

Exhibit No.: ATXI Exhibit 1.0
Issue(s): Project Management
Witness: Clinton Quinn
Type of Exhibit: Direct Testimony
Sponsoring Party: Ameren Transmission
Company of Illinois
File No.: EA-2024-0147
Date Testimony Prepared: February 6, 2024

MISSOURI PUBLIC SERVICE COMMISSION

FILE NO.

EA-2024-0147

DIRECT TESTIMONY

OF

CLINTON QUINN

ON

BEHALF OF

AMEREN TRANSMISSION COMPANY OF ILLINOIS

**St. Louis, Missouri
February, 2024**

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	PURPOSE OF TESTIMONY	2
III.	BACKGROUND ON THE PROJECT	3
IV.	COST DETAILS OF THE PROJECT	5
V.	ADDITIONAL INFORMATION ABOUT THE SWITCHYARD	7
VI.	OVERVIEW OF PROJECT SCHEDULE	8
VII.	MANAGEMENT AND CONSTRUCTION	10
VIII.	OPERATION, MAINTENANCE AND RESTORATION	12
IX.	CONCLUSION	14

DIRECT TESTIMONY
OF
CHRISTOPHER QUINN
FILE NO. EA-2024-0147

INTRODUCTION

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

Q. Please state your name, business address, and current position.

A. My name is Clinton Quinn. My business address is 1901 Chouteau Avenue, St. Louis, MO 63103. I work for Ameren Services Company (“Ameren Services”) as a Project Manager in the Transmission Department. Ameren Services is a subsidiary of Ameren Corporation (“Ameren”) and an affiliate of Ameren Transmission Company of Illinois (“ATXI”), the Applicant in this proceeding.

Q. What are the duties and responsibilities of your position?

A. As a Project Manager, I am responsible for the planning, execution, completion, and operational integration of certain transmission construction projects. I am the project manager for the Fabius Switchyard (the “Project”) being proposed by ATXI.

Q. Please describe your educational background and employment experience.

A. I graduated from Southern Illinois University in Edwardsville in 2016 with a Bachelor of Science in Mechanical Engineering, along with Minors in Civil Engineering and Business. I graduated from Southern Illinois University in Edwardsville in 2019 with a Master of Business Administration. In 2016, I started working for Prairie State Generating Company as a Project Engineer in the Combustion and Rotating Equipment Department, where I designed and

1 managed projects of varying degrees of cost and complexity. In 2021, I began working with
2 Ameren as a Project Manager in the Transmission Department where I have worked since.

3 **Q. Have you previously provided testimony before the Missouri Public Service**
4 **Commission (“Commission”)?**

5 A. No.

6 **I. PURPOSE OF TESTIMONY**

7 **Q. Are you familiar with the Project for which ATXI is seeking a CCN in this**
8 **proceeding?**

9 A. Yes, ATXI requests a CCN authorizing it to construct, own operate and maintain a
10 new, 345 kV switching station – the Fabius Switchyard – and the associated facilities, all of which
11 will be located in Knox County along the existing Maywood-Zachary 345 kV transmission line [a
12 segment of the Mark Twain Transmission Project]. The station will be constructed on land that
13 will be owned by ATXI and located immediately adjacent to the Maywood-Zachary transmission
14 line. The switchyard will be constructed pursuant to an Amended and Restated Generator
15 Interconnection Agreement ("GIA") with Northeast Missouri Wind, LLC ("NEMO Wind" or
16 "Interconnection Customer") and will serve as the point-of-interconnection for NEMO Wind's 290
17 [net] megawatt (“MW”) wind generation project. That project is designated in MISO's Generation
18 Interconnection Queue as project J1025. A copy of the GIA is attached to my testimony as
19 Schedule CQ-01 (Public and Confidential version).

20 **Q. What is the purpose of your direct testimony in this proceeding?**

21 A. The purpose of my testimony is to provide an overview of the Project including
22 how ATXI will construct, finance and operate the Project facilities.

