

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, Operate,)
Control, Manage and Maintain a High Voltage, Direct) File No. EA-2016-0358
Current Transmission Line and an Associated)
Converter Station Providing an Interconnection on the)
Maywood - Montgomery 345 kV Transmission Line.)

REBUTTAL TESTIMONY OF

MATT LANGLEY

ON BEHALF OF

INFINITY WIND POWER

January 24, 2017

1 **I. INTRODUCTION AND PURPOSE OF TESTIMONY**

2 **Q. Please state your name.**

3 A. My name is Matt Langley.

4 **Q. By whom and in what capacity are you employed?**

5 A. I work for Infinity Wind Power (Infinity), located at 3760 State Street, Suite 200, Santa
6 Barbara, CA 93105. I am the Vice President, Finance and Origination for Infinity and
7 have held this position since September 2016.

8 **Q. What is the purpose of your testimony in this matter?**

9 A. The purpose of my testimony is to respond to Grain Belt Express Clean Line LLC's
10 (Grain Belt Express) request for a certificate of convenience and necessity (CCN) from
11 the Missouri Public Service Commission (MPSC or Commission). Specifically, my
12 testimony will address the need for national electric grid expansion and discuss how the
13 Grain Belt Express project will assist in meeting that need by providing a current
14 example demonstrating the benefit of the Grain Belt Express project.

15 **Q. How is your testimony structured?**

16 A. I will begin by providing the Commission with some general background information on
17 myself and Infinity. I will then discuss the need, public interest, and economic feasibility
18 of the project from Infinity's point of view.

19 **II. BACKGROUND**

20 **Q. What is your educational background?**

21 A. I received a Bachelor's degree in Economics and the Chinese Language from The Johns
22 Hopkins University in 2001, and a Masters of Business Administration from the Darden
23 School of Business at The University of Virginia in 2008.

1 Q. You indicated above that you have been the Vice President, Finance and
2 Origination for Infinity since 2016. What does your role of Vice President involve?

3 A. I am responsible for managing the financial analysis and forecasting activities for
4 Infinity, acquiring Purchase Power Agreements (PPA) with utility customers and
5 employing other offtake strategies for the company, including hedging strategies, direct
6 sales to industrial customers, as well as other related strategies. I am also responsible for
7 financing our projects, which involves raising equity, debt and tax equity, as appropriate.
8 I also manage the team that conducts all of the financial modeling and market analysis for
9 the company.

10 Q. What did you do prior to becoming the Vice President, Finance and Origination for
11 Infinity in September 2016?

12 A. Prior to my promotion to Vice President in 2016, I was the Director of Business
13 Development for Infinity. I was hired into that position in March, 2012. I had similar
14 responsibilities that I currently have, with the exception of fewer management
15 responsibility. In my previous position, I was also more heavily involved in the
16 acquisition of energy projects from other developers.

17 Q. What did you do prior to becoming the Director of Business Development for
18 Infinity in March 2012?

19 A. Prior to joining Infinity in March 2012, I led the commercial efforts for Colorado-based
20 juwi Wind, LLC (juwi), which was developing wind projects throughout North America.
21 In that role, I led efforts to expand the company's footprint into Canada, and completed
22 the acquisition of a late stage project in Minnesota. I also conducted all of the power

1 marketing activities for the company. Prior to juwi, I worked in a similar role for Clipper
2 Windpower Development Company, located in Carpentaria, CA and Cedar Rapids, Iowa.

