



Designated Entity Pre-Qualification Filing by Ameren

On behalf of its affiliates

ATX East, LLC and
Ameren Transmission Company of Illinois

09/23/2019

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1. Introduction

Ameren Corporation (hereinafter "Ameren") submits this pre-qualification application under the terms of the PJM Amended and Restated Operating Agreement, Schedule 6. Section 1.5.8(a) and PJM Manual 14F Pre-Qualification Process. Ameren requests to confirm our pre-qualified status as a designated entity for Ameren Corporation, ATX East, LLC, and Ameren Transmission Company of Illinois. This application will highlight the qualifications, experience, capabilities, and financial strength to deliver transmission projects in a timely and cost-effective manner of the Ameren family of companies. Ameren's experience and expertise in transmission planning, construction, operations, and maintenance make Ameren qualified to develop projects in the PJM region.

2. Name and Address of the Entities Including Points of Contact

Ameren Corporation
1901 Chouteau Avenue
St. Louis, MO 63103

ATX East, LLC
1901 Chouteau Avenue
St. Louis, MO 63103

**Ameren Transmission Company of
Illinois**
1901 Chouteau Avenue
St. Louis, MO 63103

Shawn Schukar
President
Ameren Transmission Company, LLC
314-554-2981 (office)
SSchukar@ameren.com

Sean Black
Director, Transmission Business Development
Ameren Services Company
314-554-3844 (office)
sblack2@ameren.com

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3. Entity Overview

Ameren, a Fortune 500 company that trades on the New York Stock Exchange under the symbol AEE, is among the nation's largest investor-owned electric and gas utilities with more than \$20 billion in assets. Ameren was created by the year-end 1997 merger of Union Electric Company (UE) and CIPSCO, Inc. Ameren grew in 2003 with the acquisition of CILCORP, Inc. and again in 2004 with the acquisition of Illinois Power Company (IP). ATX East, LLC (ATX East), Ameren Transmission Company LLC (ATX), and Ameren Transmission Company of Illinois (ATXI) were formed to develop and invest in electric transmission infrastructure. UE, Ameren Illinois Company, d/b/a Ameren Illinois (Ameren Illinois) (which resulted from the merger of Central Illinois Public Service Company, Central Illinois Light Company, and Illinois Power Company), and ATXI currently operate as transmission-owning members of MISO. Ameren owns 100% of the common stock of each company.

Ameren's utility operating subsidiaries include the largest electric utility in Missouri (i.e. UE) and the second largest in Illinois (i.e. Ameren Illinois). Together they provide energy services to 2.4 million electric and 0.9 million natural gas customers throughout a 64,000 square-mile territory. Ameren prides itself on operating safely and maintaining financial strength while providing reliable, reasonably priced energy in an environmentally responsible fashion. Ameren's FERC-Regulated Transmission Rate Base in Illinois as of the end of 2018 is \$2.8 Billion. In addition, Ameren has FERC-Regulated Transmission in Missouri that is not reported separately. Ameren is currently developing over \$2.4 billion of transmission projects through 2023.

Ameren operates two balancing authority areas, AMMO (which includes but is not limited to Ameren Missouri's customers), and AMIL (which includes but is not limited to Ameren Illinois' customers). Ameren currently owns and operates over 4,730 miles of 138 kV line, over 800 miles of 161 kV line, around 140 miles of 230 kV line and over 2,300 miles of 345 kV transmission line. Ameren has placed over 500 miles of new transmission lines in service on newly acquired right-of-way within the last five years. In summary, Ameren's utility operating subsidiaries own and operate approximately 8,000 miles of high voltage transmission lines and substations rated at 138kV and above with voltages ranging from 138kV to 345kV and approximately 10,300 megawatts of generating capacity from a mix of coal, nuclear, natural gas, oil, and renewable resources. Through its utility operating subsidiaries, Ameren has over 100 years of experience in siting, designing, constructing, operating, and maintaining transmission systems across Missouri, Illinois, and Iowa.

