8 Company d/b/a Ameren Missouri ("Ameren Missouri" or "Company").

9           **Q. Please describe your educational background and employment experience.**

10          A. I received my Bachelor of Science Degree in Chemical Engineering from Panjab  
11 University (India) in May 1992. I received my Master of Business Administration degree  
12 from Tulane University in May 1998. I joined former Ameren Corporation subsidiary,  
13 Ameren Energy, in June 1998 and held trading and structuring positions in Ameren Energy  
14 before supervising the group that priced structured energy products for former Ameren  
15 Corporation subsidiary Ameren Energy Marketing Company's wholesale and retail  
16 customers from 2002 to 2004. From 2004 to 2007, I was responsible for the analytical  
17 group supporting Ameren Missouri's transition into the Midwest Independent  
18 Transmission System Operator, Inc. ("MISO"), including reviewing specific market design  
19 issues in MISO. In 2007, I led the Ameren Missouri Regional Transmission Organization  
20 cost-benefit study that was filed with the Missouri Public Service Commission  
21 ("Commission") in File No. EO-2008-0134, and I assumed responsibility for the  
22 Quantitative Analysis, Integrated Resource Planning, Load Analysis, and Operations  
23 Analysis groups. In January 2008, as part of my role as Director of Corporate Planning, I

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1 assumed the additional responsibility for the Asset and Trading Optimization group  
2 supporting Ameren Missouri. In November 2011, I assumed additional responsibilities for  
3 the corporate Project Management Oversight and Market Risk Management groups. These  
4 groups oversee large utility capital projects and commodity risk management. In November  
5 2014, I assumed responsibility for the Environmental Services department as Vice  
6 President of Environmental Services and Generation Resource Planning. The  
7 Environmental Services department develops environmental policy and provides  
8 environmental compliance support, which includes the areas of energy delivery,  
9 generation, and transmission. In March 2018, I assumed leadership responsibility for  
10 Ameren Missouri's entire non-nuclear generation operations and energy management  
11 function as Vice President of Power Operations and Energy Management. I assumed the  
12 position as Chief Renewable Development Officer in late 2020 and was promoted to Senior  
13 Vice-President and Chief Renewable Development Officer in 2022. In late 2024, I was  
14 named Chief Development Officer and assumed responsibility for the planning and  
15 development of the Company's entire supply-side portfolio, including both dispatchable  
16 and intermittent resources.

17 **Q. Have you previously testified in a proceeding at the Commission or before any**  
18 **other utility regulatory agency?**

19 A. Yes, I have offered testimony before this Commission on multiple occasions. Most  
20 recently in File Nos. EA-2025-0238, ET-2025-0184, EA-2023-0286, EA-2022-0245, EA-  
21 2022-0244, EA-2019-0181, and EA-2021-0202, among others.

1       **Q. What is the purpose of your Direct Testimony?**

2       A. The purpose of my Direct Testimony is to support the Company's Application for a  
3       Certificate of Convenience & Necessity ("CCN") for a 250 megawatt<sup>AC</sup> ("MW") solar  
4       generation facility known as the Reform Solar Project ("the Project"). I will outline how  
5       this Project will support the Company's plans for as much as approximately 2.0 gigawatts  
6       ("GW") of additional demand by 2032, which is outlined in and supported by the  
7       documents submitted with the Company's Notice of Change in Preferred Plan (the "2025  
8       Preferred Resource Plan"). While I discuss a macro view of the Company's supply-side  
9       resource portfolio, Company Witness Matt Michels discusses in his Direct Testimony how  
10      this Project is needed to provide energy and renewable energy credits ("RECs"), while  
11      providing other specific benefits for the Company and its customers.

12       **Q. Please summarize the key reasons the Commission should grant a**  
13      **CCN for the Project.**

14      A. There are several reasons the Commission should grant Ameren Missouri  
15      the requested CCN:

- 16              • The Reform Solar Project is needed to provide reliable service to all of our  
17              customers. As addressed in detail in Company witness Michels' Direct  
18              Testimony, the Company needs significant additional energy to serve its  
19              customers, starting as early as 2027. This shortage of energy is especially  
20              acute due to the expectation that we will, in just the next few years, add 500  
21              megawatts ("MW") or more of load from new large load customers<sup>1</sup> even

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<sup>1</sup> When I use the phrase "large load customers" I am referring to those customers who would qualify as such under the Large Load Customer Rate Plan under review by the Commission in File No. ET-2025-0184.

