Exhibit No.:

Issue(s): Large Load Power Service

Witness/Type of Exhibit: Bremser/Rebuttal Sponsoring Party: Amazon Data Services, Inc.

File No.: ET-2025-0184

Rebuttal Testimony of Dr. Albert W. Bremser

on behalf of Amazon Data Services, Inc. in Missouri Public Service Commission File No. ET-2025-0184

September 5, 2025

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1	Rebuttal Testimony of
2	Dr. Albert W. Bremser
3	on behalf of Amazon Data Services, Inc.

I. INTRODUCTION AND QUALIFICATIONS

- 5 Q. Please state your name and business address.
- A. My name is Albert W. Bremser. My business address is 11401 Lamar Ave., Overland Park,
 Kansas 66221.
- 8 Q. Who is your employer and what is your position?
- 9 A. Black and Veatch Corporation employs me as a Principal Consultant.
- 10 Q. What are your responsibilities?

- 11 A. My responsibilities include providing advisory services that address the strategic, financial,
 12 policy and regulatory advisory needs of energy industry clients.
- 13 Q. Please describe your education and professional background.
- A. I have a Bachelor of Science in Commerce from the University of Virginia, a Master of 14 15 Business Administration from the University of Pittsburgh, and a Ph.D. in Finance from Virginia Tech. I have a professional designation as a Chartered Financial Analyst (CFA). 16 I am a financial economist with over twenty years of experience involving energy and non-17 energy projects including rate-making and regulatory issues subject to state and federal 18 19 energy regulatory authorities such as the Federal Energy Regulatory Commission ("FERC"). My business background includes four years at FERC as an Energy Industry 20 Analyst in the Office of Administrative Litigation as part of FERC Trial Staff where I was 21 an expert witness on matters involving electric and pipeline transportation tariff filings. In 22 23 the private sector, I work on electric and pipeline proceedings before FERC and before state regulatory commissions as a testifying expert witness or as a non-testifying expert. 24

My work in the energy industry in the electricity and pipeline transportation areas has included new and existing energy infrastructure. I have testified and provided advisory services in the areas of risk and the cost of capital. I have provided advisory services in the areas of committed rate structures and the associated agreements for new pipeline infrastructure, and long-term contractual arrangements involving electric generation. I have been involved in numerous proceedings involving a variety of electricity generation resources such as natural gas-fueled generation, coal generation, wind generation, solar generation, nuclear generation, hydroelectric, co-generation (electricity and steam), and other types of generation facilities. During my professional career, I have reviewed and analyzed documentation related to investment decisions for potential or actual construction of energy infrastructure. I have experience with PJM Interconnection ("PJM"), Midcontinent Independent System Operator, Inc. ("MISO"), the Electric Reliability Council of Texas ("ERCOT"), and the North American Electric Reliability Corporation ("NERC"). I have provided testimony (written or oral) in proceedings, which include FERC, before public utility regulators (New Hampshire, Ohio, Wisconsin, and Virginia), and the US Surface Transportation Board. My curriculum vitae is Schedule AWB-1.

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Q. Have you testified on electric tariffs related to large loads or data centers?

A. Yes. I provided testimony in AEP Ohio's Data Center tariff proceeding¹ and Dominion Virginia's biennial base rate proceeding involving issues regarding large load customers.²

¹ Direct Testimony of Albert W. Bremser, In the Matter of the Application of Ohio Power Company for New Tariffs Related to Data Centers and Mobile Data Centers, Before the Public Utilities Commission of Ohio, Case No. 24-508-EL-ATA, August 29, 2024, available at https://dis.puc.state.oh.us/DocumentRecord.aspx?DocID=7df2e5a4-bb38-4b1e-aa28-050925cd9a27

² Direct Testimony of Albert W. Bremser, Application of Virginia Electric and Power Company for a 2025 biennial review of the rates, terms and conditions for the provision of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia, Virginia State Corporation Commission, Case No. PUR-2025-00058, August 16, 2025, available at https://www.scc.virginia.gov/docketsearch/DOCS/86sf01!.PDF

- 1 Q. Is this the first time you have provided testimony before the Missouri Public Service
- 2 Commission?
- 3 A. Yes.

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II. AMAZON'S INVESTMENT INTEREST IN MISSOURI

- 5 Q. Who are you providing testimony on behalf of in this proceeding?
- 6 A. I am providing this rebuttal testimony on behalf of Amazon Data Services, Inc.
- 7 ("Amazon") as a subsidiary of Amazon.com, Inc. and an affiliate of Amazon Web Services,
- 8 Inc.
- 9 Q. What is Amazon's interest in this proceeding?
- 10 A. Amazon develops and operates data centers to support cloud computing services offered
- by Amazon Web Services. Amazon Web Services has the world's largest and most
- extensive global infrastructure and provides the world's most comprehensive and broadly
- adopted cloud computing services, offering over 240 fully featured services from data
- centers globally.³
- Within the last two years, Amazon has announced more than \$72 billion in planned
- infrastructure investments across multiple states such as Mississippi, Indiana, Ohio,
- Georgia, North Carolina, and Pennsylvania⁴ and is currently evaluating opportunities for
- further investments in additional states, like Missouri.

