Exhibit No. ____ Issues: Project Overview Witness: Michael P. Skelly

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Sponsoring Party: Grain Belt Express Clean Line LLC

Case No.: EA-2016-__

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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. EA-2016-____

DIRECT TESTIMONY OF MICHAEL P. SKELLY ON BEHALF OF

GRAIN BELT EXPRESS CLEAN LINE LLC

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I. INTRODUCTION AND PURPOSE OF TESTIMONY

- 2 Q. Please state your name, present position and business address.
- 3 A. My name is Michael P. Skelly. I am the President and Chief Executive Officer of Clean
- 4 Line Energy Partners LLC ("Clean Line"), and the President of Grain Belt Express Clean
- 5 Line LLC ("Grain Belt Express" or "Company"), the Applicant in this proceeding. Clean
- 6 Line is the ultimate parent company of Grain Belt Express. My business address is 1001
- 7 McKinney Street, Suite 700, Houston, Texas 77002.

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- 8 Q. Please describe your education and professional background.
- 9 A. I received a Bachelor of Arts in Economics from the University of Notre Dame and 10 subsequently served in the United States Peace Corps in Central America. After my service 11 in the Peace Corps, I obtained a Masters of Business Administration from Harvard 12 Business School. I have been in the renewable energy business for over 20 years. I 13 developed thermal, hydroelectric, biomass, and wind energy projects in Central America 14 with Energia Global. I then joined Horizon Wind Energy ("Horizon"), which was 15 subsequently renamed EDP Renewables North America, and led the development of that company from a two-person company to one of the leading wind energy companies in the 16

U.S. In 2008, I was named Wind Industry Person of the Year.

I have significant experience in evaluating and developing wind energy resources. I have traveled to nearly every state in the U.S. to evaluate the potential to build wind farms and have led the development of more than 2,000 megawatts ("MW") of wind energy projects that were ultimately constructed. During my tenure at Horizon, the company developed and oversaw the completion of more than a dozen wind energy projects and created a development portfolio of more than 10,000 MW in over a dozen states. Several

members of our management team at Clean Line also came from Horizon, where we worked together to help develop and construct various projects, including 925 MW of wind projects in the three-state region of Oklahoma, Texas, and Kansas; 322 MW of wind projects in New York, which spearheaded a growing interest in wind energy throughout the northeastern U.S.; over 300 MW of wind projects in Oregon; 200 MW of wind projects in Minnesota; 400 MW of wind projects in Illinois; 299 MW of wind projects in Washington state; 54 MW of wind projects in Pennsylvania; and 380 MW of wind projects in Iowa. Horizon also owned and operated 24 MW of wind projects in Costa Rica through the Tierras Morenas Wind Farm.

This work in developing and building wind energy projects has given me, and several members of Clean Line management team who are former Horizon employees, extensive project development experience that has assisted us greatly as we develop the Grain Belt Express Project.

14 Q. Have you previously testified before any regulatory commissions?

15 A. Yes, I have provided testimony in proceedings before the state regulatory commissions of
16 Arkansas, Kansas, Illinois, Indiana, Missouri, New York, Tennessee, and Wisconsin,
17 concerning the development of wind farms or transmission projects.

O. What is the business of Clean Line?

A.

Clean Line is an independent transmission company focused on providing transmission solutions to connect renewable generation sources to communities that have a need for low-cost renewable power. The United States possesses some of the best renewable energy resources in the world, but the continued growth of renewable energy in the U.S. faces a serious challenge: the lack of transmission to connect high wind resource areas to load

centers, such as Missouri, that are seeking new sources of energy. Clean Line's objective is to develop, construct, and operate long-distance transmission lines to reliably and affordably move America's vast renewable energy resources to market.

4 Q. What is Grain Belt Express?

A.

Grain Belt Express is a limited liability company organized under the laws of the State of Indiana. Copies of its certificate of formation and its authorization to do business in Missouri as a foreign-chartered limited liability company are attached as **Exhibit 1** to the Company's Application. Grain Belt Express is a wholly owned subsidiary of Grain Belt Express Holding LLC, a Delaware limited liability company, which is a wholly owned subsidiary of Clean Line. Grain Belt Express is developing the Grain Belt Express Clean Line Project ("Grain Belt Express Project" or "Project"), an approximately 780-mile, overhead, multi-terminal ±600 kilovolt ("kV") high voltage direct current ("HVDC") transmission line and associated facilities that will connect over 4,000 megawatts ("MW")¹ of low-cost, wind-generated power in western Kansas. The Project will deliver 500 MW into Missouri and 3,500 MW into Illinois and states farther east. The Grain Belt Express Project will connect Kansas' abundant, high capacity factor and affordable wind resource with the large and growing market for cost-effective, renewable energy in Missouri and other states in the region.

Q. What is the purpose of your testimony in this proceeding?

¹ The capacity of wind farms is likely to be slightly higher than the maximum delivery capacity of the line for two reasons. First, electric losses along the line mean less power will be delivered to MISO and PJM than is converted in Kansas. Second, because multiple wind farms rarely produce at their maximum output simultaneously, additional wind farm capacity above 4,000 MW can increase utilization of the transmission line, and therefore reduce the delivered cost of energy.

The purpose of my testimony is to support the Application of Grain Belt Express, which is seeking a certificate of convenience and necessity ("CCN") under Section 393.170.1² authorizing it to construct in Missouri 206 miles of the HVDC transmission line ("HVDC Line") that will traverse the states of Kansas, Missouri, Illinois, and Indiana, including an associated converter station in Ralls County, Missouri, that will deliver energy to Missouri by interconnecting with the Ameren Missouri transmission line that connects the Maywood and Montgomery 345 kV substations. This converter station and associated alternating current ("AC") interconnecting facilities, including an AC switching station, together with the HVDC Line located in this state comprise the "Missouri Facilities". The transmission line will be located in the Missouri counties of Buchanan, Clinton, Caldwell, Carroll, Chariton, Randolph, Monroe and Ralls. I will provide an overview of the Application, including the new and additional facts being presented in this case, background on the Project and the Clean Line management team, and will explain why the Missouri Facilities are necessary or convenient for the public service.

