

Brookfield Transmission Development LLC

Pre-qualification and Filing Package
Updated December, 2018

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

Address:

Brookfield Transmission Development LLC (“Brookfield TD”)
200 Donald J. Lynch Blvd
Marlborough, MA 01752

Point of Contact:

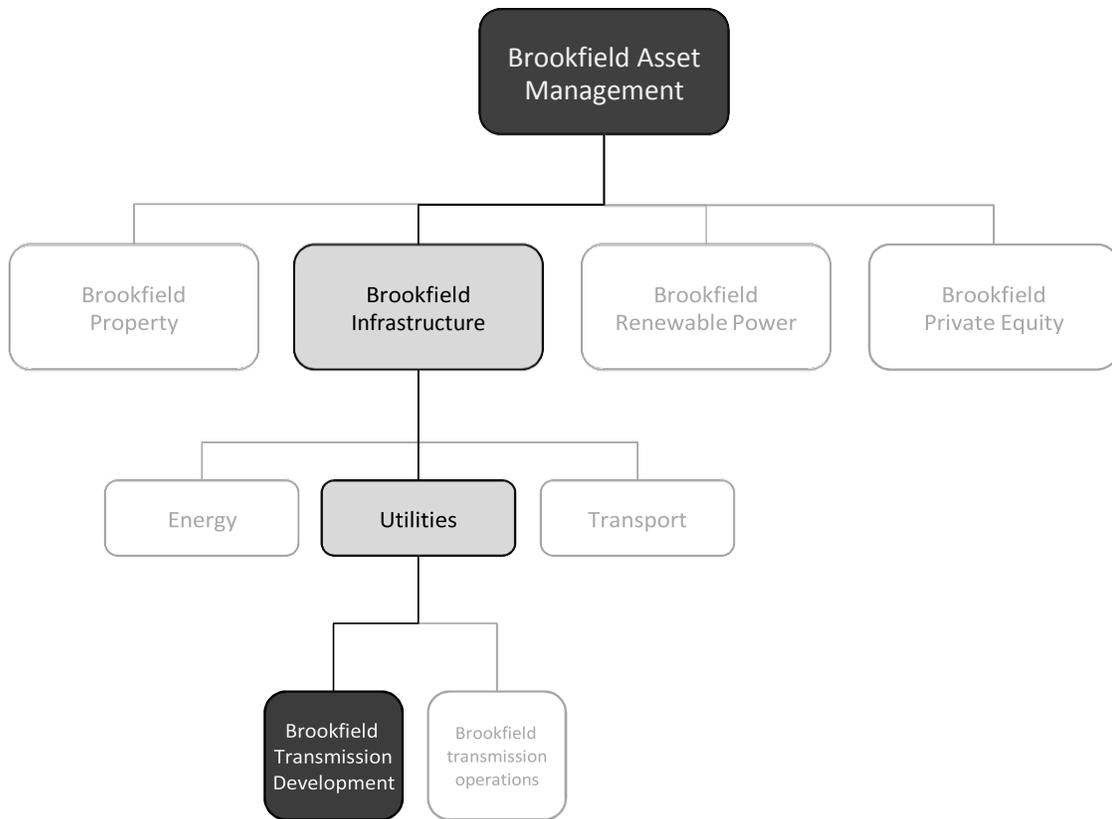
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Second Point of Contact:

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

Brookfield TD is part of the global Brookfield family of companies and a member of Brookfield infrastructure’s Utilities Group (“Utilities Group”) as shown in the diagram below. It was recently formed to permit, construct, own, and operate public electricity transmission facilities in the PJM Region. As a member of the Utilities Group, Brookfield TD will be able to draw on the technical and engineering qualifications of its affiliates and its parent companies, Brookfield Asset Management LLC (“Brookfield Asset Management”) and Brookfield Infrastructure Partners LP (“Brookfield Infrastructure”).



Brookfield Asset Management is a global asset manager with over a 100-year history and approximately \$330 billion in assets under management. Brookfield Asset Management owns and manages one of the world’s largest portfolios of premier office properties, renewable energy generating facilities, and long-life infrastructure assets (including utilities, transportation infrastructure, and timberlands) in North and South America, Australasia, and Europe. Brookfield Asset Management is publicly listed on the NYSE, TSX, and Euronext Amsterdam under the symbol BAM, BAM.A, and BAMA, respectively. Further information about Brookfield Asset Management, including financial reports, is available at www.brookfield.com.