³ Amazon, What We Do, Amazon Web Services, accessed September 3, 2025, available at https://www.aboutamazon.com/what-we-do/amazon-web-services

⁴ Amazon, AWS plans to invest \$10 billion in Mississippi, the largest capital investment in the state's history, January 24, 2024, available at https://www.aboutamazon.com/news/aws/aws-10-billion-investment-mississippi; Amazon, AWS plans to invest \$11 billion in Indiana, the largest capital investment in the state's history, April 25, 2024, available at https://www.aboutamazon.com/news/aws/aws-indiana-investment-11-billion; Amazon, AWS plans \$10 billion infrastructure investment in Ohio, advancing the future of AI, December 24, 2024, available at https://www.aboutamazon.com/news/aws/aws-continues-to-invest-in-ohio; Amazon, AWS plant to invest at least \$11

Amazon's interest in Missouri stems from several factors: competitive electricity rates, strategic geographic location, available transmission infrastructure, and the state's business-friendly environment. However, the terms and conditions of electric service are critical factors in data center site selection decisions, as these facilities require reliable power with operational and financial flexibility to serve global customers effectively.

6 Q. What does Amazon bring to Missouri as a potential Large Load Customer?

Amazon's data center operations represent significant economic development opportunities for Missouri. Based on global operations, a typical Amazon data center facility creates hundreds of construction jobs and dozens of permanent, high-skilled positions with average salaries significantly above regional medians.⁵ Amazon operates with extremely high reliability requirements with customers depending on 99.99% uptime for business operations.⁶ This translates to a high load factor electricity usage typically more than 75 percent, which provides stable revenue streams for utilities.⁷ Amazon has also committed

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billion in Georgia to expand infrastructure to support AI and cloud technologies, January 7, 2025, available at https://www.aboutamazon.com/news/aws/aws-investment-georgia-ai-cloud-infrastructure; Amazon, Amazon plans to invest \$10 billion in North Carolina to expand cloud computing infrastructure and advance AI innovation, June 4, 2025, available at https://www.aboutamazon.com/news/aws/aws-investment-north-carolina-ai-cloud-infrastructure; and Amazon, Amazon plans to invest \$20 billion in Pennsylvania to expand cloud computing infrastructure and advance AI innovation, June 9, 2025, available at https://www.aboutamazon.com/news/aws/amazon-pennsylvania-investment-cloud-infrastructure-ai-innovation.

⁵Amazon, How Amazon helps data center communities thrive, May 7, 2025, available at https://www.aboutamazon.com/news/aws/amazon-data-center-investment-community-impact

⁶ Amazon, Increasing Scalability and Reducing Costs Using Amazon Auroa Serverless with BMW, accessed September 3, 2025, available at https://aws.amazon.com/solutions/case-studies/bmw-group-aurora-serverless-case-study/; Hykell, Understanding AWS Performance SLAs for Optimized Cloud Costs, accessed September 3, 2025, available at https://hykell.com/kb/cloud-performance/aws-performance-sla/

⁷ For example, Dominion Energy in Virginia has proposed a new customer class of high load customer with a load factor of 75 percent or more. Most of those customers with the 75 percent or more load factor are data centers. Virginia Electric and Power Company, Application for a 2025 biennial review of the rates, terms and conditions for the provision of generation, distribution and transmission services pursuant to § 56-585.1 A of the Code of Virginia, Virginia State Corporation Commission, Case No. PUR-2025-00058, March 31, 2025, docket available at https://www.scc.virginia.gov/docketsearch#caseDocs/146025

to achieving net-zero carbon emissions by 2040, creating opportunities for clean energy development that benefit all customers.⁸

III.TESTIMONY PURPOSE AND SUMMARY OF RECOMMENDATIONS

4 Q. What is the purpose of your testimony?

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This testimony provides Amazon's perspective on Union Electric Company's ("Ameren Missouri" or "Ameren") proposed Large Load Customers ("LLC") Rate Plan⁹ and recommends specific modifications that will enable Amazon and other hyperscale data companies to invest in Missouri while ensuring appropriate cost recovery and customer protection. The proposed LLC Rate Plan includes a proposed Large Primary Service Tariff ("LPS Tariff"), which is Wills Direct Testimony Schedule SMW-D1,¹⁰ the four proposed LLC riders, which is Wills Direct Testimony Schedule SMW-D2,¹¹ and a change to Rider FAC (Fuel and Purchased Power Adjustment Clause), which is Wills Direct Testimony Schedule SMW-D3.¹² In this testimony, section references to the proposed LPS Tariff are to Schedule SMW-D1.

⁸ Amazon, Driving climate solutions, accessed September 3, 2025, available at https://sustainability.aboutamazon.com/climate-solutions

⁹ In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of New or Modified Tariffs for Service to Large Load Customers, Application and Request for Variance, File No. ET-2025-0184, May 14, 2025 filing, available at https://efis.psc.mo.gov/Case/Display/91941. The May 14, 2025 filing has multiple parts, which are listed as items 2 to 6, and a substitute direct testimony filed as item 8. The documents are as follows: (1) Item 2: Application and Request for Variance ("Application Transmittal Letter"); (2) Item 3: Direct Testimony of Ajay K. Arora ("Arora Direct"); (3) Item 4: Direct Testimony of Robert B. Dixon ("Dixon Direct"); (4) Item 5: Direct Testimony of Matt Michels (Public and Confidential); (5) Item 6: Direct Testimony of Steven M. Wills ("Wills Direct); and (6) Item 8: Substitute Direct Testimony of Matt Michels (Public, Confidential and Highly Confidential) ("Michels Direct").