II. OVERVIEW OF THE APPLICATION

16 Q. What is the standard that the Commission should apply in this proceeding?

A.

- 17 A. It is my understanding that the Commission will approve the Application if it determines 18 under Section 393.170.1 that the Project is necessary or convenient for the public service.
- Q. Are the Grain Belt Express Missouri Facilities necessary or convenient for the public
 service?
- 21 A. Yes, they are necessary or convenient for the public service and the Application should be approved.

² All statutory references are to the Missouri Revised Statutes (2000), as amended.

The Missouri Facilities are an integral and essential part of the multi-state Grain Belt Express Project that will allow for the development of wind-generated power projects in the state of Kansas and for the delivery of that power to markets in Missouri and states farther east. The Project provides Missouri with a new source of affordable, clean energy that will reduce costs for Missouri end-users of electricity. Missouri customers have a demand for this clean power, as evidenced by the Transmission Service Agreement ("TSA") that Grain Belt Express has entered into with the Missouri Joint Municipal Electric Utility Commission ("MJMEUC"), which is explained in more detail below and in the testimony of Company witness Mark Lawlor.

A.

There are substantial local benefits that will be made possible by the Project. By having a converter station interconnected to the Ameren Missouri system, customers of Missouri electric utilities will have access to low-cost wind energy from western Kansas. The interconnection to the Ameren system will enhance the reliability of the electric transmission grid in Missouri by making available another source of electric power supply. Further, the Project will promote competition in the supply of transmission service and power generation. More generally, the Project enables Missouri electric utilities and electric utilities in states farther east to access reliable, affordable, and renewable electric energy.

Q. What economic benefits will Missouri receive from the Grain Belt Project?

Missouri communities, workers, businesses, and ratepayers will all benefit from the construction of the Grain Belt Express Project and the resulting electricity that will be delivered to Missouri. In recognition of the positive economic benefits that the Project will have to Missouri businesses, the Missouri Chamber of Commerce formally endorsed the

Project. The construction of the Project will create more than 1,500 jobs during the three years of construction. Grain Belt Express and Quanta Services, Inc. ("Quanta") have entered into an HVDC Transmission Development Agreement, which commits each party to work towards an engineering, procurement, and construction contract. Quanta has specified that its affiliate, PAR Electrical Contractors Inc. ("PAR Electric") will lead these efforts as the primary contractor. Members of PAR Electric's management team work closely with IBEW Local Union 53 in Kansas City and Local Union 2 in St. Louis. In addition, PAR Electric has formed close alliances with Missouri sub-contractors, suppliers, and engineering firms. The overwhelming majority of employees that PAR Electric will utilize for construction of the Grain Belt Express Project are Missouri residents. Company witness Thomas Shiflett describes the relationship between PAR Electric and Grain Belt Express in more detail in his Direct Testimony.

Further, the Company is working with Missouri businesses to obtain products, equipment, and services that will be used to construct the Project. Grain Belt Express has formed partnerships with Missouri manufacturers, including ABB Inc., Hubbell Power Systems, Inc., and General Cable Industries, Inc., in order to utilize products made in Missouri and to support manufacturing jobs in the state. Company witnesses Wayne Galli (Executive Vice President of Transmission & Technical Services) and Mark Lawlor (Director of Development) discuss these relationships in greater detail in their direct testimonies. Moreover, the Missouri Facilities will provide a continuing source of property tax revenues to the local communities where the facilities are located, funding schools, fire departments, public improvements, and other vital community services. These benefits are

discussed in greater detail in the testimony of Grain Belt Express witnesses Mark Lawlor
and Richard Trenago.

3 Q. Will electricity customers in Missouri pay for the Grain Belt Project?

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A. Only if their local utility voluntarily purchases transmission service on the Project because it determines the benefits of service exceed the cost of service. The Project's development, construction, and operations costs will be borne by the investors in Clean Line and the transmission customers. The Project's costs will not be recovered through the cost allocation process of any regional transmission organization ("RTO") approved by the Federal Energy Regulatory Commission ("FERC"). In her Direct Testimony Company witness Suedeen Kelly discusses how the participant-funded nature of the Project provides benefits to Missouri's electric users.

12 Q. Are there environmental benefits associated with the Project?

- 13 A. Yes. The Project's environmental benefits are in the public interest of all Missourians.

 14 The Grain Belt Express Project will reduce emissions of carbon dioxide, sulfur dioxide,

 15 nitrogen oxide, particulates and organic compounds, reduce waste by-products, and reduce

 16 water usage, as compared to the production of comparable amounts of electricity from

 17 fossil-fueled generation. This will lead to cleaner air and water in Missouri and the broader

 18 region. This is discussed in more detail in the Direct Testimony of Company witness Neil

 19 Copeland.
- Q. Please explain the new facts that Grain Belt Express is presenting that differentiates its current filing from what was filed in the 2014 Case.

A. Since its 2014 Case, and pursuant to the Report and Order of Commission,³ Grain Belt Express has achieved additional project milestones and is presenting new evidence in its current case. The most significant difference is that Grain Belt Express has entered into a TSA with MJMEUC, pursuant to which MJMEUC has agreed to purchase 225 MW of capacity from the Project, with an option for an additional 25 MW. Grain Belt Express witness Mark Lawlor will describe this TSA in more detail in his Direct Testimony.

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Grain Belt Express has also advanced its proposal in other ways, including:

- a. Entering into an agreement with Quanta, which contemplates that its subsidiary

 PAR Electric will serve as the engineering, procurement and construction

 contractor for the Project. PAR is headquartered in Kansas City, Missouri;
- b. Offering 500 MW of bi-directional service from the Missouri converter station to PJM Interconnection LLC, ("PJM") (of which MJMEUC has agreed to purchase 25 MW). This service will allow Missouri utilities an additional means to earn revenue from off-system sales of excess power. Previously, Grain Belt Express had only offered transmission service to Missouri from the Project's Kansas converter station;
- c. Developing a Construction Plan that outlines the scope, methods, durations, and resources required to construct the Grain Belt Express Project. The Construction Plan is attached as **Schedule TFS-4** to the Direct Testimony of Company witness Tom Shiflett;

³ The PSC Order expressly states, at 27 n. 91, "As some parties have recently noted, GBE has the option to file a new application for a CCN at any point if it eventually gathers information it feels would make a better case for this project or a new project."

