

# **The Dayton Power and Light Company**

## **Pre-Qualification Filing**

**July 2018**

**(i) Name and address of the entity including a point of contact**

The Dayton Power and Light Company  
1065 Woodman Drive  
Dayton, Ohio 45432

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**(ii) Technical and engineering qualifications of the entity or its affiliate, partner, or parent company**

The Dayton Power and Light Company (Dayton Power) has substantial internal expertise in the areas of transmission planning, engineering and design, protective relaying, power siting, project management, NERC compliance, and safety. Additionally, we have agreements with a number of industry-leading consulting firms to assist as needed. Firms we have contracted for transmission line and substation design include Commonwealth Associates, Enercon Services, Laramore Douglass and Popham, Ampirical Solutions, Burns & McDonnell, and Wells Engineering.

Over the past approximately 25 years, we have completed over \$400 million of transmission and generation capital projects, including building new transmission lines and substations, and upgrading existing facilities. In particular, we completed a major EHV transmission line in Ohio---a 40 mile long, double circuit 345 kV line. The strong and reliable generation and transmission system we have put in place enabled us to withstand the 2003 blackout without any customer outages, even though the blackout originated directly to the north of Dayton Power's control zone, and spread to the east/northeast.

We are currently in the process of implementing approximately \$120 million in PJM/FERC-approved RTEP transmission projects in the Dayton zone.

Dayton Power has earned a rating as having an excellent culture of NERC compliance and excellent results in our 693, cyber-security, and PJM TO/TOP audits.

Safety is the first value and highest priority objective for AES overall and all of its subsidiaries, including Dayton Power.

- (iii) 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.**

Dayton Power is a regulated electric utility, which has been operating for over 100 years, and currently provides transmission and distribution service to more than 500,000 retail customers in a 6,000 square-mile service area in 24 counties of West Central Ohio. Our transmission system consists of approximately 1,000 miles of 345 kV and 380 miles of 138 kV facilities, with a 69 kV sub-transmission network of 990 miles. We have twenty-one transmission substations, ten of which are major 345 kV substations with transformation to 138 kV and 69 kV, including nine 345/138 kV transformers and two 345/69kV transformers.

Dayton Power completed a major, new EHV project---the approximately 40-mile Foster-Bath 345 kV Circuit. This double-circuit 345 kV project was constructed in record time of less than one year. Other examples of major transmission projects include:

- Kirby-Blue Jacket 138 kV Interconnection

- Clark-Urbana 138 kV Interconnection
- Sugarcreek 345 kV Substation
- Atlanta 345 kV Substation
- Bath 345 kV Substation
- Shelby 345 kV Substation
- Adkins 345 kV Substation
- Montpelier 345 kV Substation
- Alpha 138 kV Substation
- Cable replacement on 138kV transmission line from Hutchings Substation to Sugarcreek Substation
- Spurlock interconnection at Stuart Substation

Dayton Power is an indirect subsidiary of AES, with operations on four continents in 16 countries, including distribution businesses in Brazil, El Salvador, and the U.S., which serve more than 2,000,000 customers. Indianapolis Power and Light Company is also an AES subsidiary.

**(iv) Previous record of the entity or its affiliate, partner, or parent company to adhere to standardized construction, maintenance and operating practices**

Dayton Power has a successful history of project development, construction and management. This is a result of the diligent efforts of both internal and external

resources. The resources are utilized effectively to build on best practices and to take advantage of the latest information and technologies.

In addition to the transmission line projects Dayton Power has constructed using internal resources, depending on the scope of the project, we supplement with nationally recognized construction vendors such as L.E. Myers, D.H. Elliot, and M.J. Electric, which have built thousands of miles of 40 kV to 765 kV transmission projects nationwide. Dayton Power has used these vendors for construction of the following projects, some of which are referenced above, representing over 120 miles of transmission lines built to specifications as provided by us. Project scopes included new lines or rebuilding existing lines that utilized multiple types of wood and steel structures for single and double circuits along with single and bundled conductors for short and long spans.

- Eagle Road 138 kV Line
- Clark-Urbana 138 kV Line
- Kirby-Blue Jacket 138 kV Line
- Miami-Staunton 138 kV Line
- Bath-New Carlisle 138 kV Line
- Eldean 138 kV Line
- Foster-Bath 345 kV Line

Examples of completed substation projects include:

- Sugarcreek 345kV Substation: This was an expansion project of an existing substation. The expansion included the addition of a 345/138kV substation transformer, breakers, control, metering, associated equipment and structures.
- Atlanta 345kV Substation: This was a new construction project tapping an existing 345 kV circuit. The scope of the project included purchasing property, civil construction, and installation of a 345/69kV substation transformer, breakers, control, metering, associated equipment and structures.
- Bath 345kV Substation: The scope of this project included the installation of breakers and associated equipment to form a 345kV ring bus.
- Shelby 345kV Substation: This was an expansion project of an existing substation. The scope of the project included the addition of breakers, controls, metering and associated equipment to form a ring bus.
- Adkins 345kV Substation: This was a new construction project tapping an existing 345 kV circuit. The scope of the project included purchasing property, civil construction, and installation of gas turbine generators, substation transformers, control, metering and associated equipment.
- Montpelier 345kV Substation: This was a new construction project. The scope of the project included purchasing property, civil construction, and installation of gas turbine generators, substation transformers, control, metering and associated equipment.