23 **Q. Are you sponsoring any schedules with your testimony?**

- 1 A. Yes, I am sponsoring the following:
- 2 • Schedule CQ-01 – Amended and Restated Generation Interconnection Agreement
- 3 (Public and Confidential)
- 4 • Schedule CQ-02 – Fabius Plans and Specifications (Confidential)

5 **II. BACKGROUND ON THE PROJECT**

6 **Q. Can you provide some additional background information about the Project**

7 **and the associated renewable development?**

8 A. Yes. NEMO Wind is developing a utility-scale wind project in Northeast Missouri.

9 Once complete, that facility will generate up to 290 MW of energy to be injected onto the grid. As

10 described in the GIA, the generating facility will be composed of one-hundred-thirty-two (132)

11 Vestas V120 wind turbine units, rated at 2.2 MW each. NEMO Wind will be required to install a

12 collection system and a collection substation, with two (2) 34.5/345 kV generator step-up

13 transformers. NEMO Wind will also be required to construct a generator lead line to deliver the

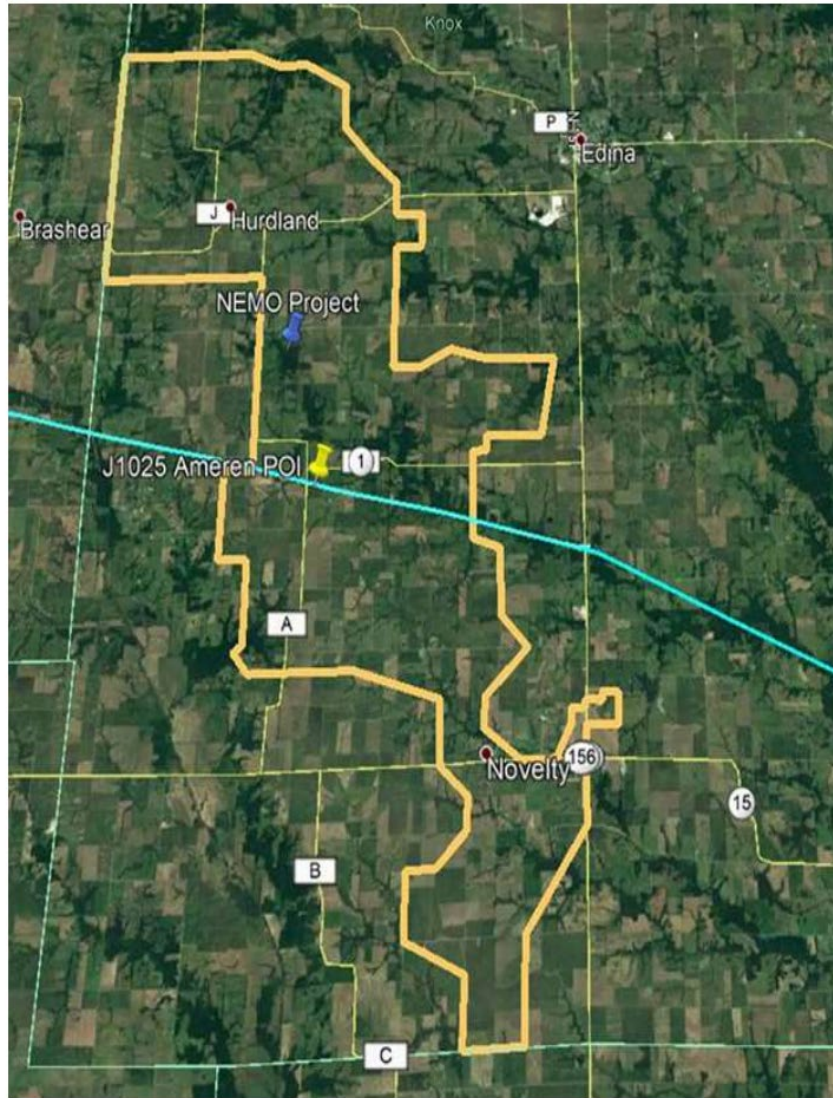
14 energy to the point-of-interconnection, the Fabius Switchyard. The map below, labeled as Figure

15 1, shows an approximate outline of the wind field, as well as the approximate location of the Fabius

16 Switchyard along the Maywood-Zachary 345 kV transmission line.

1 **Figure 1.**

A1-2: Interconnection Customer Generating Facility Site Map



2

3 ATXI is engaged in the project as a Transmission Owner operating under the generator
4 interconnection processes outlined in MISO's FERC-approved tariffs. Those processes led to the
5 execution of the GIA.