1 d. Preparing a more detailed compliance plan consistent with North American 2 Electric Reliability Corporation standards and certification requirements for transmission operators, which is attached as Schedule AWG-4 to the Direct 3 4 Testimony of Company witness Wayne Galli; 5 e. Advancing the interconnection process with the Southwest Power Pool, Inc. ("SPP"), including completing the necessary studies to sign an Interconnection 6 7 Agreement and negotiating the Interconnection Agreement with ITC Great 8 Plains; 9 f. Receiving a certificate of public convenience and necessity on November 12, 10 2015 from the Illinois Commerce Commission; 11 g. Adding Bluescape Resources Company LLC ("Bluescape") as an investor in 12 Clean Line. Bluescape is a private equity firm whose management is 13 experienced in the field of electric transmission. Bluescape is providing capital 14 to be used for the development of the Grain Belt Express Project and Clean 15 Line's other transmission projects; h. Conferring with Staff of the Commission regarding appropriate inputs to 16 production cost modeling of the wholesale power market impacts of the Grain 17 18 Belt Express Project; 19 i. Revising certain portions of the Proposed Route of the Project as a result of comments by landowners during easement negotiation efforts and public 20 21 outreach sessions in 2016, as well as from evidence provided at the local public

hearings and written testimony in the 2014 Case;

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j. Establishing a Landowner Protocol that recognizes and respects the interests of landowners, which is attached as **Schedule DKL-1** to the Direct Testimony of Company witness Deann Lanz. The Landowner Protocol includes the ability for landowners to elect into binding arbitration to determine the easement compensation. In addition, Grain Belt Express has committed to update countywide market data studies with more recent land valuation information to determine the average per-acre value for specific land types in each county. The updated market studies will set a current basis for the easement payments from Grain Belt Express to landowners;

- k. Creating a decommissioning fund to be used in the remote event that Grain Belt
 Express must dismantle, demolish, or remove all equipment facilities and structures; and
- Developing a Missouri Agricultural Impact Mitigation Protocol ("MO Ag Protocol") to avoid, minimize, and mitigate for impacts to cropland and agricultural resources in Missouri, which is attached as Schedule JLA-2 to the Direct Testimony of Company witness James Arndt.
- Q. Please identify the witnesses who are submitting direct testimony on behalf of Grain
 Belt Express.
- 19 A. Grain Belt Express' witnesses and the primary topics addressed in their testimony are as
 20 follows:

Witness	Primary Testimony Topics
Michael Skelly President and CEO of Clean Line; President of Grain Belt Express	 Overview of Applicant's case-in-chief, including overview of relief requested from the Commission and the additional facts being presented Clean Line's and Grain Belt Express' ownership, organizational structures, and business objectives Clean Line's and Grain Belt Express' technical, managerial and financial capability
David Berry Clean Line Executive Vice President – Strategy and Finance	 How the Project meets the Tartan Criteria Nature of service offered by the Project Need for the Project Benefits of the Project Grain Belt Express' economic feasibility, financing capability and financing plan
Wayne Galli Clean Line Executive Vice President - Transmission and Technical Services	 Physical and operating characteristics of the Grain Belt Express Plans and schedule for construction, including vendor contracts Process by which wind energy will be collected in western Kansas Grain Belt Express' interactions with the relevant RTOs Benefits of using HVDC technology
Mark Lawlor Director of Development for Grain Belt Express	 Project Description Route selection process Grain Belt Express' public outreach efforts and notice to landowners Grain Belt Express' TSA with MJMEUC
Deann Lanz Vice President, Land	 How the Landowner Protocol recognizes and respects the interests of landowners Grain Belt Express' approach to negotiations and right-of-way acquisition with landowners
James Puckett Practice Lead, Geospatial Analysis & Cartography with the Louis Berger Group, Inc.	 Grain Belt Express's route determination process Basis for selection of the Proposed Route Missouri Route Selection Study and Routing Study Addendum
Suedeen Kelly Former Chair of the New Mexico Public Service Commission and former FERC Commissioner	 How the Project meets the Tartan criteria How the Project benefits the Missouri public Why a participant-funded business model is a market-driven solution to transmission expansion How Grain Belt Express helps to solve the challenge of interregional transmission planning

James Arndt Senior Project Manager at Merjent, Inc. William Bailey Principle Scientist in the Center for Exposure Assessment and Dose Reconstruction of Exponent, Inc.	 Industry standard agricultural impact mitigation practices Summary of Grain Belt Express' MO Ag Policy Grain Belt Express' proposed and potential agricultural impact mitigation measures Assessment of the scientific issues related to potential health effects of electric and magnetic fields as they relate to the Project
Thomas Shiflett Executive Vice President, Electric Power Division for Quanta Services, Inc.	 PAR Electric's relationship with Grain Belt Express How PAR will manage Project construction Grain Belt Express' job impacts in Missouri Emergency response and restoration How PAR will maintain landowner relationships during the construction process
J. Neil Copeland Managing Director in the Power Supply Group at GDS Associates, Inc.	 Economic and environmental impacts of operation of the Grain Belt Express Project Production cost analysis Economic market study methodology Improvements since Grain Belt Express' 2014 Case
Edward Pfeifer Executive Advisor at Quanta Technology, LLC	 Loss of Load Expectation ("LOLE") analysis and results Reliability benefits that the Grain Belt Express Project will provide to Missouri
Prescott Hartshorne Director, US Business Development National Grid USA	 National Grid's HVDC experience Economic feasibility of the Grain Belt Express Project Development progress and financing ability Grain Belt Express' construction management ability and qualifications to provide service
Wayne Wilcox Randolph County Eastern District Associate Commissioner	 Description of how the Project is in the public interest because it will bring revenue and opportunities to the Project Area counties that it crosses Description of Grain Belt Express' work with landowners, county officials, and other community members A landowner's perspective on farming around transmission lines