- 1 before the Reform Solar Project is in service, and within just the next few  
2 years up to another 1.5 GW gigawatts of new load, and possibly more.
- 3 • The Reform Solar Project will provide RECs that the Company can use to  
4 comply with the Missouri Renewable Energy Standard ("RES").  
5 Specifically, over the next decade the Company needs at least 650 MW of  
6 additional renewable energy generation, including 450 MW by 2029. Mr.  
7 Michels discusses the Company's RES needs in his Direct Testimony.
- 8 • The Reform Solar Project is an important component of continuing to  
9 develop a balanced supply-side portfolio to meet customer needs in a  
10 reliable and resilient manner by having 70% of our energy need fulfilled by  
11 dispatchable generation resources, with renewables, including the Reform  
12 Solar Project, along with dispatchable battery energy storage resources,  
13 providing the remaining approximately 30% of our energy need.
- 14 • The Reform Solar Project not only addresses many of the Company's  
15 existing energy needs, but it also addresses further capacity needs, including  
16 because its site has the ability to support a future battery storage project.
- 17 • The Reform Solar project will allow customers to realize the benefit of  
18 significant tax credits, as much as 40-50% of the qualifying investment, thus  
19 substantially lowering the overall cost of adding this needed resource,  
20 making it more affordable for all customers. Given the recent changes in the  
21 law, it especially makes sense to implement renewable projects that  
22 continue to qualify for the tax credits, since many future projects will not.<sup>2</sup>

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<sup>2</sup> As Company witness Wibbenmeyer's Direct Testimony discusses, these tax credits remain available for Reform post-tax credit changes enacted by Congress earlier this summer.

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- 1                   • The Reform Solar Project has economic development benefits. This is  
2                   because demand for clean, reliable, and affordable energy is an important  
3                   factor in determining where businesses locate new jobs and investments.  
4                   Missouri is competing with other states for new jobs and investments from  
5                   businesses that have large energy demands and a need for renewable energy  
6                   to meet their corporate sustainability goals. Commission approval of the  
7                   Reform Solar Project will confirm for prospective large load customers that  
8                   the state is supporting Ameren Missouri's obligation to serve its customers  
9                   by ensuring that Ameren Missouri will have the generation it needs, which  
10                  will position Ameren Missouri well in the national competition to attract  
11                  large load customers to our service territory.
- 12               • The Reform Solar Project is a mature development project that is one of the  
13               important generation resources that can meet the energy needs of the  
14               Company in a timely manner. Each renewable energy project takes 5 to 8  
15               years to develop and construct, complete environmental diligence, obtain  
16               transmission interconnection, acquire real estate, obtain permitting, design,  
17               engineer, procure key equipment, construct, and provide local tax benefits.  
18               The Reform Solar Project has already completed nearly all of these steps.





1 which has served its customers well over time, as discussed in Mr. Michels' Direct  
2 Testimony.

3 **Q. What is driving this load growth?**

4 A. Organic load growth from residential, commercial and industrial customers  
5 as well as new manufacturing and data center loads. Specifically, the Company has already  
6 executed construction agreements for completion of the transmission-level infrastructure  
7 necessary to serve approximately 2.3 GW of new large load customer demand within its  
8 service territory, with customers potentially taking service starting as early as  
9 2026. Moreover, several of the parties that have executed construction agreements have  
10 already requested that we study adding an additional 1.6 GW of demand to the already  
11 anticipated 2.3 GW. Also, we have already received additional transmission study requests  
12 representing approximately 11 GW of new additional load from other potential customers,  
13 bringing the total new load for which we either have construction agreements, or are  
14 studying additional load additions for, to approximately 15 GW. And there is a significant  
15 pipeline of additional potential large load customer additions beyond the approximately 15  
16 GW of potential load I just discussed. While it is very likely the case that not all of this  
17 load will in fact locate and materialize in Ameren Missouri's service territory, it is easy to  
18 see that even if only 5% of this load does materialize, we need additional and timely  
19 dispatchable and renewable generation to provide the energy to serve it.

