1. **Name and address of the entity including a point of contact.**

Clean Line Energy Partners LLC
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Dr. Wayne Galli, Executive VP – Transmission and Technical Services
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2. **Technical and engineering qualifications of the entity or its affiliate, partner, or parent company.**

Clean Line is well-versed in the technical and engineering issues for transmission line development, construction and operation. With four High Voltage Direct Current ("HVDC") lines and one High Voltage Alternating Current ("HVAC") line currently under development, Clean Line has developed detailed design criteria, managed multiple interconnection studies, identified capable construction partners and worked through a host of other technical and engineering challenges. As a result of exploring transmission projects throughout North America and the Clean Line team's collective experience in siting thousands of megawatts of generation and associated transmission lines, Clean Line has deep familiarity with technical and engineering issues across the country.

Clean Line has a dedicated in-house engineering and technical services team that works closely with our project development teams on engineering, design, routing, permitting and interconnection issues. The team is lead by Dr. Wayne Galli, Executive Vice President – Transmission and Technical Services. Dr. Galli received Bachelor of Science and Master of Science degrees from Louisiana Tech University and a Doctor of Philosophy degree from Purdue University, all in electrical engineering. Dr. Galli is a Senior Member of the Institute of Electrical and Electronics Engineers, a member of the International Council on Large Electric Systems, and a registered Professional Engineer in the Commonwealth of Virginia.

Dr. Galli has over 15 years of experience in the electric transmission industry, in both technical and managerial roles, ranging from power system planning and operations to regulatory matters and project development. Most recently, Dr. Galli served as Director of Transmission Development for NextEra Energy Resources, a subsidiary of NextEra Energy, Inc. (formerly FPL Group, Inc.), where he developed transmission projects under the Competitive Renewable Energy Zones ("CREZ") initiative in Texas. In this position, Dr. Galli focused on, among other issues, the development of HVDC transmission solutions in the CREZ, and led all efforts in routing, siting and engineering transmission lines for one of the new transmission owners, Lone Star Transmission (a Next Era Energy company) in the CREZ.

Previously, Dr. Galli spent six years at the Southwest Power Pool, Inc. ("SPP"), where, as Supervisor of Operations Engineering, he led the implementation of several components of the SPP market and grew the SPP Operations Engineering Group over fourfold to help ensure reliable operations of the SPP grid as it moved toward a market paradigm. Dr. Galli's group was responsible for the real-time and short-term engineering support of the SPP's Regional Transmission Organization ("RTO") functions. These duties included activities primarily directed toward maintaining real-time system reliability through engineering support for the SPP Reliability Coordinator and Market Operations, performing short-term tariff studies, operational planning activities (e.g., processing outage requests), and engineering analysis support of the SPP Energy Imbalance Services ("EIS") Market. Additionally, Dr. Galli's group led the implementation of several facets of the SPP market system and performed acceptance testing of various software systems.

Dr. Galli's background also includes system planning experience with Southern Company Services, a subsidiary of Southern Company, where he analyzed expansion plans for 500 kV transmission facilities, and commercial power systems experience with Siemens Westinghouse Technical Services. Additionally, Dr. Galli has held academic positions at the university level and has helped design shipboard power systems for the U.S. Department of Defense.

Deral Danis, Manager – Engineering and Transmission, has experience in both the engineering and electricity market paradigms. Deral has spent the last three years at Clean Line managing interconnection requests and studies, analyzing regional electricity markets and supporting regulatory filings. Prior to joining Clean Line, Deral was a Manager at Constellation Energy Commodities Group, where he analyzed deliverability and transmission strategy for both new business and real-time operations for Constellation's portfolios in the southeastern United States. Deral also worked as a Shift Operations Engineer at SPP, where he provided real-time and offline transmission analysis to assist reliability coordinators and market operators in their daily planning and decision-making. Deral assisted in the testing and design of the congestion management process for SPP's EIS market. Deral holds a Bachelor of Science in Electrical and Computer Engineering Technology from Purdue University and a Master of Science in Electrical and Computer Engineering from Kansas State University.