Richard Tregnago	Description of how the Project is in the public
Randolph County Assessor	interest because it will bring property tax benefits
	to the Project Area counties it traverses
	How the property value of agricultural land with
	transmission lines is assessed

III. OVERVIEW OF THE TARTAN CRITERIA

- Q. Please describe the five Tartan Criteria that the PSC will use in their evaluation of Grain Belt Express' Application.
- Mhen evaluating a CCN case, the Commission has traditionally applied the following five criteria, known as the Tartan factors: (1) there must be a need for the service the applicant proposes to provide; (2) the applicant's proposal must be economically feasible; (3) the applicant must have the financial ability to provide the service; (4) the applicant must be qualified to provide the proposed service; and (5) the proposed service must be in the public interest.
- 11 Q. Please explain how Grain Belt Express meets each of the five Tartan Criteria.
 - A. 1. There is a need for the service provided by the Project. Grain Belt Express' TSA with MJMEUC demonstrates this need. MJMEUC is made up of 67 members that serve approximately 347,000 retail customers who have a combined peak load of over 2,600 MW. MJMEUC estimates that the purchase of 200 MW of transmission capacity from Kansas to Missouri from the Project will save members at least \$10 million annually compared to an existing contract for fossil fuel generation. Company witness Mark Lawlor will describe the TSA with MJMEUC in more detail in his Direct Testimony.

A strong need for the new service that will be provided by the Project was demonstrated by the open solicitation process that Grain Belt Express held from January to March 2015, through which customers could subscribe for capacity on the Project. To

date, fifteen shippers made 3,524 MW of requests for capacity to the Project's MISO delivery point in Missouri, which is more than six times the available capacity. Company witness David Berry describes the open solicitation process in more detail in his Direct Testimony.

The open access transmission service to be offered by Grain Belt Express will allow users to meet the requirements of Missouri's Renewable Energy Standard ("RES") as well as the renewable portfolio standard ("RPS") requirements of other states served by the Midcontinent Independent System Operator, Inc. ("MISO") and PJM energy markets.

The Project will deliver low-cost renewable wind generation that will save consumers in Missouri and other states hundreds of millions of dollars compared to other more expensive sources of generation. Based on a levelized cost of energy analysis, described in the Direct Testimony of David Berry, the Project's delivered cost is cheaper than building wind farms locally in Missouri; it is also cheaper than solar power and a new combined cycle natural gas power plant. Because the Project is the lowest-cost way to meet renewable energy and other electric demand, it is needed to serve the public.

The Missouri converter station will offer bi-directional service, allowing Missouri utilities the opportunity to sell up to 500 MW of excess power to PJM. Company witness Wayne Galli will describe the characteristics and benefits of the Missouri converter station in more detail in his Direct Testimony.

2. The Grain Belt Express Project is economically feasible. The Grain Belt Express Project is a participant-funded project; the Company assumes all financial risk of building and operating the transmission line. The Project costs will not be recovered from Missouri ratepayers through either SPP or MISO regional cost allocation tariffs. Company witnesses

Suedeen Kelly and David Berry discuss the merits of a participant funded transmission line in their Direct Testimonies.

The HVDC technology employed by the Project is the most cost-effective and efficient way to move large amounts of renewable energy over a long distance. High capacity factor wind energy sourced from western Kansas is the cheapest form of renewable energy in the Midwest and the Project's delivered energy cost to Missouri and neighboring states, including the costs of transmission, will be cheaper than alternatives to meet the demand for both renewable and non-renewable energy resources. Company witness David Berry describes this in more detail in his Direct Testimony.

Congress extended the renewable energy production tax credit in December 2015, which will further encourage the development of wind facilities. The continued advances in wind turbine technology, higher wind capacity factors, and lower production costs will result in decreased prices to consumers. The Grain Belt Express Project will connect these untapped, low-cost wind resources to the demand for renewable energy in Missouri.

3. Grain Belt Express has the financial capability to provide service. Grain Belt Express' development efforts are being financed by the equity investors in Clean Line, who are described more fully below. Over the longer term, the Company will rely on revenue from contracts with transmission service customers, like MJMEUC, who purchase capacity on the line. In Grain Belt Express' 2014 Case, the Commission found that the Company had demonstrated its financially ability to provide the service it proposed.⁴ Company

⁴ Report & Order at 21, <u>In re Grain Belt Express Clean Line LLC</u>, No. EA-2014-0207 (2015).

witness David Berry discusses Grain Belt Express' ability to finance the Project in more detail in his Direct Testimony.

- 4. Grain Belt Express is qualified to provide the proposed service. As described later in my testimony, the management team of Grain Belt Express has extensive experience developing, constructing, and operating a variety of infrastructure projects. The Company also has an experienced resource in one of its principal investors, National Grid USA and its affiliates, which comprise one of the largest investor-owned utilities and most experienced transmission operators in the world. In Grain Belt Express' 2014 Case, the Commission found that the Company demonstrated its qualifications to provide the service it proposed.
- 5. Grain Belt Express' proposed service is in the public interest. The low-cost wind energy delivered by the Project will benefit the State of Missouri by offering low cost Kansas wind energy that is not available to them today because of the lack of transmission infrastructure. That Kansas wind energy is cheaper than alternative sources of power, resulting in wholesale electric market savings without increasing the transmission component of rates paid by end-use customers. Because the Project will deliver renewable energy, it will provide Missouri load-serving entities with a cost-effective way to meet Missouri's RES requirements as well as current and future federal and state emissions

mandates. Inexpensive generation alternatives offering clean, renewable energy promote the public interest.

The construction of the Project will create more than 1,500 jobs during the three years of construction. Additionally, the Project will provide a continuing source of property tax revenues to the political subdivisions where the facilities are located.