¹⁰ Wills Direct, Schedule SMW-D1, which is MO P.S.C. Schedule No. 6 with Sheet Nos. 61 to 61.33 with different revision numbers for the sheets.

¹¹ Wills Direct, Schedule SMW-D2, which is MO P.S.C. Schedule No. 6 with Sheet Nos. 74 to 74.15. Rider CCAP (Clean Capacity Advancement Program) at Sheet Nos. 74 to 74.3, Rider CEC (Clean Energy Choice Program) at Sheet Nos. 74.4 to 74.6, Rider NEC (Nuclear Energy Credit Program) at Sheet Nos 74.7 to 74.10, and Rider RSP LLC (Renewable Solutions Program – Large Load Customers) at Sheet Nos. 74.11 to 74.15).

¹² Wills Direct, Schedule SMW-D3, which is Rider FAC (Fuel and Purchased Power Adjustment Clause), MO P.S.C. Schedule No. 6, 3rd Revised Sheet No. 27.6. This Schedule is only page and does not include the rest of Rider

1		While Amazon supports the concept of a specialized rate structure for large load customers,
2		and generally supports Ameren's LPS Tariff proposal, several aspects of Ameren's
3		proposal require modification to reflect industry operational realities and regulatory best
4		practices. My testimony is not intended to provide any legal opinions.
5	Q.	Please summarize what actions the Commission should take regarding the Ameren
6		Missouri filing in this proceeding.
7	A.	The Commission should reject the following:
8		• Incorporation of the ESA: The Commission should reject Ameren's proposal
9		to include a pro forma Electric Service Agreement ("ESA") in the LPS Tariff
10		as well as the proposal to require ESA approval by the Commission, which
11		includes a Commission determination of whether each ESA complies with
12		Section 393.130.
13		The Commission should approve (as proposed) the following:
14		• LPS Tariff: The Commission should approve a Large Load Customer sub-class
15		as part of the Service Classification No. 11(M).
16		• Term: The Commission should approve a minimum contract term of fifteen-
17		years as described in section 8.b.
18		• Ramp Schedule and Ramp Demand: The Commission should approve and

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require that the Ramp Schedule and Ramp Demand terms included in ESA

FAC. A current version of Rider FAC is available on the Ameren Missouri website at https://www.ameren.com/media/rates/files/missouri/uecsheet71riderfac.ashx

section 6.2, and the customer flexibility to amend such Ramp Schedule and
Ramp Demand, be included directly in the LPS Tariff. 13
The Commission should approve the following, with clarification:

Minimum Obligations: The Commission should approve the minimum obligation concept in section 8.c. 14 However, Ameren should address how the

- Minimum Obligations: The Commission should approve the minimum obligation concept in section 8.c.¹⁴ However, Ameren should address how the minimum obligation demand is determined and measured,¹⁵ as well as how billing demand is measured and determined with a minimum obligation.¹⁶ Specifically, Ameren should define the time interval for the demand measurement (i.e., one hour, 15-minutes, etc.).
- Large Load Customer Riders: Ameren needs to clarify and support what specific costs are being recovered in the Riders and further clarify that the Riders only recover incremental costs for the renewable or carbon free energy attributes for those Rider specific resources.¹⁷

The Commission should approve the following, with modifications:

• Maximum LLC Capacity; Reduction in Maximum LLC Capacity: The Commission should approve the concept of contracted capacity reduction described in section 8.d with modifications. ¹⁸ The Commission should modify the tariff to allow a one-time capacity reduction up to 30 percent, which

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¹³ Proposed LPS Tariff section 10, ESA section 6.2 of Sheet No. 61.20. Three are two sections of the ESA with the section heading of "Ramp Schedule and Ramp Demand" at section 4.3 on Sheet No. 61.20 and section 6.2 on Sheet No. 61.22.

¹⁴ Proposed LPS Tariff at section 8.c. of Sheet No. 61.5 ("section 8.c").

¹⁵ It is noted that the proposed LPS Tariff has a section 5, which is Billing Demand. However, section 8.c does not reference section 5.

¹⁶ Proposed LPS Tariff section 5, Billing Demand, does not specifically state the time interval for the demand measurement (i.e., on hour, 15-minutes, etc.). This section also does not include language that there is a minimum billing level for certain charges and adjustments.

¹⁷ Rider CCAP, Rider CEC, Rider NEC, and Rider RSP LLC.

¹⁸ Proposed LPS Tariff at section 8.d. of Sheet Nos. 61.5 and 61.6 ("section 8.d").