Jonathan Abebe, Manager – Engineering and Transmission, performs system studies, manages interconnection requests and participates in regional transmission planning processes on behalf of Clean Line. Prior to joining Clean Line, Jonathan was a Lead Power Systems Engineer at Vestas Technology R&D, where he was responsible for investigating solutions for increasing wind integration. Jonathan also managed the reliability performance group at National Grid USA (National Grid), where he led and coordinated activities for analyzing the reliability performance of National Grid US's transmission system in order to help identify upgrades to system reliability. Jonathan holds a Bachelor of Applied Science in Electrical Engineering from University of Toronto and a Master of Science in Electrical Engineering from Worcester Polytechnic Institute.

Clean Line also manages multiple outside engineering and technical firms on an ongoing basis. Clean Line employees have extensive experience leveraging these firms to provide additional support to Clean Line's transmission development efforts when necessary.

National Grid, a public utility holding company, is a major investor in Clean Line. National Grid regulated subsidiaries engage in the generation of electricity and the transmission, distribution and sale of both natural gas and electricity. In addition to operating over 8,500 miles of existing transmission lines, NGUSA is currently building major new transmission upgrades in New York and New England.

National Grid also contains various subsidiaries that support its activities with specialized engineering and technical expertise. These subsidiaries include National Grid USA Services Company, Inc. and National Grid Engineering & Survey, Inc, which are able to provide technical and engineering assistance for Clean Line projects.

3. 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.

Clean Line is engaged in transmission line development across the United States. In addition to four HVDC facilities – Centennial West Clean Line, Grain Belt Express Clean Line, Rock Island Clean Line and Plains & Eastern Clean Line – the company recently acquired a development-stage AC transmission project, the Western Spirit Clean Line.

As Director of Development at NextEra Energy, Clean Line Executive Vice President of Technical and Transmission Services, Dr. Wayne Galli, helped to lead the technical efforts in NextEra's participation in the Texas CREZ efforts. NextEra was awarded over 300 miles of 345 kV lines under NextEra subsidiary, Lone Star Transmission. Dr. Galli oversaw all efforts related to routing and siting the lines, including management of the engineering, routing and environmental consultants, and execution of public open houses. Certificates of Convenience and Necessity for the Lone Star Transmission's CREZ lines were granted on October 22, 2010 and November 17, 2010.

As Project Manager at NextEra Energy Resources, Clean Line Environmental Director Jason Thomas managed environmental permitting, routing, and construction monitoring efforts for several transmission lines, as well as numerous renewable energy projects.

A number of Clean Line's employees helped build Horizon Wind Energy (now EDP Renewables) into one of the leading wind developers in the U.S. While there, these individuals were involved in the development, construction, operation and maintenance of many gen-tie transmission projects. The individuals also acquired extensive experience in power and transmission markets, and general industry knowledge.

Clean Line's strategic investor, National Grid, has substantial experience in siting transmission projects over 200kV in the Northeast. For a combined list of recent transmission projects for which Clean Line employees or National Grid were involved in the development, construction, maintenance and operation, see below:

Project	State	Entity	Distance	Voltage
Maple Ridge I & II	New York	Horizon Wind	10.5 miles	230 kV
Prairie Star	Minnesota	Horizon Wind	20 miles	345 kV
Twin Groves I & II	Illinois	Horizon Wind	25.6 miles	345 kV
Blue Canyon I, II and V	Oklahoma	Horizon Wind	27.5 miles	138 kV
Meridian Way I & II	Kansas	Horizon Wind	15.4 miles	345 kV
Wild Horse	Washington	Horizon Wind	8.5 miles	230 kV
Pine Tree	California	Horizon Wind	9 miles	230 kV
Rail Splitter	Illinois	Horizon Wind	14 miles	138 kV
E205W	Vermont, Mass.	National Grid	3.25 miles	230 kV
E205E	Massachusetts	National Grid	47 miles	230 kV
West Farnum – Kent County	Rhode Island	National Grid	21 miles	345 kV
Empire – Reynolds Road	New York	National Grid	8 miles	345 kV
Ward Hill Substation	Massachusetts	National Grid	-	345 kV
Wachusett Substation	Massachusetts	National Grid	-	345 kV
Wakefield Junction Substation	Massachusetts	National Grid	-	345 kV
Berry Street Substation	Massachusetts	National Grid	-	345 kV
Kent County Substation	Rhode Island	National Grid	-	345 kV
West Farnum Substation	Rhode Island	National Grid	-	345 kV
Auburn Street Substation	Massachusetts	National Grid	-	345 kV
Pratts Junction Substation	Massachusetts	National Grid	-	230 kV
Clay Substation	New York	National Grid	-	345 kV
Chases Lake Substation	New York	National Grid	-	230 kV
Packard Substation	New York	National Grid	-	230 kV
Dunkirk Substation	New York	National Grid	-	230 kV
Gardenville Substation	New York	National Grid	-	230 kV
Scriba Substation	New York	National Grid	-	345 kV
Horse Hollow Gen Tie	Texas	NextEra	229 miles	345 kV
Lone Star Transmission CREZ projects	Texas	Lone Star Transmission	330 miles	345 kV

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

Clean Line employees have completed transmission projects in a manner consistent with Good Utility Practice, defined by FERC Order No.888 as: "Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region."

Clean Line leadership built, maintained and operated transmission projects for major developers like NextEra and EDP Renewables while adhering to industry-recognized best practices. See the list of projects above in the response to Question 3. These development efforts include managing engineering, procurement and construction contracts in excess of $2 billion.

Clean Line employees have also adhered to standardized operating practices while working at the Southwest Power Pool. While Supervisor of Operations Engineering at SPP, Dr. Wayne Galli was responsible for reliable operation of the transmission system in all or parts of eight states. Dr. Galli was also chair of the NERC Interchange Distribution Calculator (IDC) Working Group, which was responsible for developing tools to ensure that electric systems remain reliable in the wake of certain contingency conditions.

National Grid has extensive experience building, maintaining and operating electric transmission lines. Construction of new facilities has followed established best practices and applicable regulations with regard to:

- Visual impacts
- Noise mitigation
- Soil and erosion impacts
- Historic and cultural resources (including Section 106 review)
- State and Federal listed species (including Endangered Species Act, Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, etc.)
- Stormwater management
- Wetland impacts (including Clean Water Act Section 404 compliance)
- Navigable waterways (including Rivers and Harbors Act)

National Grid's record shows the ability to maintain transmission facilities with a high degree of safety and reliability. National Grid has designed an extensive Transmission Right-of-Way Management Program including:

- Fully integrated vegetation management
- Transmission line patrol responsibilities and monitoring schedule
- Division Forester assessments
- Electric conductor-to-vegetation clearance requirements
- Optimum Right-of-Way width
- Procedure for scheduling and reporting corrective action
- Determination to schedule or delay maintenance

- Field completion and reporting
- Landowner notification
- Customer inquiry and complaint resolution
- Program implementation procedures and effectiveness monitoring

For the full Transmission Right-of-Way Management Program, please see Attachment A. While this program would not necessarily apply to future PJM projects with Clean Line as the designated entity, similar practices would be applied for such projects. National Grid has also developed a Transmission Planning Guide to define the criteria and standards used to assess the ability to reliably operate its system. These criteria include:

- Fault type
- Fault clearing
- Allowable facility loading
- Reliability of service to load
- Load shedding
- Expected restoration time
- Generation rejection or ramp down
- Voltage response
- Stability requirements
- Low-voltage ride-through
- Standard bus configurations
- Interconnection design criteria
- Substation design considerations
- Generator interconnection issues

For the full Transmission Planning Guide, see Attachment B. While this guide would not necessarily apply to future PJM projects with Clean Line as the designated entity, similar criteria would factor into the design process for such projects. In addition to the planning guide, National Grid complies with