Brookfield Infrastructure Partners was formed by Brookfield Asset Management to own and operate high quality infrastructure assets globally. Brookfield Infrastructure Partners is an investment-rated (S&P BBB+) (stable) entity with a market capitalization of approximately \$15 billion (December 3rd 2018) and total enterprise value of \$29 billion. Its units are traded on the New York Stock Exchange under the symbol BIP and on the Toronto Stock Exchange under the symbol BIP.UN. Further information about Brookfield Infrastructure Partners, including audited financial statements, is available at <https://www.brookfield.com/en/businesses/infrastructure>.

Brookfield Infrastructure Partners has five major areas of concentration:

- Transportation, which includes 37 ports, 3 800 miles of toll roads, and 3 100 miles of rail operations;
- Energy, which includes almost 10 000 miles of natural gas pipelines in the US, 300 billion cubic feet of natural gas storage in the US and Canada, and five district heating/cooling systems; and
- Utilities, which includes over 6 500 miles of transmission lines, 2.1 million electricity and gas connections, and a regulated terminal in North and South America, Europe, and Australasia.
- Data Infrastructure, which includes a portfolio of 7 000 multi-purpose towers and active rooftop sites, as well as 5 000 km of fiber backbone providing essential services and critical infrastructure to transmit and store data globally.
- Sustainable Resources, which includes 3.7 million acres of timberlands and 650,000 acres of agriculture operations in North and South America.

Brookfield Infrastructure Partners' Utilities Group currently manages four operating electricity transmission platforms in North and South America:

- Quantum Participações S.A (<https://www.quantumbrt.com>) develops, owns and operates electricity transmission concessions in Brazil in partnership the Spanish group ACS, through its subsidiary CYMI. Currently, there are seven projects total 4,310 km of transmission lines, in addition to the construction of 13 new power substations and expansion of another 27 distributed throughout the Northeastern and Southeastern regions of Brazil. With projects already in operation, and delivery of other planned projects, Quantum is one of the largest power transmission companies in Brazil;
- Wind Energy Transmission Texas LLC, a joint endeavor with PSP Investments now own and operates 375 miles of 345 kV transmission lines and six substations in Texas as part of the Competitive Renewable Energy Zone program;
- Empresa de Energía de Boyacá ("EBSA"), a utility in Columbia which owns and operates over 20,000 miles of transmission and distribution lines and 88 transformer stations serving the provinces of Boyacá and Santander;
- Smoky Mountain Transmission LLC, operates about 88 miles of 161 kV transmission lines in system in Tennessee and North Carolina.

Brookfield has divested its former interests in Great Lakes Power Transmission LP, the second largest public utility transmitter in Ontario, Canada; Cross Sound Cable LLC, a 330 MW high voltage direct current (HVDC) interconnection between Connecticut and Long Island, New York ; and Transelec S.A., the largest transmission company in Chile.

In all, Brookfield owns and operates over 1,500 miles of transmission lines at all voltages up to and including 500 kV.

Each of Brookfield's electricity transmission companies employs experienced staff, including licensed professional engineers and technologists, who oversee the construction and maintenance of their own transmission and distribution facilities. This staff is also responsible for the specification of equipment and design of facilities, as well as evaluating submittals by various EPC firms that do the actual construction. The Utilities Group also employs a small number of experienced professional staff that is available to help and advise the individual business units, and is in turn able to call on further resources from within the Brookfield family, each of whom has worked for at least a decade in their respective profession. When working on major projects, Brookfield typically engages specialist major consulting firms that have experience designing and permitting major projects in the project area to support Brookfield's own internal resources. These professional service firms are typically engaged to provide engineering, siting/routing, land acquisition, public consultation, and environmental services. Brookfield employs major construction EPC contractors to build its projects. The EPC constructor is pre-qualified based on their recent history successfully completing projects on budget and schedule.

Brookfield employs its own staff to maintain and operate the facilities once energized, but, where cost effective for ratepayers, Brookfield employs local specialist contractors who work under Brookfield's site supervision. Depending on the scale of the development, Brookfield will either establish a new dedicated NERC-qualified control room, or will utilize the services of an existing Brookfield control room. In the latter instance, all costs are charged at a fully allocated rate to avoid inappropriate cross-subsidization.