III. COST DETAILS OF THE PROJECT

Q. What is the anticipated cost of the Project?

A. In order to answer that question, it is important to understand the different components necessary to interconnect the wind facility. Those components include (1) the construction of the Fabius Switchyard itself, (2) the construction of Transmission Owner Interconnection Facilities ("TOIF") at the Fabius Switchyard, and (3) line work necessary to "cut" the existing Maywood-Zachary 345 kV transmission line and re-terminate it at Fabius. These elements constitute the Project for which ATXI is seeking a CCN in this case. Per the GIA, the estimated cost of those elements was \$10,715,000. The interconnection will also trigger some work on the terminal equipment at the electrically adjacent Zachary Substation (south of Kirksville). The estimated cost of that work was \$262,000, bringing the total, originally-estimated cost of the work ATXI will perform under the GIA to \$10,977,000. The Figure 2 below table, extracted from the GIA, shows the breakdown of the various cost elements:

Figure 2.

Exhibit A5. Facilities to be Constructed by Transmission Owner

Type	Facilities to be Constructed by the Transmission Owner	Cost Estimate **
Interconnection Facilities	Construct Transmission Owner's Interconnection Facilities at 345kV Fabius Substation	\$1,024,000
Stand Alone Network Upgrade ***	Construct 345kV Fabius Substation	\$8,790,000
Network Upgrade ***	Cut the Maywood-Zachary 345 kV transmission line to connect 345kV Fabius Substation	\$901,000
Network Upgrade ***	Upgrade Terminal Equipment at the Zachery substation	\$262,000
Total:		\$10,977,000

** Estimated costs are in 2020 dollars, do not include tax gross-up or escalation, and are accurate to ±20% for the assumed location of the 345kV Fabius substation.

*** To be funded by Transmission Owner and subject to a Facilities Service Agreement between Transmission Owner and Interconnection Customer under which Transmission Owner will collect 90% of its Revenue Requirement for the actual cost of the Network Upgrades from the Interconnection Customer. Transmission Owner will recover the remaining 10% in accordance with Attachment FF of the Tariff.

1 **Q. Can you please describe the cost treatment of the various elements?**

2 A. Yes. Generators bear different types of responsibility for different types of
3 upgrades. As applied to this Project, NEMO Wind will pay 100% of the TOIF and will pay 90%
4 of the other costs, with the remaining 10% allocated to the Ameren Missouri Pricing Zone. The
5 Figure 3 below table, also extracted from the GIA, shows the breakdown of the cost elements that
6 will be allocated to the Ameren Missouri Pricing Zone based on the 90/10 split:

7 **Figure 3.**

Exhibit A9. Facilities Subject to Transmission Owner Reimbursement pursuant to Attachment FF

Type	Facilities to be Constructed by the Transmission Owner	Cost Estimate **
Stand Alone Network Upgrade ***	Construct the 345kV Fabius Substation	\$8,790,000
Network Upgrade ***	Cut the Maywood-Zachary 345 kV transmission line to connect the 345kV Fabius Substation	\$901,000
Network Upgrade ***	Upgrade Relays at Zachary substation	\$262,000
TOTAL		\$9,953,000

** Estimated costs are in 2020 dollars, do not include escalation or gross-up for income taxes, and are accurate to ±20% for the assumed location of the J1025 Interconnection Switching Station.

*** To be funded by Transmission Owner and subject to a Facilities Service Agreement between Transmission Owner and Interconnection Customer under which Transmission Owner will collect 90% of its Revenue Requirement for the actual cost of the Network Upgrades from the Interconnection Customer. Transmission Owner will recover the remaining 10% in accordance with Attachment FF of the Tariff.

8

9 **Q. How was the Project cost determined?**

10 A. Pursuant to MISO's Generator Interconnection processes, design information and a
11 detailed cost estimate was developed. The cost estimate parameters were quantified in part by
12 assessing how inflationary demand has affected services, material, and equipment pricing.

1 Material cost estimates were based on recent proposals from like-kind projects. This includes
2 proposals for 345 kV breakers, disconnect switches, steel poles, control enclosures and relays, etc.
3 Similarly, construction cost estimates were based on the total number and general type of each
4 asset in conjunction with historical values for labor using data from projects of comparable size.
5 Using this methodology, an estimated cost of \$13 million was derived.