1		includes the Ramp Period, subject to a 24 month notice period to Ameren. Large	
2		Load Customers should be allowed subsequent contract capacity reductions	
3		subject to negotiation with Ameren. The Commission should change the tariff	
4		to require Ameren Missouri to mitigate the Capacity Reduction Fee in section	
5		8.d.	
6		• Elective Termination: The Commission should approve the concept of	
7		Elective Termination and a Termination Fee with modifications. ¹⁹ The	
8		Commission should also require Ameren to provide support for the Termination	
9		Fee being based on the remaining Ramp Period, and the lesser of 5 years or the	
10		remaining contract term. ²⁰	
11		Schedule AWB-2 sets forth proposed redline edits to the tariff attached to the Wills Direct	
12		Testimony as Schedule SMW-D1 consistent with the recommendations herein. These	
13		redline edits are not exhaustive; upon further clarification by the Company as requested	
14		herein, Amazon reserves the right to make additional redline edits to the proposed tariff.	
15	Q.	Are you sponsoring any exhibits other than this direct testimony?	
16	A.	Yes. I am sponsoring Schedule AWB-1 and Schedule AWB-2.	
17	IV.	RESPONSE TO AMEREN DIRECT TESTIMONY	
18	Q.	How do you respond to Ameren Witness Dixon's economic development arguments?	
19	A.	While Amazon appreciates Ameren's recognition of the economic development potential	
20		from large load customers, witness Dixon's testimony understates the importance of	

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competitive commercial terms in site selection decisions. The data center industry is highly

¹⁹ Proposed LPS Tariff at section 8.e of Sheet Nos. 61.6 and 61.7 ("section 8.e").

²⁰ Proposed LPS Tariff at section 8.e.

competitive and projects locate in areas offering reliable electric service, reasonable electric rates, and operational flexibility.

Witness Dixon's pipeline analysis showing over 30 GW of potential development demonstrates the opportunity, but also highlights the risk. The data center industry builds new projects with development timelines and the investment of significant amount of capital. As a result, regulatory uncertainty or commercially unworkable terms can impact the site selection process. Without commercially reasonable terms, Missouri could risk losing these investments to other states. While Missouri offers many advantages, the proposed tariff terms as structured could place Missouri at a disadvantage relative to other states.

Q. What is your assessment of witness Arora's policy framework?

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12 A. Witness Arora correctly identifies the need for specialized terms and conditions for large 13 load customers, and Amazon agrees with the goal of ensuring customers pay their share of 14 the costs to provide electricity service. However, the implementation details require 15 refinement to achieve these policy objectives effectively.

The concept of revenue certainty to support infrastructure investment is sound, but the specific mechanisms proposed create unnecessary risks and administrative complexity that could deter investment without corresponding benefits to Ameren or other customers.

V. <u>SUMMARY OF AMEREN'S LARGE LOAD CUSTOMER RATE PLAN</u>

- 20 Q. Please summarize Ameren's application in this proceeding.
- A. Ameren's application is for approval of a Large Load Customer ("LLC") Rate Plan that has the following new and modified tariffs:

1. Proposed modifications to the LPS Tariff, which will include new terms and 1 conditions for Large Load Customers. 21 2 2. New tariff riders as an electric service option for Large Load Customers: ²² 3 a. Rider RSP LLC (Renewable Solutions Program – Large Load Customers) 4 b. Rider NEC (Nuclear Energy Credits Program) 5 Rider CCAP (Clean Capacity Advancement Program) 6 d. Rider CEC (Clean Energy Choice Program) 7 3. Changes to the Rider FAC (Fuel Adjustment Clause) under the terms of the 8 LLC Rate Plan that will be implemented in the next general rate review ²³ 9 Ameren is requesting the Commission to issue an order on the proposed LLC Rate Plan on 10 or before December 31, 2025.²⁴ Ameren's application is not part of a general rate 11 proceeding. I note that a general rate proceeding was settled this year prior to the LLC Rate 12 Plan application being filed. The rates from that settled rate case are the rates that appear 13 in the proposed LPS Tariff file in this proceeding.²⁵ 14

²¹ Application Transmittal Letter at 5-6: para. 11. Arora Direct at 14:1-18:14. Wills Direct, Schedule SMW-D1.

²² Application Transmittal Letter at 5-6: para. 11. Arora Direct at 15:16-18:14. Wills Direct, Schedule SMW-D2.

²³ Application Transmittal Letter at 5-6: para. 11. Wills Direct at 51:9-52:2. Wills Direct, Schedule SMW-D3.

²⁴ Application Transmittal Letter at 2: para. 6.