- (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.

As a special purpose entity, Brookfield TD will be able to draw on the experience of its parent, Brookfield infrastructure and particularly its Utility Group to develop, construct, maintain and operate new transmission facilities.

As discussed in answer to question (i) above, Brookfield's Utilities Group currently manages four operating electricity transmission platforms in North and South America. Each platform continues to replace and refurbish its existing facilities to ensure

continued reliability for customers and generators, and to invest in new facilities to meet load growth and connect new generation.

The following projects recently constructed by Brookfield TD's affiliates demonstrate Brookfield's recent experience and the strength of Brookfield's typical approach.

Brazil - Esperanza and Odoyá Projects

Since 2016, Quantum has been constructing transmission projects awarded by ANEEL that include seven projects totaling 4,310 km of transmission lines, 13 new power substations and expansion of another 27 distributed throughout the Northeastern and Southeastern regions of Brazil. The first 522 km of transmission lines under were delivered in 2017 comprised of 251 km between the states of Rio Grande do Norte and Ceará (Esperanza Project), 301 km in the State of Bahia (Odoyá Project). Completion of both Projects is expected by 2020.

Wind Energy Transmission Texas

In 2009, Wind Energy Transmission Texas ("WETT") was selected to construct approximately 374 miles of double circuit 345 kV Competitive Renewable Energy Zone ("CREZ") transmission lines and six substations in west Texas (the "CREZ projects"). This includes seven distinct lines separated into three convenience and necessity ("CCN") proceedings before the PUC. The transmission system consisted of double-circuit or single circuit, double-circuit-capable, 345-kV transmission lines, constructed on lattice steel structures and/or steel monopoles. WETT acquired the 160-foot-wide rights of way for these lines and then retained an EPC contractor to build the infrastructure. WETT now owns and operates this transmission system. Several of the 345 kV substations have continued to be expanded due to addition connection of new wind projects in the area. WETT now owns and operates this transmission system.

The CREZ project was unique because it also involved the establishment in 2010 of an entirely new public utility, WETT, to own and operate the facilities on completion as part of the ERCOT public transmission system. During the planning and development phase of the project key personnel were selected and trained. WETT was fully staffed by people competent in Asset Management, System Control, Compliance, Field Operations, and Finance and Administration before construction was complete. In 2013, WETT successfully completed NERC certification as a Transmission Operator with the necessary processes, tools, training, and personnel in place to reliably perform the NERC Transmission Operator function. All of WETT's System Operators and the Operations Supervisor are NERC-certified with either the Reliability Coordinator or Transmission Operator certification.

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

As evidenced in response to sections iii and iv, Brookfield has a long record of constructing, owning, and operating transmission assets. Brookfield participates in many ISO committees and industry forums to maintain best practices in transmission operations and maintenance practices. Brookfield also operates permanently manned 24x7 system operations centers staffed with NERC certified operators.

Brookfield has been operating as a utility in North America for over 90 years and has consistently demonstrated its commitment to operating to the Good Utility Practice standard with a comprehensive asset management model for operations to ensure the reliability, availability, and compliance of the facilities. Brookfield also has a proven track record of maintaining the assets and ensures through its compliance programs that all reliability-driven maintenance routines are completed on schedule.

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

As described above, Brookfield has demonstrated a consistent ability to adhere to standardized construction, maintenance and operating practices, and to maintain documented practices, procedures and guides for adhering to standardized construction, maintenance and operating practices.

Brookfield has no internal capacity to undertake major project construction. Instead Brookfield engages pre-qualified specialist EPC contractors, typically certified to ISO-9001, to undertake construction. Contractors are pre-qualified, in part, based on their recent safety record and their experience constructing assets in the project area compliant with all relevant local standards and requirements.

Brookfield's operating companies only employ qualified staff. Training is provided to all new employees consistent with that employee's experience, and ongoing training is provided for existing personnel to make sure competencies are maintained. Training requirements are documented and training attainments recorded in each individual's personal file.

