

Vectren

PJM Pre-qualification Application

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1.0 INTRODUCTION

To qualify for future projects within PJM, Vectren Utility Holdings, Inc. (Vectren) submits this document to the PJM Office of the Interconnection to fulfill the pre-qualification criteria outlined in Section 1.5.8(a) of Schedule 6 of the Amended and Restated Operating Agreement of PJM Interconnection, LLC.

Vectren is an energy holding company headquartered in Evansville, Indiana. Through its energy delivery subsidiaries, Vectren has served the energy needs of Indiana and Ohio residents for over 100 years. Vectren currently serves more than one million natural gas customers across 74 counties located in Indiana and west-central Ohio as well as 143,000 electric customers across seven counties in southwestern Indiana. In addition to Vectren's electric transmission and distribution services, Vectren's electric generation portfolio includes five coal-fired base load units, six natural gas peaking units, and a landfill gas-fired generating station. Vectren employs more than 1,900 people and more than 5,500 when including Vectren's nonutility entities.

2.0 APPLICANT INFORMATION

Legal Name of Applicant:

Vectren Utility Holdings, Inc.

Applicant Corporate Address:

Vectren Corporation
One Vectren Square
Evansville, IN 47708

Applicant Primary Contact:

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3.0 TECHNICAL AND ENGINEERING QUALIFICATIONS

“Technical and engineering qualifications of the entity or its affiliate, partner, or parent company.”

Vectren is experienced with developing, designing, and implementing electric transmission and substation projects. Vectren has internal personnel with expertise in the fields of system planning, electric transmission and substation design, environmental, system protection and relaying, SCADA, distribution design, asset management, project management, and GIS.

Vectren’s Electric Transmission and Substation Engineering Department consists of substation and transmission engineers averaging over 30 years of experience in design. This talented group is responsible for both in-house project engineering as well as engineering, surveying, and construction contractor oversight. Vectren engineers are experienced with the latest design software and are knowledgeable of the latest industry best practices and current design standards through regular training.

4.0 PROJECT EXECUTION EXPERIENCE

“Demonstrated experience of the entity or its affiliate, partner, or parent company to develop, construct, maintain, and operate transmission facilities. Including a list or other evidence of transmission facilities previously developed regarding construction, maintenance, or operation of transmission facilities both inside and outside of the PJM Region.”

Within the MISO footprint, Vectren plans, designs, constructs, owns, operates, and maintains a portfolio of approximately 1,000 miles of electric transmission facilities operating at 69kV, 138kV, and 345kV. Vectren has been an active MISO member since its inception and not only understands the MISO processes, Vectren participates regularly in MISO committees and working groups including those for the Transmission Planner (TP), Transmission Owner (TO), and Transmission Operator (TOP) functions. Vectren understands and realizes the benefits of collaborative efforts with Regional Transmission Operators. As a MISO member, Vectren has proposed and implemented projects to solve regional system issues. A sample of these projects includes the following:

- Duff Substation - A 345/138kV substation placed in service in 2004
- Francisco Substation – A 345/138kV substation placed in service in 2007
- Gibson–A.B. Brown 345kV Line – A 38 mile long 345kV transmission line in Indiana, connecting Duke’s Gibson Generating Station to Vectren’s A.B. Brown Generating Station. This line was placed in service in 2010.

- A.B. Brown– Reid 345kV Line – A 26 mile long 345kV transmission line between the A.B. Brown Generating Station in Indiana and Big Rivers Electric Corporation’s Reid Substation in Kentucky. This line was placed in service in 2012.
- A.B. Brown 138kV Reactor – A 138kV reactor installed at A.B. Brown Generating Station and placed in service in 2015.

As a Qualified Transmission Developer in MISO, Vectren continues to plan for and expand our transmission assets. Vectren has recently submitted a joint development proposal for MISO’s first competitive transmission project (Duff-Coleman) as a part of FERC Order 1000. Vectren will also design and construct the substation terminal work at the Duff Substation for this project.