6 **Q. The GIA indicates that all of these costs were estimated in 2020 dollars. Do**
7 **you have any idea what these costs are today?**

8 A. Using the practices described above, the costs described herein and included in the
9 GIA have been formally updated by the Ameren Cost Engineering team. Given inflationary
10 pressures and the generally rising cost environment, Ameren has estimated that the final costs will
11 be closer to \$13 million (with the potential to be 10-15% higher as we receive bids from vendors
12 and contractors and as we progress with Project execution), versus the initial \$11 million described
13 in the GIA. However, the Interconnection Customer will still be responsible for the actual cost of
14 the facilities involved, subject to the 90/10 split described above.

15 **IV. ADDITIONAL INFORMATION ABOUT THE SWITCHYARD**

16 **Q. Can you please provide some additional information about the switchyard?**

17 A. Yes. The Fabius Switchyard will be constructed on a site that will be acquired by
18 NEMO Wind and transferred, in fee, to ATXI. The Fabius Switchyard will be constructed in a
19 ring bus configuration with three-line terminal positions and room for one additional future
20 connection should one be required.¹ The diagram showing the preliminary layout of the station
21 on the parcel is included on Original Sheet No. 96 of the Confidential version of the Schedule CQ-
22 01 GIA. Original Sheet Nos. 87-89 of the GIA list the major materials associated with the station

¹ There are no other projects in the MISO Generator Interconnection Queue currently proposing to connect to Fabius.

1 as well as outline the general roles and responsibilities of the parties with respect to the site itself.
2 More detailed plans and specification for the station are attached to this testimony as Schedule
3 CQ-02 (Confidential). I would estimate that these plans and specs represent a design package that
4 is 90% complete.

5 **Q. Are there any other specifics you think are important to note?**

6 A. I'd like to explain further how this Project will interact with the facilities that were
7 constructed as a part of the Mark Twain Transmission Project. As parties may recall, Mark Twain
8 was ultimately constructed as a double circuit 345/161 kV line, with ATXI owning the 345 kV
9 facilities and the local transmission cooperative owning the 161 kV facilities. I think it is important
10 to note that Fabius will be located on the south side of the Mark Twain line, representing the side
11 closest to the 345 kV circuit. That will help reduce operational or physical interference with the
12 non-ATXI 161 kV circuit.

13 **V. OVERVIEW OF PROJECT SCHEDULE**

14 **Q. What is the planned in-service date for the Project?**

15 A. The goal is for the station to be complete and providing backfeed by June 1, 2025.
16 This date is known as the "TO Ready Date" and is the main objective in terms of ATXI's
17 performance. The COD for the generating facility itself is scheduled to be November 15, 2025.

18 **Q. By when does ATXI request that the Commission approve its application for**
19 **a CCN?**

20 A. May 31, 2024.

21 **Q. Why is that date significant?**

22 A. Assuming a 30-day effective date associated with the Commission's order, that is
23 the date by which an order would need to be issued to facilitate ATXI's July 1, 2024 construction

1 start date. As most of the activities in the schedule are interrelated, it is important that the Project
2 stays on schedule in order to help facilitate the generator's target COD.

3 **Q. Please provide an overview of the anticipated schedule for the Project.**

4 A. A milestone table listing the significant dates and activities associated with the
5 Project is include as Appendix B to the GIA. Please see Original Sheet Nos. 111-124. Some of
6 those activities have been completed and some have not been. Below is a list of some significant
7 remaining milestones:

- 8 • NEMO Wind to begin site preparation – April 2024
- 9 • Site turnover – June 1, 2024
- 10 • ATXI start of construction - July 1, 2024
- 11 • NEMO Wind connects lead line to station arbor – May 2, 2025
- 12 • ATXI ties-in station to Maywood-Zachary – May 17, 2025
- 13 • Backfeed / TO Ready Date – June 1, 2025
- 14 • COD – November 15, 2025

15 **Q. Are there any other schedule-related points to raise?**

16 A. Just that the schedule is subject to the customary set of qualifiers contained in the
17 GIA. Please see Original Sheet No. 124 of the GIA. Those qualifiers note, among other items,
18 that the schedule is dependent on factors including weather, outage availability and material
19 procurement.