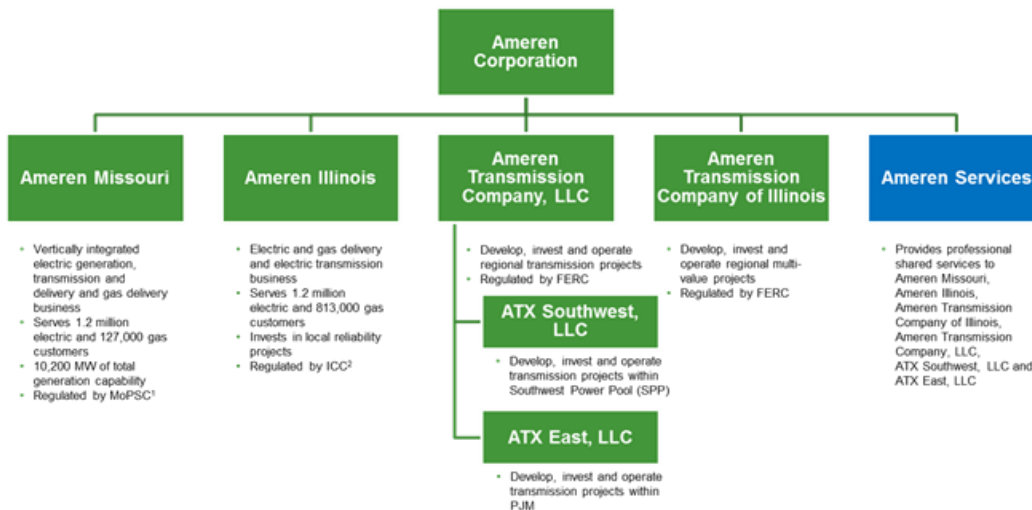
Two types of Ameren affiliate companies own transmission facilities: a vertically integrated utility (UE) and transmission owning utilities (Ameren Illinois and ATXI). Ameren Transmission Company LLC, (ATX) was formed specifically to develop, own, construct, acquire, operate, lease and otherwise manage Ameren Corporation's strategic investment in FERC-regulated electric transmission infrastructure across the United States, in areas

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that are outside of Ameren Corporation's retail service territory. ATX currently has two operating subsidiaries:

- ATX Southwest, LLC was formed to develop, invest and operate transmission projects within the Southwest Power Pool (SPP);
- ATX East, LLC was formed to develop, invest and operate transmission projects within PJM;

The figure below depicts the relationship of Ameren with the subsidiaries mentioned above:



Business and technical services related to transmission planning, development, construction, operations, and maintenance are provided to these utility operating subsidiaries through Ameren Services Company (AMS). AMS is an operating subsidiary that was formed by Ameren in 1999 and currently employs around 1,400 professionals. For over 16 years, AMS has provided shared services to support the development, operation and maintenance of electric generation, transmission and distribution infrastructure to Ameren Missouri, Ameren Illinois, and ATXI. AMS currently provides a full-time staff of around 350 professionals that work in transmission project management, engineering, construction management, safety, quality, commissioning, and operations and maintenance. In addition, AMS provides access to subject matter experts in other functional areas, including: real estate, environmental and finance. Through the resources provided by AMS, Ameren and its' operating subsidiaries have demonstrated successful experience in constructing, operating and maintaining large transmission projects with a very high degree of complexity.

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4. Technical and Engineering Qualifications

The Ameren family of companies (collectively Ameren) is qualified in the fields of planning, design, construction, operations, and maintenance of electric transmission facilities. Ameren's experience in operating electric transmission facilities dates back to the early 1900s and includes expertise in the transmission areas of planning; design; line routing and siting; rights-of-way acquisition; safety; construction; project management; operations and maintenance of transmission, substation, and distribution facilities; vegetation management; system protection; relay and control; and NERC compliance. Ameren's team of engineers, project managers, skilled craftsmen, and business professionals have a long history of designing, financing, constructing, operating, and maintaining large-scale transmission facilities. Ameren's engineering and technical teams have developed the electric transmission system supporting Central and Eastern Missouri as well as Central and Southern Illinois.