- NERC Reliability Standards TPL-001, *System Performance Under Normal Conditions*, TPL-002, *System Performance Following Loss of a Single BES Element*, TPL-003, *System Performance Following Loss of Two or More BES Elements*, and TPL-004, *System Performance Following Extreme BES Events*,
- NPCC Directory #1, *Design and Operation of the Bulk Power System* and Directory #4, *Bulk Power System Protection Criteria*,
- *Reliability Standards for the New England Area Bulk Power Supply System* (ISO-NE Planning Procedure No. 3), and
- *New York State Reliability Council Reliability Rules for Planning and Operation of the New York State Power System*

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

Clean Line will partner with experienced, highly-qualified contractors to construct transmission facilities. For the existing Plains & Eastern and Rock Island projects, Clean Line has entered into

development agreements with Fluor Enterprises, Inc./Pike Energy Solutions and Kiewitt Power Constructors Co., respectively. Clean Line can leverage existing expertise to maintain and operate such facilities, or turn O&M responsibility over to another qualified utility and/or operations entity.

National Grid routinely constructs, maintains and operates an extensive transmission system in the northeast United States. Regulators in several states have repeatedly found National Grid capable of performing these functions to a high standard.

For example, the Rhode Island Energy Facility siting board found that the construction and operation of National Grid's Rhode Island Reliability Project was "consistent with the State Guide Plan,"[1] and "will not cause unacceptable harm to the environment"[2] based on the best practices proposed by National Grid during the regulatory process.

National Grid's capability to adhere to standardized construction practices is further demonstrated in its Interstate Reliability Project (IRP) plan. The Interstate Reliability Project is a new 345 kV transmission line in Massachusetts and Rhode Island that will be built in existing transmission right-of-way. The IRP plan outlines National Grid's:

- Removal of vegetation and right-of-way mowing
- Installation of soil erosion and sediment controls
- Construction and maintenance of access roads
- Removal and disposal of existing transmission line components
- Installation of foundations and structures
- Installation of conductor and shield wire
- Right-of-way restoration
- Substation construction and improvements
- Construction traffic management
- Construction work hours
- Construction equipment

6. 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.

See Attachment C – Clean Line Financial Statements

See Attachment D – National Grid Financial Statements

[1] See *State of Rhode Island and Providence Plantations Energy Facility Siting Board* in re The Narragansett Electric Company d/b/a National Grid (Rhode Island Reliability Project). Docket No. SB-2008-02. "Decision and Order." 12 August 2010. P.49
[2] *Ibid*. p. 47

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

   Clean Line agrees to execute the Consolidated Transmission Owners Agreement if Clean Line becomes a Designated Entity and eventually becomes owner of the completed facility for which it was designated. Clean Line may also execute the Consolidated Transmission Owner Agreement at some agreed upon time prior to owning the completed facility subject to future negotiations between Clean Line and PJM.

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

   Clean Line employees have extensive experience in operating bulk electric grid systems across the United States. This experience includes remedying operational interruptions, equipment failures and other system disturbances at SPP, Southern Company, and National Grid.

   National Grid recently restored power service to more than 357,000 customers in Massachusetts and Rhode Island within five days after a blizzard hit in February. National Grid responded to over 2,700 reports of downed wires and more than 80 broken poles in Massachusetts and over 1,400 reports of downed wires in Rhode Island. National Grid has also sent crews to other areas of the country in response to disasters like Hurricane Katrina and Hurricane Wilma. National Grid has participated in several programs to coordinate utility responses to disasters, including Northeast Mutual Assistance Group, New York Mutual Assistance Group, Southeast Electricity Exchange and Midwest Mutual Assistance Group.

9. **Description of the experience of the entity in acquiring right-of-way.**

   Clean Line employees and National Grid have extensive experience acquiring right-of-way for transmission lines and other infrastructure projects. This experience extends to the permitting, regulatory approval and negotiation phases of land acquisition. The founding management team has years of experience acquiring right-of-way for transmission projects associated with thousands of megawatts of wind projects developed by Zilkha Renewables and later Horizon Wind Energy. Some of these projects are listed in the table below.