20 **Q. Please describe the regulatory approvals required for this Project.**

21 A. Outside of the CCN, this Project may require federal, state and local permitting
22 which generally include items like environmental permits and road-related approvals.
23 Environmental surveys and studies will also be necessary to comply with various environmental

1 laws (Endangered Species Act, Clean Water Act, etc.). Some of those permits may be obtained
2 during the pendency of the CCN case. Others may come later in project development. ATXI is
3 committed to working with all regulatory authorities to ensure we have all of the necessary permits
4 and approvals to develop the Project.

5 **VI. MANAGEMENT AND CONSTRUCTION**

6 **Q. How does ATXI intend to construct the Project?**

7 A. The Project will be constructed using a Design-Bid-Build process managed by
8 Ameren Services. In this traditional approach to project delivery, the ultimate owner arranges for
9 the completion of the design. In the bid phase, the owner then coordinates the bidding of the
10 materials and any labor necessary for the Project based on the design. The owner then selects the
11 preferred vendors and orders materials. Finally, the build phase requires the owner to coordinate
12 the receipt of the materials and manage construction, including the activities of any construction
13 contractors.

14 **Q. Why does ATXI intend to use contractors to construct the Project?**

15 A. Using contractors is the most efficient and cost-effective way for ATXI to construct
16 projects such as this one. It would be cost-prohibitive and inefficient to permanently employ the
17 internal staff necessary to support the peak manpower requirements associated with all
18 transmission line and substation projects. Therefore, as it has routinely done in the past, Ameren
19 Services, on behalf of ATXI, will utilize contractors to construct the Project.

20 **Q. How will ATXI select contractors for the Project?**

21 A. Ameren Services, on behalf of ATXI, will use a formal sourcing process to secure
22 bids for the labor necessary to construct the Project. Generally, the sourcing process is comprised
23 of: (i) formation of a contract development team to identify and write the scope of work to be

1 completed, identification of qualified contractors for bidding, and the contractor selection criteria
2 necessary; (ii) evaluation and acceptance of the statements of qualifications and bids received from
3 those interested in the work as scoped; and (iii) negotiation of the terms and conditions most
4 favorable to ATXI. This rigorous sourcing process assures Ameren Services secures the best bid
5 for efficient and effective construction.

6 **Q. Please explain how ATXI will ensure adequate and efficient construction of**
7 **the Project.**

8 A. Ameren Services, on behalf of ATXI, has strong project management emphasis and
9 experience. Ameren Services has documented corporate project oversight policies and procedures
10 that govern all phases of transmission line projects, including this Project. These policies and
11 procedures are consistent with the Project Management Institute’s Project Management Book of
12 Knowledge (“PMBOK”), which is an ANSI standard. Ameren Services’ policies describe key
13 steps in ensuring adequate and efficient construction, such as engineering design calculation
14 checking, constructability reviews, project risk registers with defined risk mitigation plans, and
15 fully integrated logic- driven schedules. Further, monthly status reports with key project health
16 metrics are reviewed with management. The monthly status reports identify issues affecting project
17 execution, potential high impact risks, and cost and schedule performance.

18 **Q. Please explain how ATXI will supervise construction of the Project.**

19 A. Ameren Services’ Transmission Construction Services group will have primary
20 responsibility for job site supervision during construction of the Project. In addition to this
21 supervision, employees engaged in design engineering, project controls, and safety will also
22 oversee construction. Finally, construction contractors will be continuously managed through field
23 inspections, testing (as required), and construction review.

1 **Q. Will ATXI ensure that the Project is designed and constructed in accordance**
2 **with all applicable laws and regulations?**

3 A. Yes. The Ameren Services personnel involved in the design and construction of
4 the Project are regularly involved in the design and construction of transmission lines and
5 substations in Missouri. As such, they are aware of the laws and regulations applicable to such
6 design and construction. When changes are made to these laws and regulations, Ameren Services
7 employees involved in regulatory issues advise those affected by the changes to implement any
8 modifications in process or procedure necessary to stay compliant. Through its experience and the
9 process to address changes, Ameren Services and ATXI will ensure that they comply with all
10 applicable federal and state regulations and orders of the Commission, including the National
11 Electrical Safety Code (“NESC”).

12 **Q. What is ATXI’s capability to efficiently manage and supervise construction of**
13 **the Project?**

14 A. As described above, ATXI utilizes services provided by Ameren Services, and thus
15 is capable of efficiently managing and supervising construction of the Project. Ameren Services
16 and its personnel, on behalf of its transmission-owning affiliates, has successfully built many
17 transmission line and substation projects. ATXI will leverage this experience to help ensure that
18 the Project is designed and constructed in accordance with all applicable federal, state and local
19 regulations and the NESC.