3 **Q. Have you ever provided testimony before the Missouri Public Service Commission?**

4 A. Yes, I previously provided testimony to the Commission on behalf of Infinity in File No.
5 EA-2014-0207.

6 **III. BENEFITS OF THE GRAIN BELT EXPRESS PROJECT**

7 *Need for the Grain Belt Express Project*

8 **Q. Grain Belt Express witness Mr. David Berry indicates that there is a demand from**
9 **Kansas wind producers for the Grain Belt Express Project.¹ Do you agree with Mr.**
10 **Berry's assertion?**

11 A. Yes. As a wind developer in Kansas, Infinity believes that the Grain Belt Express project
12 satisfies a missing link in modernizing the nation's electric power infrastructure. The
13 project will enable Infinity and companies like Infinity to export inexpensive power to
14 the benefit of others in load centers outside of Kansas. As was true a couple of years ago,
15 wind energy is still the least expensive form of new build energy in the US. This is true
16 because we are siting the wind farms in areas that are very windy, thus making the farms
17 quite productive. The challenge is developing the means to deliver this very cheap power
18 to load, where it can help provide stable prices to businesses and consumers. The Grain
19 Belt Express Project is the solution to that very real delivery problem, as is evidenced by
20 the recent contract that Infinity was able to broker with the Missouri Joint Municipal
21 Electric Utility Commission ("MJMEUC).

¹ Berry Direct, pp. 24-25.

1 **Q. To what contract are you referring?**

2 A. I am referring to a contract that was just entered into on January 23, 2017, between
3 Infinity and MJMEUC. Because the contract is contingent upon the approval of the
4 Grain Belt Express Project, many of the terms remain confidential, but what I can say is
5 that it is a 20-year term fixed-price contract that provides for the purchase by MJMEUC
6 of a minimum of 100 MW of capacity and energy per year from our Iron Star Wind
7 Project, a maximum purchase of 300 MW per year, and a likely purchase amount of 200
8 MW per year.

9 **Q. Would this contract have been possible without the Grain Belt Express Project?**

10 A. No. As I noted, the contract is contingent upon the completion of the Grain Belt Express
11 Project, which requires the Missouri Public Service Commission's approval of Grain Belt
12 Express' application for certification. Without the Project, there is not a sufficient
13 pathway for the power to flow from Kansas to MJMEUC.

14 **Q. Are you suggesting that there are no other alternatives to exporting Kansas' wind
15 energy than the project being proposed by Grain Belt Express?**

16 Essentially, yes. I do not believe there are other economically feasible ways to export the
17 energy, and certainly the contract between Infinity and MJMEUC will not exist without
18 the Grain Belt Express Project. The project proposed by Grain Belt Express is the most
19 efficient way to export large amounts of power due to the technology being used.

20 In order to export power today, a generator in Kansas must work with multiple
21 utilities and transmission operators in order to acquire the rights to export. This is really
22 due to the design of the grid, and its lack of modernization. Many of those agreements are
23 short in term, and very expensive, and in looking at these alternatives to export power, it

1 is clear that there is no existing project or combination of projects that can yield similar
2 results as the Grain Belt Express Project.

3 *Public Interest*

4 **Q. Mr. Berry discusses how the Grain Belt Express project is in the public interest.²**
5 **How does Infinity view the public interest being affected by the Project?**

6 A. As I have noted to this Commission in Grain Belt Express' previous certification filing in
7 2014, the benefits of a project like this are several in number and significant in impact.
8 Infinity has developed projects throughout the region, and has witnessed the impacts to
9 the landowners, the communities, and the regions. Specifically, the projects provide
10 economic benefits to the landowners and ratepayers, to local businesses and American
11 manufacturing companies. Additionally, the project will be supporting energy projects
12 that are clean, do not consume precious water or finite resources, and are capable of
13 delivering power at a predictable fixed price, rather than one that is dictated by volatility
14 of the energy markets.

15 **Q. Please continue.**

16 A. The wind resource in Kansas is one of the finest in the United States. It allows our
17 energy projects to produce power during both peak, and off peak hours, and is very well
18 understood. By delivering this resource to the load centers in Missouri and east, we can
19 help create a stable power pricing regime, which is good for industries that are coming
20 back to the United States, or that are growing. We continue to see increasing numbers of
21 large companies that are directly purchasing renewable power from developers like
22 Infinity. These companies are doing this in part because they recognize the

² Direct Testimony, David Berry, pp. 23-45.

1 environmental benefits of doing so, but also because they see the value in purchasing
2 energy at a very low and fixed price for a long period of time. This stability is exactly
3 what industry requires when it is deciding to invest in growth. The Grain Belt Express
4 project will allow more purchases of this kind, thus facilitating further economic growth
5 in the Midwest.