5.0 PREVIOUS CONSTRUCTION AND OPERATING PRACTICES

“Previous record of the entity or its affiliate, partner, or parent company to adhere to standardized construction, maintenance and operating practices.”

Vectren designs and constructs its transmission and substation facilities in accordance with the latest industry standards and best utility practices. Adherence to industry standards includes those of the IEEE, NESC, ASTM, ANSI, and ASCE. Vectren also maintains in-house construction standards for all contractors and in-house crews to follow standard work procedures.

Vectren operates and maintains its facilities per MISO and NERC requirements. Vectren’s dedicated electric compliance department oversees all NERC compliance requirements to ensure Vectren is operating in full compliance with applicable NERC standards.

6.0 CONSTRUCTION, MAINTENANCE, AND OPERATING CAPABILITIES

“Capability of the entity or its affiliate, partner, or parent company to adhere to standardized construction, maintenance and operating practices.”

Vectren has a long history of complying with and designing to industry best practices and standards pertaining to construction, maintenance, and the operation of our transmission and substation facilities. Through our engineering and compliance departments as described in Sections 3 and 5, Vectren will continue to adhere to the latest industry standards and NERC standards and requirements.

7.0 FINANCES AND CREDITWORTHINESS

“Financial statements of the entity or its affiliate, partner, or parent company. Please provide the most recent fiscal quarter, as well as the most recent three fiscal years, or the period of

existence of the entity, if shorter, or such other evidence demonstrating an entity's current and expected financial capability acceptable to the Office of the Interconnection."

Vectren's 2015 Form 10-K was filed with the SEC and includes the audited financial statements and footnotes, including its affiliates. The 10-K Form can be found on Vectren's Investor Relations website at <http://investors.vectren.com/corporateprofile.aspx?iid=4057065>

Vectren's credit ratings are as follows:

Vectren's Credit Ratings	2015	2014	2013
Standard and Poor's	A-	A-	A-
Moody's	A2	A2	A3

8.0 COMMITMENT TO EXECUTE CONSOLIDATED TRANSMISSION OWNERS AGREEMENT

"Commitment by the entity to execute the Consolidated Transmission Owners Agreement, if the entity becomes a Designated Entity."

If made a designated entity, Vectren hereby commits to execute the Consolidated Transmission Owners Agreement per the requirement of the PJM Operating Agreement, Schedule 6, Section 1.5.8(a)(1)(vii).

9.0 EXPERIENCE OPERATING AND MAINTAINING TRANSMISSION FACILITIES

"Evidence demonstrating the ability of the entity to address and timely remedy failure of facilities."

Vectren is experienced and ready to address system emergencies and facility damage. Vectren has operated electric distribution, transmission, and substation facilities for over 100 years and has procedures in place to address system emergencies. Vectren currently owns, operates, and maintains a variety of electric transmission line facilities totaling nearly 1,000 circuit miles as well as over 100 substations, as detailed in the following table.

Transmission Operating Voltage	Circuit Miles	Substations¹
69 kV	555	94
138 kV	374	26
345 kV	64	3

¹ kV level of substations represents the high-side terminal design voltage

Vectren's standard of construction and timely response to system outages has resulted in superior reliability for our electric customers. In 2014, Vectren was ranked in the top 95th percentile for electric reliability and recognized by the PA Consulting Group as "Top Ranked Midsize Utility in the nation for electric reliability". Vectren's operating practices are described in further detail as follows.

9.1 SAFETY

Vectren recognizes that safety is a way of life both on and off the job and is fully committed to protecting the health and safety of our employees, contractors, and the communities we serve. This strong safety culture drives Vectren's day-to-day work and Vectren encourages dialogue with stakeholders, including employees, contractors and the public.

Vectren has established a safety management system for its utilities, including its electric utility. Vectren has, as part of its safety management system, a safety department, led by the Vice-President of Safety and System Integrity, a safety director, and a safety staff located throughout our service territory and at our electric generating stations. Vectren's Safety Group members' qualifications include Certified Safety Professional, Certified Occupational Hearing Conservationist, and Certification for Fall Prevention. This safety group develops and implements safety policies, rules, processes and procedures and supports quality management program audits of Vectren electric and gas contractors.