The Grain Belt Express is a participant-funded, "shipper pays" transmission line, which means that the benefits of the Project's service will be made available to the public without socializing transmission costs to load serving entities or their customers. Grain Belt Express will recover its capital costs by entering into voluntary, market-driven contracts with entities that want to become transmission customers of the Project; only the users of the HVDC line will pay for the costs of the Project.

The Project's interconnection to Ameren's Maywood-Montgomery 345 kV transmission line will enhance the reliability of the electric transmission network in Missouri by connecting geographically diverse parts of the electric grid and by providing a new source of electricity for Missouri.

Regional and interregional transmission projects are often more efficient and costeffective than local transmission projects and provide a wide range of benefits, including relieving transmission congestion, increasing installed revenue margins, exporting excess generation, importing low-cost power, and, in the case of interregional transmission projects, such as the Grain Belt Express Project, relieving seams issues. Company witness Suedeen Kelly discusses the importance and beneficial nature of interregional transmission projects in her Direct Testimony.

A.

Grain Belt Express has developed a Landowner Protocol, which recognizes and respects the interests of landowners during the right-of-way acquisition process. As part of this Landowner Protocol, Grain Belt Express will hire a regional appraisal firm with agricultural expertise to perform refreshed county-wide market data studies to determine the average per acre value in each county. If Grain Belt Express and a landowner have reached an agreement on the form of easement but are unable to reach agreement on the appropriate compensation, at such landowner's request, the landowner may submit the issue of compensation to binding arbitration, a process that typically costs less, has more simplified procedures, and results in a final decision more quickly than circuit court litigation. Company witness Deann Lanz discusses our Landowner Protocol in her Direct Testimony. Additionally, Grain Belt Express has developed the MO Ag Protocol to avoid, minimize, and mitigate for impacts to cropland and agricultural practices in Missouri. Company witness James Arndt reviews the Company's MO Ag Protocol in his Direct Testimony.

IV. <u>CLEAN LINE AND THE GRAIN BELT EXPRESS PROJECT</u>

Q. Why has Clean Line proposed the Grain Belt Express Project?

Clean Line's mission is to develop, build, and operate transmission lines to facilitate the development of renewable energy projects, particularly wind generation projects, that otherwise would not be built. As part of this goal, Clean Line is developing several projects, including the Grain Belt Express Project, which is described in detail above. The primary objective of the Grain Belt Express Project is to bring electricity produced by wind

- 1 generation facilities in wind-rich areas of western Kansas to electricity markets in Missouri,
- 2 Illinois, Indiana, and states farther east.

3 Q. What is the cost to build the Grain Line Express Project?

- 4 A. The Company estimates the total Project cost will be approximately \$2.35 billion,⁵ with
- 5 the Missouri Facilities projected to cost \$525 million.⁶ Company witness David Berry will
- address the ability of Clean Line to finance the development and successful completion of
- 7 the Project.

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8 Q. Who are the owners of Clean Line?

9 A. Clean Line's owners are National Grid USA ("National Grid"), ZAM Ventures, L.P.

("ZAM Ventures"), Clean Grid Holding, LLC, Michael Zilkha, and Clean Line Investment

LLC. In the United States, National Grid USA's regulated subsidiaries deliver electricity

to approximately 3.5 million customers in New York, Massachusetts and Rhode Island.

Through these subsidiaries, National Grid jointly owns and operates over 8,800 miles of

high voltage transmission, 105 miles of underground cable and 491 substations.

National Grid USA is a wholly owned U.S. subsidiary of National Grid plc, a major multinational company whose principal activities are owning and operating regulated networks for the transmission and distribution of electricity and natural gas. National Grid plc is based in the United Kingdom and is one of the largest investor-owned energy companies in the world with \$75 billion in assets and over \$22 billion in annual revenues.

⁵ This figure does not include the cost of network upgrades required to interconnect the Project to the electric transmission grid, which are estimated at \$550 million.

 $^{^6}$ This figure does not include the cost of network upgrades required to interconnect the Project to the electric transmission grid in Missouri, which is estimated to be \$5-10 million.

ZAM Ventures focuses on long-term investments in the energy sector and has made several investments in alternative energy companies.

A.

Clean Grid Holdings, LLC is a subsidiary of Bluescape, a private independent oil and gas holding company primarily focused on unconventional hydrocarbon opportunities and energy-related private equity investments. Bluescape is a seasoned energy investor, making and managing investments in the energy space in a variety of geographic areas, primarily in the United States. Along with its current investments, the Bluescape management team has substantial experience investing in and managing public utility assets, including transmission infrastructure and power plants.

Michael Zilkha and his family have a proven track record of making successful and productive investments in the energy industry, including being the primary investor in Horizon during its early growth. Clean Line Investment LLC is a vehicle for service providers and employees to invest in Clean Line and is a small, minority shareholder in Clean Line.

Q. Does Clean Line have other projects underway in the United States in addition to the Grain Belt Express Project?

- Yes. Clean Line and its subsidiaries are presently developing three other HVDC transmission projects and one AC transmission project that will connect wind generation resources in other wind-rich areas of the U.S. to other load and population centers where a demand exists for electricity from renewable resources. Those other projects are as follows:
 - Plains and Eastern Clean Line LLC, Plains and Eastern Clean Line Oklahoma LLC,
 and Arkansas Clean Line LLC, subsidiaries of Clean Line, have signed a

Participation Agreement with the United States Department of Energy, through
which they are jointly developing the Plains & Eastern Clean Line project, a 720-
mile HVDC transmission project that will deliver up to 4,000 MW of wind
generated power from resources in the Oklahoma Panhandle region to areas with
demand for renewable energy in the Tennessee Valley Authority, Arkansas, and the
southeastern U.S.