Dayton Power tracks, trends and reports the Customer Average Interruption Duration Index (CAIDI) and System Average Interruption Frequency Index (SAIFI), as mandated by the Public Utilities Commission of Ohio. Proposed performance targets for 2018 are as follows.

CAIDI (in minutes)	125.04
SAIFI (outage events per customer)	.88

Dayton Power has been a member of PJM since 2004, and has a local control center staffed 24X7 by all NERC-certified operators. We have a back-up control center in the event of an emergency condition, which would require an evacuation of the primary control center. PJM, as the Transmission Operator (TOP), delegates numerous operations-related NERC compliance requirements to Dayton Power & Light who is the Transmission Owner (TO). We have received 100% compliant results in our 2017 PJM TO/TOP matrix audits, as well as our 2017 audit by RFC.

Dayton Power operates its transmission system to meet the requirements of the applicable NERC standards, RFC expectations, PJM requirements via the agreement and TO/TOP Matrix, and our own Standard Operating Procedures. The system operators are formally trained to the NERC 'Transmission Operator' level; they hold the PJM certification, and are certified by DP&L. They attend the annual PJM operator seminar and have access to various on-line training programs. Dayton Power is also active in the North American Transmission Owners Forum, the Southeastern Electric Exchange, and participates with various groups, including those related to training.

**(v) Capability of the entity or its affiliate, partner, or parent company to adhere to standardized construction, maintenance and operating practices**

Construction

As referenced above, in addition to Dayton Power's internal construction resources, we supplement with industry leading construction vendors, depending on the scope of the project. Dayton Power designs transmission line and substation facilities to meet or exceed the NESC. The Company ensures its engineering staff has access via seminars and documentation on changes made to the standard. Transmission engineering staff attends training sessions to maintain competency on design standards and software

products. Dayton Power maintains an internal staff of transmission maintenance staff that are responsible for the construction and maintenance of the system.

Dayton Power also maintains an internal staff of substation engineers responsible for construction and maintenance of the system. These resources are responsible for successfully engineering all capital and maintenance projects. The projects vary in scope from routine equipment replacements to new substation construction. The resources use the best of past practices as well as the latest information and technology to accomplish the projects. Individuals are encouraged and provided opportunities to participate in training programs that enhance skill sets and awareness of new methods and technologies.

Dayton Power strives to develop and maintain strategic relationships with a variety of contract resources to complete capital projects in a safe, reliable and cost-effective manner. The resources are identified and selected through a rigorous process that includes a formal bidding process, reference checks, safety record review, and other financial reviews. Through this process, Dayton Power has a proven record of identifying resources to successfully complete capital projects. Examples of external resources used on historic projects include:

- L.E. Myers
- Burns & McDonnell
- Patterson Engineering
- Commonwealth Associates Inc.

#### Transmission Maintenance

Dayton Power's Transmission Maintenance Department is responsible for remediation of any items found during our routine inspections. Inspections are performed by helicopter flyover and foot patrol. The 345 kV and 138 kV lines are inspected four times per year and the 69 kV lines are inspected twice per year. Any anomaly identified is prioritized and entered into the transmission maintenance database for repair. If needed, a qualified

transmission line technician will inspect the reported item from the ground to define scope. All other items are completed by the department based on priority.

#### Transmission Pole Inspection Program

In 2007, Dayton Power instituted a Transmission Pole Inspection Program. The program was designed to supplement the existing aerial program for the 69 kV and 138 kV transmission lines. The majority of the 69 kV and 138 kV lines are constructed with wood structures, whereas the 345 kV lines are all steel towers or steel poles. The purpose of the inspection program is to identify decayed/damaged poles and evaluate them for strength and schedule replacement if warranted. Additionally, the program entails inspecting all hardware, especially ground wires and obtaining ground impedance readings.

#### Transmission Line Clearance

The Transmission Line Clearance department is responsible for vegetation management. The primary metrics that the Transmission Line Clearance Department monitors in order to measure the effectiveness of its program are as follows.

- Maintenance areas and hot spots remediated
- Acres mowed
- Acres treated with herbicide
- Inspections completed
- Outage data related to vegetation

To address the 2010 NERC Alert regarding Facility Ratings, Dayton Power has employed LiDAR. The data gathered as part of this project is computer modeled and utilized to its fullest extent to assist in our vegetation management program.