The following list highlights Ameren's technical and engineering qualifications:

- Transmission planning
- Transmission operations
 - 24x7 control center
 - NERC certified operators
- Transmission and substations
- Construction and maintenance
- Emergency response and restoration
- Project management
- Real estate acquisition
- Spare equipment

5. Experience: Development, Construction, Maintenance, & Operations

Ameren has over 100 years of experience in developing, siting, designing, constructing, owning and operating, alone or with partners, electric transmission infrastructure to improve reliability, provide access to renewable energy resources, enhance the efficiency of regional energy markets, help pave the way to a smarter grid, and bring significant jobs and other economic benefits to a region. In addition, Ameren has developed and maintained numerous transmission interconnections with 15 separate transmission operators. These transmission facilities ensure reliable and continuous flows of electricity for Ameren's customers as well as neighboring utilities and electrical cooperatives.

Ameren's in-house transmission project management, engineering and construction management teams save third party costs. Ameren's ability to originate project financing at very attractive rates, and, importantly, its ability to lend its frame agreements for transmission equipment procurement has allowed it to execute transmission projects that

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provide benefits to its customers at costs that are extremely competitive with any region of the U.S. In the five-year period between 2014 and 2018, Ameren Transmission executed a \$3.7 billion project portfolio to within 1% of budget. For all projects, including those outside of our retail service territory, Ameren prefers to use local subcontractors and labor to the greatest extent possible.

Ameren has experience developing, constructing, maintaining, and operating transmission facilities of all common types including wood pole, lattice steel tower, steel pole, and concrete pole construction. In addition, Ameren operates and maintains 28 extra-long span major river transmission line crossings.

Ameren's internal resources are supplemented by a large array of contractors and consultants that also regularly perform these activities under special agreement with Ameren. At any time multiple suppliers in each technical area are maintained under contract to allow for multiple responders as necessary.

Ameren is in the final stages of completing the construction of three major transmission projects in Illinois and Missouri that, combined, include over 500 miles of 345kV transmission lines. These three projects: Illinois Rivers, Mark Twain, and Spoon River (further summarized below) are now facilitating the delivery of renewable energy, improving reliability and providing economic and efficiency benefits.

Illinois Rivers Project

This project, which is scheduled to be completed in December 2020, involves the construction of a 345-kilovolt line that extends from a new substation near Palmyra, Missouri, across the Mississippi River to Quincy, Illinois and continues east across Illinois to the Indiana border where the line will tie into a substation owned by Duke Energy. At an estimated cost of \$1.4 billion, the complexity and scale of this project are summarized below:

- Ten substations were constructed or expanded, including: five greenfield substations, four brownfield substations and one greenfield switching station
- Nine new line segments, eight of which have been successfully completed and placed in service, totaling 375 miles of 345 kV transmission line
- Construction of three major river crossings:
 - One crossing of the Mississippi River; 1-1/2 miles long with a 2,600 ft. river span
 - Two Illinois River crossings; one over 3/4 mile and one 1-1/3 mile with a 3,800 ft. river span
- Acquired property rights for over 1,380 tracts of land from 1,145 landowners
 - Over 8,000 Acres of Easements
 - Over 1,000 Acres of clearing
- Constructed approximately 2,300 foundations and structures
 - Foundations 7' – 12' diameter by 30' – 60' in depth

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- Over 200,000 cubic yards of concrete
- Tallest structure (by the river crossing) is 476 feet in height.
- Over 350 scheduled outages were required to make all interconnections, with 98% of those outages completed on time.
- Managed the project cost to within 1% of the budget that was established in 2014.