20 **Q. Are there key challenges that you face in interconnecting with these**  
21 **kinds of customers?**

22 A. Yes. The first challenge we face in being able to serve large load customers  
23 is timely building enough generation so that we have the energy (and capacity) needed to

1 reliably serve all customers while meeting the timelines for ramping up to full demand that  
2 the new customers desire. Timely construction of local transmission infrastructure to  
3 connect the new customers to the electric system can also be a key challenge for utilities.  
4 Another important element for new large load customers is having access to renewable and  
5 carbon-free energy to meet their sustainability goals. This CCN filing addresses all three  
6 of these challenges. First, it contributes to building the generation needed to serve our  
7 customers. Second, it is a mature project with known interconnection and network upgrade  
8 costs, having successfully completed MISO's generation interconnection queue. And third,  
9 it provides these new large load customers with access to Company-owned renewable  
10 energy projects to meet their carbon-free energy goals.

11 **Q. Focusing on the generation that is needed, like Reform, what role do**  
12 **you see the Commission playing?**

13 A. The Commission plays a vital role, because its approval of the generation  
14 we need will demonstrate to prospective large load customers that we can meet their needs.  
15 And since large load customers have options as to where to locate, approval of the CCN  
16 supports the state and Ameren Missouri's ability to compete for their load. We are seeing  
17 numerous jurisdictions across the United States that are experiencing significant interest  
18 from large customers, particularly in the data center sector. While Northern Virginia,  
19 Dallas, Texas, California (with key markets in Ashburn and Silicon Valley), and Chicago  
20 have historically been the most established hubs for these kinds of investments, the growth  
21 in demand for data services is creating many other expansion markets across the United  
22 States, if those markets take the steps needed to serve them. Missouri has a clear  
23 opportunity to be one of these expansion markets. In fact, in the last couple of years, data

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1 center companies have announced significant investments, to the tune of billions of dollars,  
2 in states such as Ohio, Indiana, Mississippi, Louisiana, Wisconsin, and Arizona, to name  
3 just a few. Large data center customers have traditionally preferred to expand into locations  
4 where they already have significant operations. The interest in locating in our state, and in  
5 Ameren Missouri's service territory specifically, presents Missouri and Ameren Missouri  
6 with a huge, once-in-a-lifetime opportunity to attract these kinds of beneficial loads and  
7 the vital economic development and infrastructure investments they will spur in our region,  
8 which can be done in a manner that meets the needs of new customers while also being fair  
9 to all customers. But we must build new generation to take advantage of this  
10 opportunity. This includes new dispatchable generation as well as additional renewable  
11 generation to get 30% energy from renewable energy and thereby provide a path to carbon-  
12 free energy that these new customers desire.

13 **Q. Does the state of Missouri recognize such benefits?**

14 A. Yes, I believe it does, as evidenced by the Department of Economic  
15 Development's engagement to attract such loads and by existing state programs specifically  
16 designed to attract customers who qualify under the Company's large load tariff filing in  
17 File No. ET-2025-0184. But as noted, another key component of serving these customers  
18 is to build the generation needed to serve them in a timely manner, like the Project that is  
19 before the Commission for approval.

20 **Q. You noted earlier that the Company also needs RECs to comply with**  
21 **the Missouri RES. Please explain.**

22 A. As discussed in greater detail in Mr. Michels' Direct Testimony, by 2029  
23 the Company would need an additional 332,000 RECs based upon the load expectations

1 reflected in the Company's 2025 PRP. And even if load growth were less than assumed by  
2 the plan – just 500 MW by 2029- the Company still needs an additional approximately  
3 231,000 RECs by 2029 and over 600,000 by 2032. The Project can supply all of the needed  
4 RECs.

5 **III. THE REFORM SOLAR PROJECT'S ROLE IN AMEREN MISSOURI'S**  
6 **BALANCED SUPPLY-SIDE RESOURCE PORTFOLIO**

7 **Q. In summarizing your key conclusions, you noted that one of the**  
8 **Company's planning goals is to have a balanced portfolio. Please explain why.**

9 A. The Company's goal is to ensure that around 70% of the energy required to  
10 serve all customers at all hours of every year is obtained from dispatchable resources to  
11 maintain reliability. This dispatchable portfolio consists of a mix of baseload and peaking  
12 generation comprised of nuclear, coal, natural gas, and hydro. We plan to obtain the  
13 remaining approximately 30% of required energy from a combination of zero fuel cost  
14 renewable energy resources and dispatchable battery energy storage resources. The Reform  
15 Solar Project is a key part of meeting that 30% goal.