9.2 PREVENTATIVE AND CORRECTIVE MAINTENANCE PRACTICES

Vectren is committed to a targeted inspection and maintenance program for its various electric transmission facilities. Vectren's preventative and predictive maintenance programs are comprehensive and include regular field inspections for vegetation management, encroachments, pole and insulator inspections which include visual, thermal (IR), corona (UV), and radio interference (RF) inspection. Vectren's EMS and Distribution OMS systems track maintenance activities and create preventative maintenance orders which are tracked in an extensive Maximo asset management system that is integrated into Vectren's GIS system.

Vectren employs transmission line specialists whose focus is the inspection and field oversight of work on the electric transmission system. These personnel have an average experience of 35 years in the electric industry.

9.3 FORCED OUTAGE RESPONSE CAPABILITIES

As a Transmission Owner, Vectren understands the need for timely and accurate assessment of emergency outage situations. These assessments and actions lead to safe, efficient outage response and restoration activities. Outage assessments are coordinated through Vectren's existing Transmission System Operations and local Electric Field Operations Groups.

The Vectren Transmission System Operations (TSO) team works with MISO real-time operations for Vectren's facilities that are currently under MISO control. Vectren has a Primary Control Center (PCC) staffed and operated 24 hours a day, 365 days a year with NERC certified operators. Vectren also maintains a Backup Control Center (BCC). Both control centers have SCADA and EMS systems integrated with MISO for rapid and efficient coordination. TSO's operators are trained on operating guidelines and operator actions that can be taken to resolve any issues in a timely manner.

9.4 EMERGENCY REPAIR CAPABILITIES

Vectren maintains both in-house and multiple contractor resources on site for normal construction work. These resources are available to rapidly mobilize and address emergency repair needs. Through coordination with TSO, field resources are directed to assess and begin addressing system damage in a timely fashion. These on site resources may be augmented by additional construction support through either additional contractor support or response from mutual aid sources, depending on the level of response needed. Vectren is a member of the Great Lakes Regional Assistance Group and the Midwest Mutual Assistance Group and would call upon these resources if needed.

Vectren recently exercised this need during the 2009 Ice Storm, which caused widespread damage to Vectren's electric system and resulted in over half of our electric customers being without power. Through Vectren's rapid response, the majority of these customers were restored within days and all customers within one week. This was accomplished through Vectren's successful management of over 1,000 construction contract personnel and over 80 tree trimming contract crews.

Vectren also maintains multiple storage yards with spare line and substation equipment for emergency needs. Spare steel structures, conductor, insulators, transformers, and other items are maintained at a responsible level for maintenance and emergency needs. Vectren also has access to local supplier warehouses for rapid material delivery in catastrophic scenarios.

10.0 RIGHT OF WAY ACQUISITION EXPERIENCE AND CAPABILITIES

"Description of the experience of the entity in acquiring rights of way."

Vectren has extensive experience in land acquisition for large electric and gas transmission projects and our policies for right-of-way procurement are equitable and fair. Vectren is experienced in using both in-house and external right-of-way agents to negotiate for new and expanded right-of-way as well as local and regional contractors for land appraisal, surveying, title work, and legal counsel.

Vectren's long history with these contractors has demonstrated quality and dependable work products across many Vectren gas and electric transmission projects. Three recent examples of

project work include the 13 mile (60 parcel) Eagle Valley Pipeline project near Martinsville, Indiana, the 3.3 mile (48 parcel) 69kV electric transmission line project in Evansville, Indiana, and the 20 mile (115 parcel) Rex Pipeline Project near Danville, Indiana. Out of these recent projects, less than 3% of parcels went to condemnation due to diligent negotiations and fair engagement with land owners.

Vectren has refined an expedited approach to right-of-way, conducting good faith negotiations with property owners, and engaging in early mediation as part of its exercise of eminent domain. Early mediation is an effective tool for timely resolution of eminent domain litigation. Vectren recognizes the necessity of acquiring right-of-way as expeditiously and as early as possible.