This project included the largest transmission structures that have been constructed by Ameren. The taller of the four towers required to cross the Illinois River on the Meredosia-Ipava line segment are 486 feet in height, with a span of 3,800 feet between the large towers and 7,300 feet between the dead end towers. This river crossing is highlighted in a short video about the project that is available using the following link:

[Illinois Rivers Project Video](#)

Spoon River Project

The Ameren Transmission Company of Illinois (ATXI), has completed the construction of the Spoon River Transmission Project, a 44-mile, 345 kV transmission line spanning between Galesburg and Peoria in Illinois. Ameren developed a strategic communication and outreach plan for the project in early 2014. The plan served as a foundation for the routing team to pursue an open stakeholder outreach effort, providing various opportunities for landowners, community representatives, agencies, and non-governmental organizations to be involved in the routing process. Ameren used various communication tools to inform stakeholders and solicit their feedback. Outreach events included focus group workshops, community representative forums, and open houses. These events were held during and in support of route selection. In addition, stakeholder feedback was welcomed and incorporated into the process throughout the entire route development process. Stakeholders had the opportunities to reach the project team through the project hotline and website, and on the website they were able to review the most current project information. Thanks to the cooperation and collaboration of landowners, communities and contractors ATXI was able to deliver the project nine months ahead of schedule and under the budgeted cost of \$150 million. Learn more about this successful project by watching a video using the following link:

[Spoon River Project Video](#)

Mark Twain Project

This project consists of a new, approximately 60-mile long, 345 kV transmission line between Maywood Substation, near Palmyra, Missouri and the new Zachary Substation to be constructed as part of this project near Kirksville, MO. A new 35-mile long, 345 kV transmission line will also be built north from the Zachary substation to the Iowa border. The estimated total project cost is \$250 million.

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To support the development of this project, Ameren negotiated a strategic partnership with a Northeast Power – a member of Associated Electric Cooperative - to successfully site the line and secure all required regulatory and county approvals necessary to construct the project. Under this partnership, approximately 59 miles of the Mark Twain transmission line will be co-located with Northeast Power's existing 161 kV transmission line. To accomplish this, ATXI will remove the current wooden H-frame transmission facilities and replace them with new steel structures; the vast majority of which will be monopole in design. ATXI will pay for the poles, insulators and hardware.

In addition, ATXI co-located a second section of this transmission line with Ameren Missouri's existing 161 kV transmission line running from Kirksville, MO to the Iowa border.

This approach created a "win-win" solution. The line will be constructed in a manner that minimizes the need for new property rights. And, landowners living along the existing Northeast Power and Ameren Missouri lines will benefit from less burden on farmland – due to the reduced number of poles and the elimination of guy wires and anchors – and new easement payments. The project is currently on budget and on schedule to complete in December 2019.

A partial list of other, recent projects is listed in the following table:

Stage	State	Project Name	Description
Completed	IL	Fargo-Maple Ridge 345 kV Line	Fargo-Maple Ridge 345 kV Line – New 16 mile 345 kV 3000 A Line. Constructed 345 KV expansions of the Fargo and Mapleridge substations.
Completed	MO	Lutesville-Heritage 345kV Line	Lutesville-Heritage 345kV Line – New 13 mile 345 kV 3000 A Line. Constructed a new 345/161 kV Heritage substation and added a 345 kV terminal at Lutesville.
Completed	MO	Clark-Osage 138kV Reconductor	Clark-Osage 138kV Reconductor – Reconductored 95 miles of a 138kV line and replaced 24 steel lattice towers with steel monopoles
Completed	IL	Grand Tower-Makanda – 138 kV Line Rebuild	Grand Tower-Makanda – 138 kV Line Rebuild - Rebuilt 17 miles of a 138 kV wood-H frame line through the Shawnee National Forest.
Completed	IL / MO	Venice – Campbell 138 kV River Crossing	Venice – Campbell 138 kV River Crossing – Constructed a new 138kV river crossing over the Mississippi river. Added

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Stage	State	Project Name	Description
			138kV terminal positions at two substations.
Completed	MO	Cahokia-Buck Knob – 138 kV Reconductor	Cahokia-Buck Knob – 138 kV Reconductor - Reconductored 28 miles of a 138 kV line and replaced 25 structures with steel monopoles. Expanded the existing Dupo Ferry substation to a 138 kV, four position, 2000 A ring bus and retired the existing Buck Knob substation.
Under Construction	IL	Jarvis - 345/138 kV Substation	Jarvis - 345/138 kV Substation – Construct a new 345/138 kV Jarvis substation. Construct a new 138 kV Kren switching station. Reroute 345 kV and 138 kV lines into the new substations.
Under Construction	IL	Decatur-Bloomington – 138 kV Line Rebuild	Decatur-Bloomington – 138 kV Line Rebuild – Rebuild 43 miles of 138 kV lattice towers with steel monopoles.