20
21 **VII. OPERATION, MAINTENANCE AND RESTORATION**

22 **Q. Please provide an overview of ATXI’s plans for operating the Project.**

23 A. ATXI will obtain operations and maintenance services from Ameren Services once
24 the Project is complete. Ameren Services team, which is comprised of North American Electric

1 Reliability Corporation (“NERC”)-certified System Operators with substantial experience
2 performing the Transmission Operator and Balancing Authority tasks, is providing these same
3 services to ATXI for other transmission sub and switching stations owned by ATXI. Ameren
4 Services maintains a primary control center that will conduct all operational switching and
5 coordination with adjacent and interconnected systems. Once the Project is placed into service,
6 it will be continuously monitored through SCADA by the control center. The control center is
7 staffed around the clock by system operators that are certified by NERC. The system operators
8 are required to maintain their certification through a combination of computer based training and
9 live system simulation drills. Ameren Services also maintains backup control centers in the
10 unlikely event that the primary control center must be evacuated to minimize any potential
11 disruption to operating the transmission system. Operation will be compliant with applicable state
12 and federal law, FERC-approved NERC Standards and other applicable requirements.

13 **Q. Please provide an overview of ATXI’s plans for maintaining the Project.**

14 Specifically with respect to substation maintenance, Ameren subsidiaries currently own
15 and operate over 300 substations that contain transmission class equipment. Ameren Services and
16 other Ameren operating subsidiaries maintain in-house substation maintenance expertise as well
17 as operations and maintenance personnel at locations spread throughout Missouri and Illinois. All
18 transmission substations are inspected routinely and the individual equipment contained therein
19 (breakers, etc.) is subject to an internal substation maintenance strategy setting equipment-specific
20 maintenance expectations. Substation equipment is maintained to meet or exceed requirements
21 set by NERC, and Ameren Services maintains documentation verifying this compliance, as well
22 as information documenting the intervals at which maintenance activities are performed and the
23 scope of work executed on any maintenance projects or visits. Any issues identified during

1 substation inspections will be given a priority as provided by internal maintenance standards and
2 a remediation action will be scheduled based on that priority.

3 **Q. Please provide an overview of ATXI's plans for restoration of safe and**
4 **adequate service after significant, unplanned/forced outages of the Project.**

5 A. Ameren Services has documented processes governing responses to unplanned
6 outages. Ameren Services will apply these procedures to the Project by clearly defining roles and
7 responsibilities across its experienced group of subject matter experts.

8 Ameren Services operators will monitor the status of the Project 24/7. If an unplanned
9 outage occurs, subject matter experts will be assigned to review the outage data, utilize fault
10 location information, dispatch field resources for make safe activities and to assess damage, and
11 determine material and labor resources necessary for the safest and most efficient restoration.
12 Ameren Services maintains a close relationship with multiple contract partners and tracks their
13 staffing levels on Ameren projects on a continual basis. This information is used to determine the
14 best resources to respond to the situation. Ameren Services also has access to an experienced staff
15 of internal lineman that can respond to storm damage if necessary.

16 **VIII. CONCLUSION**

17 **Q. Does this conclude your direct testimony?**

18 A. Yes, it does

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In The Matter of the Application of Ameren)	
Transmission Company of Illinois for a)	
Certificate of Convenience and Necessity)	
Under 393.170.1, RSMo Relating to)	Case No. EA-2024-0147
Transmission Investments in Northeast)	
Missouri)	

AFFIDAVIT

1. My name is Clinton Quinn. I am a Project Manager for Ameren Services, which is a subsidiary of Ameren Corporation and an affiliate of Ameren Transmission Company of Illinois, the Applicant in the above-captioned proceeding.
2. I have read the above and foregoing Direct Testimony and the statements contained therein are true and correct to the best of my information, knowledge, and belief.
3. I am authorized to make this statement on behalf of Ameren Transmission Company of Illinois.
4. Under penalty of perjury, I declare that the foregoing is true and correct to the best of my knowledge and belief.

/s/ Clinton Quinn

Clinton Quinn
Project Manager
Ameren Services

Date: February 5, 2024