6 *Economic Feasibility of the project*

7 **Q. Mr. Berry examines the economic feasibility of the Grain Belt Express project on
8 pages 27-34 of his Direct testimony. Do you agree with Mr. Berry's analysis?**

9 A. Yes, I do agree with Mr. Berry's discussion. While I have not conducted a separate in-
10 depth levelized cost analysis like Mr. Berry's, the results of his study are consistent with
11 \$/MWh values I routinely see through the course of my daily activities. I also agree, as
12 discussed above, that the Grain Belt Express project will provide a lower cost option of
13 exporting large amounts of Kansas wind power to areas further east.

14 From Infinity's perspective, we know that energy projects are sensitive to
15 economies of scale so larger projects are more efficient because the more megawatts we
16 can generate and ultimately deliver, the lower the price is of the power that we sell to
17 ratepayers. However, when we consider the costs of building a project, one of the critical
18 challenges is the attractiveness of a project to the financing community. These projects
19 are designed to last for twenty to thirty years and cost several hundred million dollars
20 each. Therefore, we need to raise significant capital from large, institutional investors.
21 The Grain Belt Express project contributes significantly to our ability to raise these funds
22 because it offers an exportation path for our projects that does not currently exist.

1 In other words, the lack of sufficient pathways for exporting presents challenges
2 to obtaining the financing needed to construct or fully develop a wind farm. In the
3 absence of the Grain Belt Express Project, Infinity’s ability to develop energy projects in
4 western Kansas is somewhat hampered due to technical and financial challenges resulting
5 from the lack of pathways. The net result of these challenges is a less reliable and more
6 expensive energy product for ratepayers. In our analysis, with the current technology and
7 infrastructure, it would not be economically feasible to deliver this quantity for clean,
8 inexpensive power in the absence of this project. For example, the use of Direct Current
9 (DC) technology as opposed to Alternating Current (AC) technology reduces the amount
10 of line loss that is experienced, which means that more of the energy generated at the
11 wind farm in Kansas will make it to the end consumer of that power.

12 As mentioned, if we did not have the Grain Belt Express project, we would have
13 to deliver the power from our farms over the existing AC systems. The problem with the
14 AC approach is that the cost of moving power is significantly higher, and the way that it
15 is accomplished is significantly more complicated. This complexity makes it much
16 harder to attract both customers and financing to a project.

17 Because of the quality of the wind resource, the economies of scale, and the
18 stability of financing, wind projects that will deliver power over this project will do so at
19 a lower cost to rate payers in Missouri and states to the east. If the Grain Belt Express
20 project is constructed, Infinity has the potential of bringing on-line multiple phases of
21 generation, which will result in a lower per megawatt cost – the larger the project, the
22 lower the per megawatt cost will be.


1 Q. Does this complete your testimony?

2 A. Yes.

AFFIDAVIT

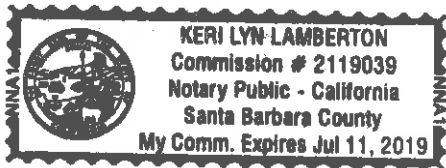
STATE OF CALIFORNIA)
) ss
COUNTY OF ALAMEDA)


I, Matthew Langley, upon oath first duly sworn, state that I am Vice President, Finance and Origination of Infinity Wind Power, that I am authorized to make this Affidavit on behalf of Infinity Wind Power, that I have prepared the foregoing *Rebuttal Testimony*, and that the statements contained therein are true and correct to the best of my knowledge and belief.



Matthew Langley
Vice President, Finance and Origination
Infinity Wind Power

Subscribed and sworn to before me this 23rd day of January, 2017.





Notary Public

My appointment expires: 7/11/19

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the Rebuttal Testimony of Matt Langley was served upon the parties to this proceeding by email this 24th day of January 2017.

/s/ Terri Pemberton

Terri Pemberton

Attorney for Infinity Wind Power