Ameren reports statistics for transmission lines having nominal voltages at or above 132kV in annual FERC Form 1 filings for its three major utilities: UE, Ameren Illinois Company (AIC), and Ameren Transmission Company of Illinois (ATXI). Links to Ameren’s most recent FERC Form 1 filings are provided below.

Union Electric Company 2018 FERC Form 1	UE FERC FORM 1
Ameren Illinois Company 2018 FERC Form 1	AIC FERC FORM 1
Ameren Transmission Company of Illinois 2018 FERC Form 1	ATXI FERC FORM 1

6. Standardized Practices

Ameren is fully committed to compliance with standardized construction, maintenance, and operating practices. Standards set by North American Electric Reliability Corporation (NERC), SERC Reliability Corporation (SERC), Occupational Safety & Health Administration (OSHA), National Electrical Safety Code (NESC), Institute for Electrical and Electronics Engineers (IEEE), American National Standards Institute (ANSI), as well as other regulatory and standards setting organizations are the basic components in a culture of compliance at Ameren.

Ameren currently adheres to standardized operating processes for internal Ameren processes as well as those of other operating entities consistent with NERC Standards relating to coordinated operation. Ameren internal processes govern normal, emergency, and abnormal conditions. As to external processes, Ameren adheres to operating practices of PJM as a neighboring Balancing Authority (BA) and Transmission Operator (TOP), and with MISO, its Reliability Coordinator (RC). Additionally, Ameren adheres to good utility practice in the absence of formal operating practice processes.

Ameren has developed Standard Specifications, Design Criteria, and Guidelines that assure a consistent approach will be followed in the design and construction of transmission lines and substations. These construction specifications are issued with each job to the Ameren crew or the contractor crew. Each job is monitored throughout the construction phase by a construction supervisor to assure the construction meets Ameren's engineering standards and specifications. Prior to energizing, each project is inspected by engineering, maintenance, and forestry to assure that the project was constructed as per all Ameren Standards, Design Criteria, and Guidelines. Any deficiencies found either during construction or upon final inspection are added to a punch-list, subsequently corrected, and then verified as properly corrected prior to the transmission line or substation equipment being released to Ameren Transmission Operations for start-up. A written Commissioning (start-up) procedure is then followed to assure the equipment is energized in the proper sequence. During the commissioning, testing/measurements are performed as required and the equipment verified to be functioning properly prior to an official release to the operations group for service.

Examples of Design and Construction standards are as follows:

- 30 Transmission Line Design Specifications
- 23 Transmission Line Guidelines
- 14 Transmission Line Design Criteria
- 18 Transmission Line Construction Inspection Checklist
- 97 Substation Design Guides, Material/Equipment/Construction Specifications and numerous standard drawings

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Ameren has developed procedures to support compliance with NERC reliability and planning standards. For example, Ameren's Transmission Interconnections group is responsible for compliance with the NERC Facility Rating Methodology standard (FAC-008-3), the NERC standard to determine and communicate System Operating Limits (FAC-014-2), and the NERC planning standards (TPL Standards 001 through 004). Documents have been created detailing the procedures followed to meet compliance for each of these standards.