16 **Q. Has the Company determined that providing approximately 30% of**  
17 **the energy its customers need from renewable energy resources is an appropriate**  
18 **level to ensure reliability and cost-effective energy?**

19 A. Yes, we have. Renewable energy projects allow the Company to serve its  
20 customers with zero fuel cost<sup>3</sup> and carbon-free energy. Additionally, renewable projects  
21 that are completed in a timely manner can also benefit the Company's existing customers

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<sup>3</sup> The Company has already had coal plant retirements and will have another retirement in the next several years. The Commission recognizes that zero fuel cost energy resources like Reform are the most cost-effective resources to replace energy from those coal plants. See File No. EA-2022-0245, *Report and Order*, p. 29, Issued April 12, 2023 ("Renewable Generation is the most affordable energy resource to replace coal-fired generation plants").

1 with significant federal tax credits to reduce the cost impact of these generation resources.<sup>4</sup>  
2 Moreover, MISO studies indicate that around 30% renewable generation can be reliably  
3 integrated into the MISO system. However, there is also evidence that once renewable  
4 energy exceeds 35% or so on a system, additional dispatchable resources, that would not  
5 be needed at renewable penetration levels below 35%, may need to be added to maintain  
6 reliability. Considering these facts, the Company determined that maintaining renewable  
7 energy at around 30% strikes an appropriate balance between utilization of zero fuel cost  
8 and carbon free renewables and dispatchable resources, including natural gas-fired and  
9 nuclear resources. This balance will ensure reliability, take advantage of federal tax credits,  
10 and benefit all customers while also helping our existing commercial and industrial  
11 customers and new large load customers achieve their sustainability goals.

12 **Q. What is the Reform Solar Project's role in achieving that balance?**

13 A. There are many reasons the Reform Solar Project is well-aligned with the  
14 Company's obligation to provide reliable and affordable energy to its customers. First, as  
15 discussed above, it meets specific needs, that is the need for energy to serve customers and  
16 the need for RECs for RES compliance. Second, the Project is at a mature stage of  
17 development, with key milestones such as interconnection, environmental, equipment  
18 contract execution, and engineering complete or well underway – substantially reducing  
19 overall development risk and increasing the likelihood of timely execution. These factors  
20 make the Reform Solar Project one of only a few projects that can be built in time to supply  
21 the energy the Company needs to serve its customers when those customers need the

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<sup>4</sup> The Commission has recognized the value of these tax credits. See *Report and Order* File No. EA-2022-0145, pp. 29-30.

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1 energy. Other forms of generation like natural gas combined cycle generation or even  
2 additional simple cycle peaking natural gas generation, beyond the Castle Bluff and Big  
3 Hollow projects, are not likely to get key generation equipment in time to meet energy  
4 needs that noticeably grow starting in 2029. Third, the Reform Solar Project provides zero-  
5 fuel-cost and carbon-free energy that is valuable for meeting the sustainability goals of new  
6 large load customers seeking to locate to the Ameren Missouri service territory. Fourth, as  
7 Company witness Wibbenmeyer's Direct Testimony discusses, the Project is among the  
8 few projects that will be able to take advantage of the lucrative federal tax credits that are  
9 still available, which will mean hundreds of millions of dollars of federal tax credits for the  
10 Company's customers. Fifth, while the primary driver of the Project is not to provide  
11 capacity, the fact is that it does provide critical capacity benefits, especially during the  
12 summer months when the MISO energy market is getting more constrained from a capacity  
13 standpoint to reliably serve customers, as well as providing some winter capacity. And  
14 while our summer capacity position may not show a shortfall, there are benefits of having  
15 some surplus summer capacity, as evidenced by another MISO planning reserve auction,  
16 this time from the summer of 2025, in which capacity prices peaked to \$666.50 per MW-  
17 day. Finally, the site and the interconnection facilities and network upgrades being  
18 implemented to serve the solar project positions the Reform site well to connect 100 MW  
19 – 250 MW of new battery energy storage, which would provide additional winter capacity  
20 at the same location. The addition of battery storage at this location in the future would  
21 also allow the Company to charge the battery project during periods of very low energy  
22 prices in the MISO market and store energy to provide energy during early morning and

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- 1 early evening ramp up periods and on days that the solar project is not producing energy
- 2 to enhance both reliability and affordability for all customers.

3 **Q. Does this conclude your Direct Testimony?**

4 A. Yes

In the Matter of the Application of Union Electric )  
Company d/b/a Ameren Missouri for Permission and )  
Approval and Certificates of Public Convenience and ) File No.: EA-2025-0239  
Necessity Authorizing it to Construct Renewable )  
Generation Facilities. )

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

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

Sworn to me this 29<sup>th</sup> day of August, 2025.