²⁵ Proposed LPS Tariff with the charges appears in the Wills Direct Testimony at Schedule SMW-D1. Missouri Public Service Commission, PSC Approves Agreement in Ameren Missouri Electric Rate Case, April 23, 2025, available at https://psc.mo.gov/Electric/PSC_Approves_Agreement_in_Ameren_Missouri_Electric_Rate_Case--pr-25-33 In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Adjust Its Revenues for Electric Service, Missouri Public Service Commission, File No. ER-2024-0319, available at https://efis.psc.mo.gov/Case/Display/87208

Q. How does Ameren define "Large Load Customers"? 1 Ameren has defined the Large Load Customer subclass as customers that have an expected 2 A. or actual demand level of 100 MW or more, and take service at transmission level voltages 3 (i.e. voltage of more than 115 kilovolts ("kV")).²⁶ 4 Will Large Load Customers be a sub-class within an existing service classification? 5 Q. 6 A. Yes. The proposed Large Load Customer subclass will be part of the customer class receiving service pursuant to the Service Classification No. 11(M) – Large Primary Service 7 Tariff ("LPS Tariff"), which has modifications proposed by Ameren.²⁷ 8 Q. Please summarize the proposed changes to the LPS Tariff. 9 The proposed changes to the LPS Tariff include: 10 A. Defining Large Load Customers as a sub-class of the Service Classification 11 11(M) 12 Minimum obligation charges 13 Voluntarily riders 14 Terms and conditions, and contract provisions 15 Contracts terms with ramp periods 16 Contract termination fees and requirements 17 Capacity reduction fees and requirements 18

²⁶ Wills Direct at 9:14-17. The threshold choice of 100 MW is described at Wills Direct at 9:18-11:4. The transmission voltage level requirement is described at Wills Direct at 11:5-15. The new subclass will be created within the current 11(M) classification as described in Arora Direct at 4-7, and Wills Direct at 3:5-6 and 8:12-13.

²⁷ Wills Direct at 9:12-17. The Proposed LPS Tariff is Schedule SWM-D1 of the Wills Direct.

1 Q. Do any current customers meet the definition of a Large Load Customer?

- 2 A. No. The Wills Direct Testimony describes the threshold of 100 MW as more than the peak
- demand of approximately 32 MW for the system's largest customer.²⁸ As a result, this new
- 4 customer sub-class will consist of new customer accounts, or current customers who
- 5 expand their electricity usage to reach the 100 MW threshold.
- 6 Q. Please explain how the minimum obligation charges are used in the proposed LPS
- 7 Tariff.
- 8 A. The Minimum Obligation is stated as a percentage of Maximum LLC Capacity (i.e.,
- 9 contracted demand), which the proposed LPS Tariff has set at 70 percent. This Minimum
- Obligation is used for three different purposes, which are provided below in Table 1.

²⁸ Wills Direct at 4:18-20, and 10:6-10.

Table 1

Uses of the Minimum Obligation Percentage Within the Proposed LPS Tariff for Payment from the Large Load Customer to Ameren Missouri

		What is the		
	Service	Minimum		
	Status	Obligation used	Proposed LPS Tariff Section	
Number	Situation	for?	Number and Name	
1	Normal monthly service	Normal monthly billing	8.c Minimum Obligation; 10 - ESA 4.4 Minimum LLC Demand	
2	Reducing Maximum LLC Capacity	Calculation of Capacity Reduction Fee	8.d Maximum LLC Capacity; Reduction in Maximum LLC Capacity; 10 – ESA 4.2 Maximum LLC Capacity; Reduction in Maximum LLC Capacity; 10 – ESA Exhibit B	
3	Contract Termination	Calculation of Termination Fee	8.e Elective Termination; 10 – ESA 3.3a Termination Fee; 10 – ESA Exhibit A	

As shown above in Table 1, the Minimum Obligation percentage of Maximum LLC Demand has three different uses with the proposed LPS Tariff. The Service Status Situation number 1 involves setting a minimum level of monthly payment to be received from the customer by Ameren. The purpose of that minimum level of monthly payment is to recover costs incurred to provide electric service that customer. The Service Status Situation numbers 2 and 3 involves a payment from the customer to Ameren for the purpose of reducing electric service partially or completely. The purpose of that payment (Capacity Reduction Fee or Termination Fee) is to recover costs related to electric service for that customer.

1 VI. <u>RECOMMENDATIONS</u>

- 2 A. The Commission Should Reject Ameren's Proposal to Incorporate the Form ESA
 3 and Subsequent ESA Approvals into the LPS Tariff.
- Q. Can you please summary Ameren's Proposal to incorporate a pro forma ESA intothe Tariff?
- 6 A. Yes, under section f. Ameren proposes that the Form of the ESA shall be included in the Tariff under Section 10.

8 Q. Do you agree with this proposal?

No. Ameren should clearly outline which terms should be included in the Tariff and which 9 A. terms are to be negotiated in an ESA between Ameren and the Large Load Customer. For 10 example, Payment Terms included in section j.2 should be outlined in an ESA, not a Tariff. 11 As described in more detail below, Ameren is responsible for ensuring that its proposed 12 Schedule (i.e. the LPS Tariff) complies with the standard set forth in subsection 7 of 13 Section 393.130. The terms necessary for this compliance should be solely included within 14 the Terms of the Tariff, not within an attached ESA. By including the ESA, Ameren is 15 discouraging Large Load Customers who may need flexibility to negotiate on the form of 16 the ESA within the parameters of the Tariff. 17

- Q. Can you please summarize Ameren's Proposal for Commission approval of each ESA?
- A. Yes. Ameren wants each ESA to be approved by the Commission with a risk analysis provided by Ameren. Ameren proposes to provide evidence that the Large Load Customers rates will reflect a representative share of the costs to serve those customers. ²⁹
- Q. Do you have any additional comments on the proposed requirement for the ESA and a risk analysis to be submitted to the Commission?
- A. Yes. Ameren's proposal establishes a "double approval" under which the Commission must first approve the proposed LPS Tariff but subsequently approve every ESA executed under the proposed Tariff. This creates regulatory uncertainty, administrative burden, and competitive disadvantage.