- Centennial West Clean Line LLC, another subsidiary of Clean Line, is developing the Centennial West Clean Line transmission project, a 900-mile HVDC transmission project that will deliver up to 3,500 MW of electric power from New Mexico and Arizona to communities in California and other areas in the West that have a strong demand for clean, reliable energy.
- Rock Island Clean Line LLC, another subsidiary of Clean Line, is developing the
 Rock Island Clean Line transmission project, a 500-mile transmission line that will
 deliver up to 3,500 MW of electricity generated by the wind resources of northwest
 Iowa and surrounding regions to communities in Illinois and other PJM states.
- Western Spirit Clean Line LLC, another subsidiary of Clean Line, is developing the Western Spirit Clean Line, an approximately 140-mile transmission line that will deliver up to 1,000 MW of wind power from east-central New Mexico to the Albuquerque area and to load centers farther west.
- Q. What development activities has Grain Belt Express engaged in prior to filing the Application?
- A. Much of the Company's development activities to date have centered on route development and regulatory permitting in Kansas, Missouri, Illinois and Indiana, and extensive outreach

to state and local governments, businesses, agencies and the general public. To date, Grain Belt Express has received regulatory approval from the Commissions in Kansas, Illinois, and Indiana. Missouri is the last state where regulatory approval is needed. On November 2, 2012, Grain Belt Express filed a Petition to be recognized as a public utility in Indiana with Indiana Utility Regulatory Commission ("IURC"). On May 22, 2013, the IURC granted Grain Belt Express the authority to operate as a transmission only public utility in the State of Indiana. On March 7, 2011, Grain Belt Express filed a Petition for a limited certificate of public convenience to transact the business of a public utility in the state of Kansas. On December 7, 2011, the Kansas Corporation Commission ("KCC") granted that petition. Further, on July 15, 2013, Grain Belt Express filed a Petition for a siting permit to construct the Kansas portion of the Grain Belt Express Project with the KCC, which it granted on November 7, 2013. On April 10, 2015, Grain Belt Express filed an application with the Illinois Commerce Commission ("ICC") for a certificate of public convenience and necessity to construct, operate and maintain its transmission line and to conduct a transmission public utility business, along with a request for authorization to construct the line. On November 12, 2015, the ICC granted the Company a certificate of public convenience and necessity and authorized Grain Belt Express to construct the Illinois portion of the line.

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Grain Belt Express now seeks approval from this Commission to construct and operate the Project along the route proposed in northern Missouri. As described in Company witness James Puckett's testimony and the Missouri Route Selection Study and the Routing Study Addendum, significant time and effort have been dedicated to identifying the Proposed Route. This has involved hundreds of individual and group

meetings with community leaders, landowners, state and federal agencies, non-governmental organizations, elected officials, and other stakeholders.

Throughout the course of developing the Project, our team has conducted extensive outreach to business leaders, legislators, county and municipal government officials and landowners throughout the four-state project area in order to educate stakeholders about the need for transmission to facilitate wind farm development and delivery of wind power to geographically distant markets, and about the Grain Belt Express Project, specifically. Company witness Mark Lawlor addresses the nature and scope of those public outreach activities in Missouri in his Direct Testimony.

Q. What services will Grain Belt Express provide?

A.

Grain Belt Express will offer transmission service through an open access transmission tariff that will be filed with and subject to the jurisdiction of FERC under the Federal Power Act and FERC's regulations. Grain Belt Express expects that its customers will consist principally of (i) wind energy producers located in the wind-rich region of western Kansas at the western end of the Grain Belt Express Project, and (ii) buyers of electricity — particularly buyers seeking to purchase electricity generated from renewable resources — located in areas at, or connected to, the eastern two delivery points of the Project, such as MJMEUC. Buyers of electricity are expected to be principally wholesale buyers, such as utilities, competitive retail energy suppliers, including certified alternative retail electricity suppliers, and brokers and marketers. As Company witness David Berry explains in his testimony, customers will be able to obtain transmission service on the Grain Belt Express Project through several avenues, including an open solicitation process conducted in

accordance with Grain Belt Express' grant of negotiated rate authority from FERC⁷ and FERC's Policy Statement on Allocation of Capacity on New Merchant Transmission Projects and New Cost-Based, Participant-Funded Transmission Projects.⁸

4 Q. How will the services of Grain Belt Express be priced?

Because Grain Belt Express will be engaged in the provision of interstate transmission services, its rates will be subject to FERC's jurisdiction. On May 8, 2014, FERC authorized Grain Belt Express to sell transmission capacity to potential customers of the Project, including utilities and other load serving entities or clean energy generators. In addition, Clean Line was granted authorization to negotiate bilateral agreements for 100% of the line's capacity.

11 Q. Will the Company be rate-regulated by the Missouri Commission?

12 A. No. Neither the Project nor its Missouri Facilities will provide service to end-use 13 customers or provide retail service in Missouri, and the Project will not be rate-regulated 14 by the Commission. Accordingly, Grain Belt Express requests that the Commission limit 15 its authority over the Company and grant waivers from certain reporting requirements 16 under the Commission's regulations, as set forth in the Application.

17 Q. Is Grain Belt Express capable of efficiently managing and supervising the 18 construction process for the Grain Belt Express Project?

19 A. Yes. This capability is demonstrated by four components: (1) Clean Line and Grain Belt
20 Express have a plan in place to establish an effective construction management
21 organization and are implementing the plan; (2) Grain Belt Express has engaged

 $^{^7}$ Grain Belt Express Clean Line LLC, 147 FERC \P 61,098 (2014).

⁸ 142 FERC ¶ 61.038 (2013)

⁹ Grain Belt Express Clean Line LLC. 147 FERC ¶ 61.098 (2014).

experienced contractors to carry out the tasks associated with constructing the Project and placing it into operation; (3) Grain Belt Express will enter into contracts with its contractors that will provide for effective project controls and oversight mechanisms from the project owners' perspective; and (4) Members of Clean Line's management team and Clean Line's principal investors have experience in developing construction management organizations and overseeing the construction of large projects in the electric utility industry. Information on the experience of members of the management team is provided in **Schedule MPS-1**.

Q. Please explain the value and synergy that National Grid brings to the Project.

A.