Brookfield's transmission control centers currently operate transmission facilities in the Texas Reliability Entity (TRE), and Southeast Electric Reliability Council (SERC) reliability areas in North America. The control centers are currently staffed with NERC certified operators and perform the Transmission Operator function. All of Brookfield's control rooms are CIP compliant and maintain those standards. Brookfield has successfully completed several NERC compliance audits in the past five years.

Brookfield maintains its facilities in accordance with a documented asset management system.

- (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.

All of the equity required for Brookfield TD's development, construction, and operating activities will be provided through Brookfield Infrastructure Fund II ("the Fund"). The Fund was established by Brookfield to invest in infrastructure, with a focus on transportation, renewable power, utilities, and energy assets in North and South America, Europe and Australasia. The Fund has over 60 investors with equity commitments totaling \$7 billion. Brookfield is the largest investor in the Fund, with approximately \$2.8 billion committed. Brookfield TD will secure debt financing through the use of project level financing on standard commercial terms. Brookfield TD will have sole responsibility for servicing the debt associated with the design, procurement, construction and placing of the project in service and the debt carried after the start of commercial operations.

As previously mentioned, Brookfield Infrastructure Partners is an investment-rated (S&P BBB+) (stable) entity with a market capitalization of approximately \$11.2 billion and total enterprise value of \$29 billion. Its units are traded on the New York Stock Exchange under the symbol BIP and on the Toronto Stock Exchange under the symbol BIP.UN.

Electronic copies of the last three fiscal years of audited financial statements and annual reports (20-F) for Brookfield Infrastructure Partners can be found at

- <https://bip.brookfield.com/en/reports-and-filings/financial-reports/annual-reports>

Electronic copies of Brookfield Infrastructure Partners LP's most recent quarterly financial statements can be found at:

- <https://bip.brookfield.com/en/reports-and-filings/financial-reports/quarterly-reports>

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

Brookfield Transmission Development LLC commits to execute the Consolidated Transmission Owners Agreement if it becomes a Designated Entity.

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

Each of Brookfield's North American transmission businesses has been regularly audited by the respective NERC regional reliability entity. There have been no notices of violation or potential violation at any of these facilities during the time that Brookfield has owned and/or operated them.

The following audits of Brookfield TD affiliates have been completed in the past five years and are publicly available.

- Wind Energy Transmission Texas (NERC, 2013)¹
- Smoky Mountain Transmission²

An example demonstrating Brookfield’s ability to timely remedy the failure of facilities comes from 2013, when a transformer at one of Great Lake Power Transmission’s substations suffered a major failure. The failure occurred when a raccoon climbed on top of a recloser, contacted a live phase conductor, and created a low resistance close-in ground-fault that travelled back through the transformer. On-site testing of the damaged transformer revealed it had suffered significant internal damage. GLPT concluded that the transformer could not be repaired on site, and that the cost of repairs would exceed the cost of replacement. GLPT therefore replaced the transformer at a cost of approximately \$250,000. Supply was restored in the interim through switching.

Brookfield will prepare facility-specific recovery plans for major events, such as catastrophic failure of a transformer, for any new facilities it constructs in the PJM Region.

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

Brookfield TD, as a newly established special purpose entity, has yet to acquire rights of way on its own. However its affiliates have been acquiring rights of way for electric service since the late 1920’s, and the wider Brookfield group has considerable experience of land acquisition – Brookfield’s residential property business has over 100,000 single family residential lots and 254 acres of multi-family, industrial and commercial parcels either under development or banked for future development; and Brookfield’s renewable power business has secured over 150,000 acres of land in the USA and Canada for wind farms since 2006. Nowadays, when acquiring land for new transmission lines and substations, Brookfield employs specialist consultants familiar with the land use and permitting requirements of the specific jurisdiction, and undertakes broad public and landowner outreach program before finalizing the route. This approach was most recently illustrated in the case of WETT, which secured right of way for 375 miles of new 345 kV transmission lines in northwest Texas.

¹ https://www.nerc.com/pa/comp/Audit%20Repos%20DL/2015_Public_TRE_WETT.pdf#search=WETT%20TOP%20certification

² <https://www.nerc.com/pa/comp/Organization%20Certification%20DL/Smoky%20Mountain%20Transmission%20LLC%20TOP%20Certification%20Final%20Report.pdf#search=SMOKY%20TOP%20certification>