Many of the criteria that are used to develop the Ameren system exceed NERC reliability standards from both a steady-state and a dynamics perspective. For example, areas where Ameren planning criteria is more robust than the NERC planning standards include:

- N-2 contingency events involving 345 kV circuits or higher will not allow for interruption of Firm Transmission Service or loss of load.
- Limits to dropping load for some coincident (P3-P7) transmission outages
- Minimize the use of special protection systems to meet reliability standards
- Maintain margins between contingency flow and emergency ratings for incremental transfer capability (simultaneous and non-simultaneous)
- No allowance for high-speed reclosing of 345 kV circuits to maintain stability
- Stability to be maintained for double line to ground faults (2LG) with delayed clearing

7. Financials

Recent Ameren Annual Reports can be found at the following links (press Ctrl and Click link to open):

[Q2 – 2019 Form 10-Q](#)

[2018 Ameren Annual Report](#)

[2017 Ameren Annual Report](#)

[2016 Ameren Annual Report](#)

All recent Ameren SEC Filings can be found at this link (press Ctrl and Click link to open):

[Ameren SEC Filings](#)

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The following table presents the principal credit ratings for Ameren Corporation by Moody's, S&P, and Fitch as of August 31, 2019:

	Moody's	S&P	Fitch
Ameren:			
Issuer(Moody's) / Corporate Credit (S&P) / Issuer Default (Fitch) rating	Baa1	BBB+	BBB+
Senior Unsecured Debt	Baa1	BBB	BBB+
Commercial Paper	P-2	A-2	F2

8. Consolidated Transmission Owners Agreement

Ameren Corp. or its designated affiliate will sign the Consolidated Transmission Owner's Agreement if they become a Designated Entity.

9. Address and Timely Remedy Failure of Facilities

Ameren is constantly prepared to address emergencies and equipment failures on the high voltage transmission system with a focus on the safe and expedient return of electric service. Ameren maintains an internal staff of labor resources, equipment, supervision and engineering solely dedicated to construction, maintenance, and failure response to the 138kV and above transmission system. Ameren's control center and emergency response establishment are staffed 24x7, 365 days a year and ready to respond to system emergencies. Employees, contractors, consultants, equipment and material are available for response at all times. Ameren's internal resources are supplemented by a large array of contractors and consultants that also regularly perform maintenance activities under special agreement with Ameren. At any time multiple suppliers in each technical area are maintained under contract to allow for multiple responders as necessary.

Ameren maintains a large stock of material specifically reserved for failure response. This stock is sized based on in-service plant and can be scaled as needed for coverage of the system. In addition, Ameren maintains a map-based database of all transmission line assets to aid in ongoing maintenance and to provide fast response to unforeseen system events.

Ameren participates with industry associations such as Edison Electric Institute (EEI) and the Midwest Mutual Assistance Group (MMAG) that allow for resource and material sharing during large scale emergency events. Shared resources and material can be rapidly deployed in varying levels depending on the extent of the emergency. In addition, Ameren works with EEI and MMAG to seek continuous improvement and ensure the deployment of industry best-practices.

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Utilizing the previously mentioned resources, Ameren's emergency response teams identify damaged facilities, isolate the impacted facilities, perform damage assessments, and develop action plans to return the facilities to normal operation. Action plans focus on the permanent repair of parts and equipment at damaged facilities. However, temporary solutions may need to be employed on an interim basis to accelerate restoration.

10. Experience: Rights-of-Way

Ameren has a substantial full-time internal staff dedicated to researching, acquiring, and managing its real property assets, which include fee owned properties, transmission and distribution rights-of-way and other miscellaneous property rights. This group has personnel throughout the Ameren service areas with numerous acquisition efforts underway at all times. In the last several years Ameren has acquired hundreds of miles of transmission right of way in both Illinois and Missouri. The Real Estate Department works very closely with Ameren's Planning, Stakeholder Relations, Engineering, Environmental Services, Legal, Governmental Affairs and Communications departments to either verify existing rights-of-way or acquire new rights-of-way and real property interests necessary to advance pending projects, as well as sustain, modify, and improve existing facilities.

In addition, Ameren has experience exercising its eminent domain rights in Illinois and Missouri. The Ameren Real Estate Department has considerable experience working with the state regulatory commissions and the local court system to ensure all necessary property rights are acquired in a fair, equitable and timely manner to keep projects on schedule.