Our investor, National Grid, is an experienced developer, construction manager, owner and operator of transmission lines, including HVDC facilities, and has extensive contacts in the utility construction industry. National Grid's construction management team provides support to Clean Line and its project companies on HVDC contracting and project management. Clean Line also has a direct line of communication with National Grid's global procurement team, who can provide benchmark pricing and procurement assistance on structures, conductors and labor costs. For example, we have consulted regularly with the team at National Grid that implemented the BassLink HVDC transmission project between Australia and Tasmania and the BritNed HVDC transmission project between the United Kingdom and the Netherlands. National Grid has made and has committed that it will continue to make, its construction management resources available to aid Clean Line and its project companies whenever necessary. This is one of the synergies provided by National Grid's investment in Clean Line. Company witness Prescott Hartshorne will discuss further National Grid's relationship with Clean Line in his Direct Testimony.

Q. Have any other regulatory commissions found that Clean Line and its project companies are capable of managing the construction of a transmission line?

A.

Yes. The Oklahoma Corporation Commission in its order on October 28, 2011 in Cause No. PUD 201000075 granted Plains and Eastern Clean Line LLC electric transmission-only public utility status in the State of Oklahoma, affirming the Administrative Law Judge's recommendation that "Clean Line possesses the financial, managerial and technical experience to build, own and operate transmission in Oklahoma." ¹⁰

The Kansas Corporation Commission in its Order on December 7, 2011 85 in Docket No: 11-GBEE-624-COC granted Grain Belt Express Clean Line LLC a limited certificate of public convenience to transact business as a public utility in Kansas, finding at page 25 that "there is sufficient competent evidence demonstrating that Clean Line has the managerial, financial, and technical experience to construct, operate and maintain the line."

The Indiana Utility Regulatory Commission in its Order on May 22, 2013 in Cause No. 44264, granted Grain Belt Express Clean Line LLC the authority to operate as a transmission-only public utility in Indiana, finding at pages 18-19 that the Company "submitted extensive evidence of its technical, managerial, and financial capability to construct, own, and operate the Project. Specifically, Mr. Skelly and Dr. [Wayne] Galli testified in detail about the Petitioner team's background, experience, and expertise in the

¹⁰ Order No. 590530, Cause No. PUD 201000075, *In the Matter of the Application of Plains and Eastern Clean Lin LLC, to Conduct Business as an Electric Utility in the State of Oklahoma*, Exhibit A, p. 2.

¹¹ Order Approving Stipulation & Agreement and Granting Certificate, Docket No: 11-GBEE-624-COC, *In the Matter of the Application of Grain Belt Express Clean Line LLC for a Limited Certificate of Public Convenience to Transact the Business of a Public Utility in the State of Kansas*, p. 25.

energy sector, project development, electricity transmission, and financing. Mr. [David] Berry also testified about Petitioner's and its parent company's financial expertise, backing and investors. Accordingly, we find that Petitioner has the necessary technical, managerial, and financial capability to construct, own, and operate the Project."¹²

The Tennessee Regulatory Authority ("TRA"), in its order dated May 5, 2015, in Docket No. 14-00036, granted Plains and Eastern Clean Line LLC a certificate of public convenience and necessity to construct a transmission line and to operate as an electric transmission public utility. The TRA, at page 6 of its Order, found that "P&E has submitted sufficient evidence to demonstrate that it possesses the requisite managerial, financial and technical abilities to build and operate the proposed transmission line." ¹³

The Illinois Commerce Commission, in its order on November 12, 2015 in Docket No. 15-0277, granted Grain Belt Express a certificate of public convenience and necessity to construct, operate and maintain a high voltage electric service transmission line and to conduct a transmission public utility business in connection therewith, and authorized Grain Belt Express to construct the high voltage electric transmission line. In its Order at page 136, the ICC stated, "...the Commission believes GBX's comprehensive construction

¹² Order of the Commission, Cause No. 444264, Petition of Grain Belt Express Clean Line LLC for: (1) a Determination of its Status as a "Public Utility" under Indiana Law; (2) a Determination that it has the Technical, Managerial, and Financial Capability to Operate as a Public Utility in Indiana; (3) Authority to Operate as a Public Utility in Indiana, including Authority to Exercise all Rights and Privileges of a Public Utility Accorded by Indiana Law; (4) Authority to Transfer Functional Control of Operation of its Transmission Facilities to be Constructed in Indiana to a Fully Functioning Regional Transmission Organization; (5) a Determination that the Commission should Decline to Exercise Certain Aspects of its Jurisdiction over Petitioner Clean Line LLC; (6) Authority to Locate its Books and Records Outside the State of Indiana; (7) Consent by the Commission to Boards of County Commissioners for Petitioner Clean Line LLC to Occupy Public Rights of Way, to the Extent it may be Necessary; and (8) all other Appropriate Relief, pp. 18-19.

¹³ Order Granting Certificate of Public Convenience and Necessity, Docket No. 14-00036, *Petition of Plains and Eastern Clean Line LLC for a Certificate of Public Convenience and Necessity Approving a Plan to Construct a Transmission Line and to Operate as an Electric Transmission Public Utility*, p. 6.

management organization and the experience of its management team satisfy the requirement that it is capable of efficiently managing and supervising the construction process and has taken sufficient action to ensure adequate and efficient construction and supervision thereof."¹⁴

IV. PUBLIC POLICY SUPPORTING THE DEVELOPMENT OF RENEWABLE ENERGY RESOURCES AND PRIVATE INVESTMENT IN INFRASTRUCTURE

Q. Does Missouri have any stated policy supporting the development of wind energy

resources?

A.

Yes. Missouri's public policy is to support the use of affordable renewable energy or the associated credits in an investor-owned electric utility's generation portfolio, as demonstrated by the adoption of 2008 of Proposition C, the Renewable Energy Standard contained in Section 393.1020 et seq. The effect of the Act is to foster the development of affordable renewable energy, which the Grain Belt Express Project provides by bringing wind power from western Kansas to Missouri.

Additionally, the Division of Energy within the Missouri Department of Economic Development states that it "works to advance the use and adoption of clean renewable energy technologies across the state to protect, preserve and enhance Missouri's natural, cultural and energy resources."¹⁵ This, too, evidences a state policy favoring the development and use of wind-generated power.