First, requiring the double approval means that potential customers cannot be certain of service availability until after making substantial site investments and improvements. The ESA is signed by the customer after the customer has committed to or done significant planning and investment at the service location where the electric service will be received. Second, the double approval is administratively burdensome. Dixon Direct Testimony describes that there are new and existing business inquiries by the manufacturing industry for 40 projects with an expected demand of 12,691 MW, which is an average demand of more than 300 MW per project.³⁰ For data centers, there are 37 projects with an expected demand of 17,401 MW, which is an average demand of more than 450 MW per project.³¹

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²⁹ Proposed LPS Tariff at section 8.f of Sheet No. 61.7 ("section 8.f"). Wills Direct at 11:21-23, and 44:3-6. Also, Ameren wants the Riders to be subject to Commission approval as well. Wills Direct at 17:19-22.

³⁰ 12,691 MW divide by 40 projects is an average of 317 MW per project.

³¹ 17,401 MW divide by 37 projects is an average of 470 MW per project.

If every ESA requires a risk analysis by Ameren and Commission review and approval, then there will be a significant barrier to a customer's ability to be certain they can actually take electric service from Ameren and a significant administrative burden on the Commission.

The double approval could place Ameren and the State of Missouri in a competitive disadvantage because the majority of other markets allow large customers to commence service under approved tariff terms without individual contract approval processes.

Here, the tariff should contain comprehensive terms and conditions that govern all Large Load Customer service, with ESAs required to be consistent with the Tariff. If the Commission believes some level of monitoring is needed, then Ameren can provide a standardized report to the Commission at a reporting interval the Commission deems appropriate.

Q. Do you have any other concerns with the double approval proposed by Ameren?

A. Yes. It appears to be pursuant to, but inconsistent with statute. Section 393.130.7, RSMo, states:³²

"Each electrical corporation providing electric service to more than two hundred fifty thousand customers shall develop and submit to the commission schedules to include in the electrical corporation's service tariff applicable to customers who are reasonably projected to have above an annual peak demand of one hundred megawatts or more. The schedules should reasonably ensure such customers' rates will reflect the customers' representative share of the costs incurred to serve the customers and prevent other customer

³² Missouri Revisor of Statues, Title XXV Incorporation and Regulation of Certain Utilities and Carriers, Section 393.130, available at https://revisor.mo.gov/main/OneSection.aspx?section=393.130

classes' rates from reflecting any unjust or unreasonable costs arising from service to such customers."

Ameren witness Wills specifically explains that the Company must submit the ESA and provide evidence that the ESA "will prevent other customer classes' rates from reflecting any unjust or unreasonable costs" and further that the Commission can only approve the ESA if it finds the ESA complies with "this Section 8 and the statutory standard is satisfied."³³ However, the statute is clear that what must meet the statutory standard are the schedules themselves, not individual customer ESAs.

Ameren's proposal suggests that the Commission could deny a proposed ESA and therefore a customer's ability to take service. However, the statute plainly says the company "shall" develop and submit these schedules to the Commission for large customers (such that they shall be available to customers who qualify). These inconsistencies, along with the policy considerations above, warrant a different approach.

B. The Commission Should Approve Ameren's Proposed LPS Rate Class, Term, and Inclusion of Ramp Flexibility

- Q. Please summarize Amazon's comments and recommendations regarding Ameren's Large Load Customer Rate Plan.
- Amazon supports creating a Large Load Customer subclass within the LPS Tariff. 34

 Amazon supports a general framework that has Large Load Customers paying their "fair

³³ Proposed LPS Tariff at section 8.f.

³⁴ Wills Direct at 9:14-17. The threshold choice of 100 MW is described at Wills Direct at 9:18-11:4. The transmission voltage level requirement is described at Wills Direct at 11:5-15. The new subclass will be created within the current 11(M) classification as described in Arora Direct at 4-7, and Wills Direct at 3:5-6 and 8:12-13. I note that Wills Direct at 10:1-2 states "First, SB 4 contains this 100 MW threshold in its establishment of a legal requirement for separation of large load customers." SB 4, "Modifies and creates new provisions relating to utilities" was signed into law by the governor on April 9, 2025 with an effective date of August 28, 2025. SB 4 is available at

share" with appropriate terms and conditions.³⁵ Amazon is also supportive of carbon-free electricity options that Large Load Customers can voluntarily chose to use, or not. ³⁶ However, there are certain aspects of Ameren's application that require tariff language confirmation, clarification or modification, or changes in proposed processes.