The goal of the DPL Transmission Line Clearance Department is to have zero MVCD encroachments and/or vegetation-related Sustained outages due to managed trees within the ROW, and to identify and mitigate problems from vegetation located adjacent to

ROW by extensive patrolling and inspections as well as employing industry accepted practices and procedures as detailed in this Program document and associated Appendices.

Our commitment to this level of safety and reliability performance has been exhibited through our design and implementation of this plan and our past performance which has resulted in DPL not having experienced any outages on its' transmission system as a result of managed trees since 1996.

### Operations

As referenced above, Dayton Power has been a member of PJM since 2004, and has a local control center staffed 24X7 by all NERC-certified operators. We also have a back-up control center in the event of an emergency condition, which would require an evacuation of the primary control center. As a PJM Transmission Owner/Local Control Center (TO/LCC), PJM, as our Transmission Operator, delegates numerous operations-related NERC compliance requirements to us which are reviewed through PJM's TO/TOP matrix.

Dayton Power operates its transmission system to meet the requirements of the applicable NERC standards, RF expectations, PJM requirements via the agreement and TO/TOP Matrix, and our own Standard Operating Procedures. The system operators are formally trained to the NERC 'Transmission Operator' level; they hold the PJM certification, and complete an internal certification process as well. They attend the annual PJM operator seminar and have access to various on-line training programs. Dayton Power is also active in the North American Transmission Owners Forum and participates with various groups, including those related to training.

- (vi) **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**

Following are links to the audited financial statements of DPL Inc., parent company of Dayton Power, for the most recent quarter, as well as the last three years.

10-Q for Q1 2018:

<http://www.sec.gov/Archives/edgar/data/787250/000078725018000015/0000787250-18-000015-index.htm>

10-K for 2017:

<http://www.sec.gov/Archives/edgar/data/787250/000078725018000008/0000787250-18-000008-index.htm>

10-K for 2016:

<http://www.sec.gov/Archives/edgar/data/787250/000078725017000009/0000787250-17-000009-index.htm>

10-K for 2015:

<http://www.sec.gov/Archives/edgar/data/787250/000078725016000035/0000787250-16-000035-index.htm>

Following are links to the audited financial statements of AES Corporation, parent Company of DPL Inc., for the most recent quarter, as well as the last three years.

10-Q for Q1 2018:

<https://www.sec.gov/Archives/edgar/data/874761/000087476118000041/0000874761-18-000041-index.htm>

10-K for 2017:

<https://www.sec.gov/Archives/edgar/data/874761/000087476118000014/0000874761-18-000014-index.htm>

10-K for 2016:

<https://www.sec.gov/Archives/edgar/data/874761/000087476117000003/0000874761-17-000003-index.htm>

10-K for 2015:

<https://www.sec.gov/Archives/edgar/data/874761/000087476116000077/0000874761-16-000077-index.htm>

**(vii) Commitment by the entity to execute the Consolidated Transmission Owners Agreement, if the entity becomes a Designated Entity.**

Dayton Power is an existing signatory to the Consolidated Transmission Owners Agreement.

**(viii) Evidence demonstrating the ability of the entity to address and timely remedy failure of facilities.**

Dayton Power maintains a staff of internal transmission maintenance crews that are responsible for the repair of transmission facilities. This staff is on-call to respond 24x7. The Company is active in two mutual assistance groups (Great Lakes Mutual Aid Group and the Southeastern Electric Exchange) which provides access to additional transmission crews from around the country. During Hurricane Ike in 2008 and the Derecho of 2012, various transmission problems were addressed by a combination of these crews. The company maintains a fleet of mobile distribution substation transformers, a mobile capacitor bank, and strategic spare transformers and breakers to be utilized in case of an emergency.

**(ix) Description of the experience of the entity in acquiring rights of way**

Dayton Power's right-of-way procurement is handled through its Real Estate Services Department. Real Estate Services has significant internal expertise in the areas of property and rights-of-way procurement, surveying, and administration, including extensive experience with railroads and the Ohio Department of Transportation. The Real Estate Services Department works closely with the Company's engineering and design functions to coordinate schedules and other project needs. The department supplements its staffing with outside engineering and surveying firms on an as-needed basis. Examples of large projects requiring extensive right-of-way procurement includes the Kirby-Blue Jacket and Clark-Urbana.

DPL Inc., through its regulated and unregulated subsidiaries holds title to approximately 32,000 acres of land. This real property is located across 29 counties in Ohio and Kentucky. Real Estate Services acquires rights-of-way and purchases property for substations, distribution and transmission facilities, and for other needs as necessary to support Company operations. The Real Estate Services Department handles all crossing agreements with railroads and state agencies.