¹⁴ Order, Docket No. 15-0277, Application for an Order Granting Grain Belt Express Clean Line LLC a Certificate of Public Convenience and Necessity pursuant to Section 8-406.1 of the Public Utilities Act to Construct, Operate and Maintain a High Voltage Electric Service Transmission Line and to Conduct a Transmission Public Utility Business in Connection Therewith and Authorizing Grain Belt Express Clean Line pursuant to Sections 8-503 and 8-406.1(i) of the Public Utilities Act to Construct the High Voltage Electric Transmission Line, p. 136

¹⁵ https://ded.mo.gov/division-of-energy/renewables/renewable-energy

Not only is the renewable power delivered by the Project cost-competitive, it is not subject to several risks that affect the cost of fossil fueled generation, such as fuel price fluctuation and regulation of emissions. There is no inflation factor or fuel cost for wind energy, so the price of generation will not rise over time. The low-cost wind delivered by the Project will benefit the State of Missouri and will help to satisfy these state policies by meeting the demand for clean energy specifically and low-cost energy in general.

Q. Is there a demand for renewable energy from commercial and industrial entities inMissouri?

A.

A.

Yes. The Project can meet the needs of large industrial and corporate users in Missouri, who increasingly demand clean energy as part of corporate policies and decisions to make new investments in the state. Many corporations have adopted ambitious renewable energy goals whose successful achievement depends on large-scale, off-site wind energy procurement. Several major corporations with a strong manufacturing presence in Missouri but limited options for low-cost renewable energy development at scale have expressed their support for the delivery to Missouri of low-cost wind energy that the Grain Belt Express Project will enable. These corporations include General Mills, General Motors, Kellogg's, Nestlé, Procter & Gamble, Target, and Unilever. A letter of interest from these corporations is attached as **Schedule MPS-2**.

Q. How does the development of new transmission infrastructure such as the Grain Belt Express Project serve the interests of the general public?

The construction of new transmission will drive the development of wind generation resources. This will come about for two reasons. First, the existing transmission system in windy areas has reached or is nearing maximum capacity. Second, many of the best

regions in the U.S. for locating new wind generation facilities – the areas that are richest in wind resources and have the highest wind speeds – are located far from load and population centers. Such wind-rich regions include the Great Plains from western Texas and Oklahoma north through western Kansas up to the Dakotas. Transmission facilities dedicated to transporting the electricity produced in these regions hundreds of miles to load and population centers farther east are limited or non-existent.

To take advantage of these resources, investment in transmission infrastructure to move affordable wind energy over long distances and across many utility footprints as efficiently as possible is essential. As an experienced developer of wind energy projects, I can say with confidence that developers of wind generation projects will not invest capital in the construction of additional wind generation facilities in Kansas without reasonable assurances of adequate transmission capacity and infrastructure to deliver their output to areas of high demand. If we want wind generation facilities to be developed in the nation's best wind resource areas to meet the growing demand for electricity from renewable sources, we must first construct interregional transmission facilities that can deliver the output of these generating facilities to load and population centers. That is what the Grain Belt Express Project will do.

Missouri citizens will receive significant benefits from the Project because it will deliver affordable, wind-generated energy to Missouri consumers through a delivery point in Ralls County. Missourians will receive this benefit without an increase in transmission rates because Grain Belt Express will bear all of the financial risk for the Project which will be able to deliver power to Missouri utilities at a lower cost than current wholesale power prices in the state. As I noted previously, this additional interconnection will also

enhance the reliability of the electric transmission network in Missouri by making available another source of electric power supply, and will promote competition in the supply of generation and transmission service.

4 Q. Please summarize your direct testimony.

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The Grain Belt Express Project will result in a major investment to improve Missouri's electric transmission infrastructure with no risk to the ratepayers. The Project will provide the most efficient means to link affordable renewable energy supply to demand in Missouri, Illinois, Indiana and other states. Through its TSA with MJMEUC, the Project will directly serve Missouri consumers with electricity at a lower cost than what they are paying today. MJMEUC has agreed to purchase 200 MW of the total 500 MW of available service from Kansas to Missouri. Other Missouri utilities can achieve the same benefit by buying the remaining transmission service on, or energy delivered by, the Project. The Project will generate employment before, during and after construction. Through property taxes assessed on the Project, it will also contribute millions of dollars of revenues to local schools, roads, fire districts, and other vital public services in the counties in which Missouri Facilities are located. Because the Project serves wind generators and wholesale purchasers, its costs will be recovered solely from its transmission service contracts, and will not be recovered through the socialized cost allocation processes of SPP, MISO or PJM. Grain Belt Express has the managerial and financial capabilities to develop the Project and to bring it successfully into operation. For these reasons, I believe the Project is necessary and useful for the public service and the Application should be approved.

22 Q. Does this conclude your prepared direct testimony?

23 A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of the Application of Grain Belt Express)		
Clean Line LLC for a Certificate of Convenience and)		
Necessity Authorizing it to Construct, Own, Control,)	Case No. EA-2016-	
Manage, Operate and Maintain a High Voltage, Direct)		
Current Transmission Line and an Associated Converter	·)		
Station Providing an Interconnection on the Maywood-)		
Montgomery 345 kV Transmission Line)		

AFFIDAVIT OF MICHAEL P. SKELLY

STATE OF ILLINOIS)
) s:
COUNTY OF COOK)

Michael P. Skelly, being first duly sworn on his oath, states:

- 1. My name is Michael P. Skelly. I am the President and Chief Executive Officer of Clean Line Energy Partners LLC.
- 2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Grain Belt Express Clean Line LLC consisting of 31 pages, having been prepared in written form for introduction into evidence in the above-captioned docket.
- 3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

Michael P. Skelly

Subscribed and sworn before me this 29 day of June, 2016.

Notary Public

JANYCE K. WILSON
OFFICIAL SEAL
Notary Public - State of Illinois
My Commission Expires
March 22, 2018