O. Please explain Amazon's support for creating a new customer sub-class within the Service Classification No. 11(M).

7 A. Amazon supports Ameren creating a customer sub-class within the Service Classification No. 11(M) based on relevant electric service usage characteristics such as expected 8 maximum load (i.e., usage characteristics) and the interconnection voltage level.³⁷ As 9 described in the Wills Direct Testimony, the threshold of 100 MW is more than the peak 10 demand of approximately 32 MW associated with the system's largest customer.³⁸ This 11 means the new customer sub-class will consist of new customer accounts. Also, given the 12 level of investment in distribution, transmission and generation infrastructure that is needed 13 to serve larger customer loads (i.e. usage and peak usage), it is reasonable to create a new 14 customer sub-class. 15

https://www.senate.mo.gov/25info/bts_web/Bill.aspx?SessionType=R&BillID=66. The Revised Statutes of Missouri at Title XXV (Incorporation and Regulation of Certain Utilities and Carriers) Chapter 393 (Gas, Electric, Water, Heating and Sewer Companies) Section 130.7 describes thresholds based on reasonably projected annual peak demand for electric utilities with more than 250,000 customers (100 MW or more), or 250,000 customers or less (50 MW or more).

³⁵ "The Plan should reflect terms that, while meeting these new customers' needs and allowing them to be attracted to the Company's service territory, also provide fair and reasonable assurance that these customers will pay their fair share." Arora Direct 13:1-4. "... these provisions provide significant protection against 'stranded costs" that in theory could otherwise exist." Arora Direct at 24:12-13.

³⁶ Application Transmittal Letter at 5-6: para. 11. Arora Direct at 15:16-18:14.

³⁷ Load is customer usage of electricity in a general sense, but can be more specific to refer to customer demand at a specific point in time or specific time interval (i.e. specific hour).

³⁸ Wills Direct at 4:18-20, and 10:6-10.

Q. Can you describe Ameren's proposal for contract term length requirements?

2 A. Yes. Ameren is proposing a contract term of at least 12 years after the end of the Ramp

Period ("Term"). The Ramp Period shall be no more than 5 years and in no event shall the

total term of the contract, inclusive of the Term and Ramp Period be less than 15 years.

5 Q. Do you recommend any modifications to this proposal?

6 A. Yes. While the minimum contract term of 15 years is reasonable in light of the remainder
7 of the proposal, the Tariff should include language to allow customer flexibility during the

Ramp Period. Specifically, the Tariff should state that the Large Load Customer shall have

the right to require a change to their Ramp Demand for any 12-month period during the

Ramp Period after the first 24 months of the Ramp Period by providing written notice to

Ameren.

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This modification is essential because data center deployment often faces unforeseen technical, market, or regulatory challenges that can affect implementation timelines. The

ability to adjust ramp schedules provides necessary operational flexibility while

maintaining overall commitment structure.

C. The Commission Should Require Clarification on Ameren's Proposed Minimum Obligations and Large Load Customer Riders

- 18 Q. Please explain Amazon's support for requiring Large Load Customers to have 19 contractual commitments and minimum obligation charges.
- A. Amazon supports Ameren's goal of making sure all customers, including Large Load
 Customers, pay their share of the costs to provide electricity service, and that the risks of

"stranded costs" for providing the electricity service are mitigated.³⁹ Amazon supports

Ameren's Large Load Customer conceptual framework to reduce risk to all ratepayers.

3 Q. What clarifications are needed regarding the minimum obligation?

A. It is unclear how the minimum obligation demand or the billing demand is measured and determined under the LPS proposal. The Commission should require Ameren to specifically define the time interval for the demand measurements to provide clarity on the proposal.

8 Q. Can you please summarize Ameren's Large Load Customer Rider Proposal?

Yes, Ameren has proposed four "Large Load Customer Riders" which would apply to
Large Load Customer's service under an applicable ESA "if selected by the Large Load
Customer pursuant to such applicable ESA." The Riders include: (i) Renewable Solutions
Program, (ii) Clean Capacity Advancement Program, (iii) Nuclear Energy Credit Program,
and (iv) Clean Energy Choice Program.

Q. What clarifications are needed regarding the Large Load Customer Rider Proposal?

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A. Ameren needs to clarify and support what specific costs are being recovered in the Riders.

The Riders should only recover incremental costs for the renewable or carbon free energy attributes for those Rider specific resources. Costs not specifically related to the Rider's specific resources should not be recovered in Rider rates, charges and fees. This will ensure that each of the proposed Large Load Customer Riders is actually "voluntary" as proposed in the Tariff.

³⁹ "The Plan should reflect terms that, while meeting these new customers' needs and allowing them to be attracted to the Company's service territory, also provide fair and reasonable assurance that these customers will pay their fair share." Arora Direct 13:1-4. "... these provisions provide significant protection against 'stranded costs" that in theory could otherwise exist." Arora Direct at 24:12-13.

D. The Commission Should Approve, with Modifications, Ameren's Proposed Capacity Reduction, and Elective Termination Can you please summarize Ameren's proposal regarding reductions to contract capacity?

Yes. Under Ameren's proposal, after the first 5 years of the ESA Term, a Large Load

Customer may request a one-time reduction of their Maximum LLC Capacity by up to 10%

by providing Ameren with written notice not less than 24 months prior to the beginning of

the calendar year for which the reduction is requested. Such reduction of capacity is subject

to a Capacity Reduction Fee which is defined in the Customer's ESA.

Q. What modifications do you recommend to this proposal?

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11 A. The Commission should modify the tariff to allow a one-time reduction of up to 30%,
12 which includes the Ramp Period, subject to a 24-month notice period to Ameren, without
13 penalty.