   In addition to the management team, other Clean Line employees have experience acquiring right-of-way for transmission lines. Mark Lawlor, Clean Line Director of Development, previously worked for Horizon Wind Energy as a Project Manager, where he was involved in land acquisition for Kansas wind projects. Mark directly developed a project portfolio totaling more than 900 MW of constructed and developed wind facility assets. Mark was responsible for all development aspects including site assessment, land acquisition, permits and interconnections studies and agreements. Notable projects include the 201 MW Meridian Way Wind Farms I and II and the 400+ MW Western Trail Wind Farm, including managing the acquisition of a 26 mile transmission easement. Mark also managed a team of developers responsible for developing projects in the SPP region.

   Before Horizon, Mark was a founding partner in a law firm specializing in renewable energy law. In 2008 Mark was appointed by the Governor of Kansas to the Kansas Wind Working Group,

and has served as the chair of the Wind Coalition's SPP Committee for the past two years. He has a Juris Doctor from Washburn University School of Law with a Certificate in Environmental Law, as well as a Bachelor's degree in Environmental Studies and a Bachelor's degree in Political Science from the University of Kansas.

Doug Jones, Clean Line Regional Manager, spent nearly ten years with Horizon Wind Energy as a Senior Project Development Manager. During his career at Horizon Wind, Doug had a direct hand in the development, including land acquisition, of over 1.5 gigawatts of operating wind power across the Midwest, including projects in Iowa, Illinois, Minnesota, and Wisconsin. Doug optioned or leased land for the High Prairie I Wind Farm, including a 16 mile transmission easement, the Prairie Star Wind Farm, including three miles of the transmission easement, the Lost Lakes Wind Farm, the Pioneer Prairie I & II Wind Farms, and the Rail Splitter Wind Farm, including a 14 mile transmission line easement. Prior to entering the renewable energy field Doug was a high school physics teacher in northwest Iowa. Doug received his Bachelor of Science from Buena Vista University in Storm Lake, Iowa and his MSE degree from Drake University in Des Moines, Iowa.

Jason Thomas, Clean Line's Environmental Director, is an environmental management professional with over 17 years of broad experience. He successfully permitted several complex and controversial projects, including high-voltage transmission lines. He has an extensive background in environmental planning, natural resources, agency consultation, due diligence, and regulatory compliance. In his role as Clean Line's Environmental Director, he oversees the environmental planning and permitting of approximately 3,000 miles of proposed high voltage transmission projects in eleven states. Previously, he served in a similar role for NextEra Energy Resources, the largest owner of wind generation in North America, supporting the development of wind, solar, transmission, and natural gas projects. His territory included several western states for renewable energy and transmission development. He managed environmental studies and permitting for over 2,500 MW of wind projects, 300 MW of solar projects, and over 250 miles of associated transmission lines.

A list of recent completed projects for which Clean Line employees or National Grid have acquired land leases or rights-of-way is given below:

Project	State	Entity	ROW Distance
Maple Ridge I & II	New York	Horizon Wind	10.5 miles
Prairie Star	Minnesota	Horizon Wind	20 miles
Twin Groves I & II	Illinois	Horizon Wind	25.6 miles
Blue Canyon I, II & V	Oklahoma	Horizon Wind	27.5 miles
Meridian Way I & II	Kansas	Horizon Wind	15.4 miles
Wild Horse	Washington	Horizon Wind	8.5 miles
Pine Tree	California	Horizon Wind	9 miles
Rail Splitter	Illinois	Horizon Wind	14 miles
High Prairie I	Minnesota	Horizon Wind	16 miles
Pioneer Prairie I & II	Iowa	Horizon Wind	3 miles
E205W	Vermont, Mass.	National Grid	3.25 miles

E205E	Massachusetts	National Grid	47 miles
West Farnum – Kent County	Rhode Island	National Grid	21 miles
Empire – Reynolds Road	New York	National Grid	8 miles
Horse Hollow Gen Tie	Texas	NextEra	229 miles
Lone Star CREZ projects	Texas	Lone Star	330 miles
TOTAL			**787 miles**