Data center development involves complex technical and market variables that can affect capacity requirements even after initial planning. Technology improvements, changes in computational requirements, or evolving customer demands may necessitate adjustments to initially projected capacity needs. A 30% reduction allowance provides reasonable flexibility while maintaining revenue certainty for the utility. This reduction allowance would further enable Ameren to resell this unused capacity which would mitigate the buildout of new, unnecessary, infrastructure to serve other customers.

Large Load Customers should additionally be allowed to further reduce their contract capacity below the 30% reduction subject to agreement and approval by Ameren.

- 1 Q. Does the Company offer a way for the proposed penalty for capacity reductions
- 2 beyond 10% to be mitigated?
- 3 A. No. Under Ameren's Proposal, Ameren has no obligation to mitigate the amount of any
- 4 Capacity Reduction Fee.
- 5 Q. Do you recommend that the Commission approve mitigation language?
- 6 A. Yes. The Commission should require Ameren to mitigate the Capacity Reduction Fee to
- be consistent with the mitigation for the Elective Termination in section 8.e.
- 8 Q. Can you describe Ameren's Proposal for Elective Termination?
- 9 A. Yes. A Large Load Customer can terminate their ESA effective 24 months after providing
- Ameren with written notice. If a Large Load Customer decides for an Elective
- Termination, then they will make a termination payment to Ameren. 40
- 12 Q. What changes do you recommend regarding the Elective Termination?
- 13 A. The Commission should approve the concept of Elective Termination and a Termination
- 14 Fee with modifications.
- The Commission should require Ameren to provide support for the Termination Fee being
- based on the Minimum LLC Demand for the remaining Ramp Period, and the lesser of 5
- 17 years or the remaining contract term. Taking into consideration the whole of the LPS Tariff
- proposal, Amazon is supportive of the Termination Fee as currently calculated. However,
- as the calculation is currently based on the Minimum Obligation as proposed in Ameren's
- filing, any potential modifications to certain terms in the LPS Tariff that may be adopted

⁴⁰ Arora Direct at 15:8-15.

would affect the Termination Fee calculation. This may result in an inflated Termination Fee and Large Load Customers covering service costs that they did not cause. By requiring that Ameren provide a basis and justification for the current calculation, parties and the Commission will better be able to ensure that any changes to the LPS Tariff through this process would result in commensurate adjustments to the Termination Fee.

VII. <u>CONCLUSION</u>

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- 7 Q. Can you please summarize your recommendations for this proceeding?
- 8 A. The Commission should approve Ameren Missouri's Large Load Rate Plan with the 9 modifications outlined in this testimony. These changes will create a framework that:
 - Attracts significant economic development to Missouri;
 - Ensures appropriate cost recovery for Ameren Missouri;
 - Protects existing customers from inappropriate cost shifting;
 - Provides regulatory certainty for large load investments; and
 - Maintains Commission oversight through comprehensive tariff provisions.
 - The recommended modifications reflect industry practices, and the operational realities of data center operations. Approval of these modifications will position Missouri as a competitive location for large load investments while maintaining the customer protection objectives underlying Ameren's proposal.
 - More specifically, my recommendations are that the Commission should approve the Large Load Customer sub-class as part of Service Classification 11(M), and the definition of a Large Load Customer as proposed by Ameren. The Commission should approve the concepts involved for the terms and conditions. However, modifications are needed. The

Commission should require Ameren to provide additional support or clarify its position for the terms and conditions concepts Ameren wants to implement, which I summarized in Section II. Having an appropriate implementation of the changes to the LPS Tariff by Ameren Missouri will help Ameren Missouri ensure Large Load Customer are paying appropriate rates to recover costs when taking service, or being charged appropriate fees when modifying the contracted demand for electric service. I recommend the Commission not require ESA or voluntarily rider agreements signed by a Large Load Customer and Ameren be subject to Commission approval. The LPS Tariff should have the appropriate terms and conditions in the tariff to allow for those agreements to be signed without Commission approval. Having all the charges and fees, and terms and conditions specified in the tariff will provide commercial certainty and transparency for Large Load Customers taking electric service or planning to take electric service in the Ameren Missouri service territory. Having all the charges and fees, and terms and conditions specified appropriately in the tariff will allow potential or existing Large Load Customers to know the "rules of the road" on the economic aspects of taking electric service from Ameren Missouri.

Q. Does this conclude your rebuttal testimony?

17 A. Yes.

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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 New Modified Tariffs for)	File No. ET-2025-0184				
Service to Large Load Customers)					
AFFIDAVIT OF DR. ALBERT W. BREMSER						

State of Virginia)
) ss
County of Fairfax)

Dr. Albert W. Bremser, being first duly sworn on his oath, states:

- 1. My name is Dr. Albert W. Bremser.
- 2. I am of sound mind and lawful age.
- 3. Attached to this affidavit and made a part hereof for all purposes is my Rebuttal Testimony I prepared on behalf of Amazon Data Services, Inc.
- 4. Under penalty of perjury, I declare that the foregoing is true and correct to the best of my knowledge and belief.

Dr. Albert W. Bremser