

**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 Current )  
Transmission Line and an Associated Converter )  
Station Providing an Interconnection on the )  
Maywood - Montgomery 345 kV Transmission Line.

**Case No. EA-2014-0207**

**STAFF’S REPLY POST-HEARING BRIEF**

**Introduction**

Before responding to particular matters raised in the initial briefs of other parties, Staff reiterates that its position is still that the Commission should find that Grain Belt Express is a public utility who requires a certificate of convenience and necessity from the Commission to operate in the state of Missouri, but that Grain Belt Express has not shown that segment of its multi-state HVDC transmission line that would cross Missouri or its proposed converter station to be located in Ralls County, Missouri, are needed, economically feasible or promote the public interest and, therefore, not grant Grain Belt Express a certificate of convenience and necessity for them.

**County Franchises**

Relying on § 393.170 RSMo,<sup>1</sup> the Missouri Landowners Alliance asserts that Grain Belt “has failed to secure the needed approvals pursuant to Section 292.100 RSMo from the eight county commissions in the counties where the proposed line

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<sup>1</sup> All statutory cites are to RSMo 2000, unless otherwise noted.

would be built.”<sup>2</sup> Those counties are Buchanan, Clinton, Caldwell, Carroll, Chariton, Randolph, Monroe and Ralls counties, Missouri. Section 292.200 provides:

No person or persons, association, companies or corporations shall erect poles for the suspension of electric light, or power wires, or lay and maintain pipes, conductors, mains and conduits for any purpose whatever, through, on, under or across the public roads or highways of any county of this state, without first having obtained the assent of the county commission of such county therefor; and no poles shall be erected or such pipes, conductors, mains and conduits be laid or maintained, except under such reasonable rules and regulations as may be prescribed and promulgated by the county highway engineer, with the approval of the county commission.

Section 393.170 provides:

393.170. 1. No gas corporation, electrical corporation, water corporation or sewer corporation shall begin construction of a gas plant, electric plant, water system or sewer system without first having obtained the permission and approval of the commission.

2. No such corporation shall exercise any right or privilege under any franchise hereafter granted, or under any franchise heretofore granted but not heretofore actually exercised, or the exercise of which shall have been suspended for more than one year, without first having obtained the permission and approval of the commission. Before such certificate shall be issued a certified copy of the charter of such corporation shall be filed in the office of the commission, together with a verified statement of the president and secretary of the corporation, showing that it has received the required consent of the proper municipal authorities.

3. The commission shall have the power to grant the permission and approval herein specified whenever it shall after due hearing determine that such construction or such exercise of the right, privilege or franchise is necessary or convenient for the public service. The commission may by its order impose such condition or conditions as it may deem reasonable and necessary. Unless exercised within a period of two years from the grant thereof, authority conferred by such certificate of convenience and necessity issued by the commission shall be null and void.

Grain Belt Express relies on the distinction the Western District Court of Appeals drew in *State ex rel. Harline v. PSC*, 343 S.W.2d 177, 182-85 (Mo. App. W.D. 1960),

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<sup>2</sup> Initial Post-Hearing Brief of the Missouri Landowners Alliance, pp. 40-50.

and recently restated *StopAquila.org v. Aquila, Inc.*, 180 S.W.3d 24, 32-34 (Mo. App. W.D. 2005), that Commission authority for a “line” certificate emanates from § 393.170.1 and Commission authority for an “area” certificate emanates from § 393.170.2 to argue that “[t]he necessity of municipal franchise only applies to the grant of an “area” CCN under 393.170.2” and, therefore, “[b]ecause Grain Belt Express is seeking a ‘line’ CCN under Section 393.170.1, it is not required to obtain any franchise from any governmental body.”<sup>3</sup> The foundation for Grain Belt Express’ position is, at best, shaky.

As originally enacted, § 393.170 was a single undivided paragraph<sup>4</sup> and but one section of 140 sections of the Public Service Commission Act.<sup>5</sup> The Revisor of Statutes first divided it into subparts in the 1949 Missouri Revised Statutes—the publication with which the Revisor adopted the current system of statute numbering, instead of renumbering them sequentially every decade, and where it distributed the 1913 Public Service Commission Act, as amended, from one chapter into multiple chapters. Doing so had no legislative effect.<sup>6</sup>

As Staff explained in its initial brief, it was not until 1934, after the Missouri Supreme Court held expansion into new territory required a new certificate, that the Commission embarked on granting utilities subject to its jurisdiction “blanket” or “area” certificates. More importantly, the Commission’s grant of a certificate of convenience and necessity does not confer authority, but, rather, allows a public utility to exercise

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<sup>3</sup> Initial Post-Hearing Brief of Grain Belt Express, pp. 53-54.

<sup>4</sup> § 72 of Public Service Commission Act, Laws of Missouri 1913, pp. 610-11.

<sup>5</sup> Laws of Missouri 1913, pp. 556-651.

<sup>6</sup> *Kansas City v. Travelers Insurance Company*, 284 S.W.2d 874,878 (Mo. App. 1955).

rights and powers it already has, *i.e.*, it grants another layer of state approval that is required before a public utility may lawfully provide utility service to the public.<sup>7</sup>

If a utility requires use of public rights-of-way to provide utility service, then it requires authority from the state that it does not obtain from the Commission. When a utility is using public rights-of-way to provide its utility service, it is illogical that the prerequisite to a certificate of convenience and necessity of authority from the political subdivision to use those public rights-of-way not apply merely because the utility is seeking authority to build a transmission line rather than “area” or “blanket” authority to provide utility service within a particular geographic part of the state.

Exhibit 141 graphically shows that Grain Belt Express’ HVDC transmission line route in Missouri crosses many public rights-of-way and, more importantly, closely parallels public roads, apparently in their rights-of-way, in at least Clinton, Caldwell, Chariton, Randolph, Monroe and Ralls counties, Missouri. It is Staff counsel’s opinion that a precondition to the Commission granting Grain Belt Express a certificate of convenience and necessity for that part of its HVDC transmission line project in Missouri is that, where that route lies in a public right-of-way in a county, Grain Belt Express must have authority from that county to use that public right-of-way. As identified by the Missouri Landowners Alliance in its initial brief, Schedule LDL-3 to the rebuttal testimony of its witness Louis Donald Lowenstein (Ex. 306) shows that during 2012 Grain Belt Express obtained from each of the eight counties a franchise that allows it to use public rights-of-way in that county for the HVDC transmission line. While they contain conditions, none limit the duration of the authority granted; therefore, each is

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<sup>7</sup> *State ex inf. Shartel v. Missouri Utilities Co.*, 331 Mo. 337, 53 S.W.2d 394 (Mo. Banc 1932); *State ex rel. City of Sikeston v. Public Service Commission of Missouri*, 336 Mo. 985, 995-96; 82 S.W.2d 105, 108-09 (Mo. 1935); *State ex rel. Union Electric Company v. Public Service Commission*, 770 S.W.2d 283, 285-86 (Mo. App. 1989).

perpetual.<sup>8</sup> Further, none of the counties explicitly reserved the right to revoke the franchise.<sup>9</sup> While, as the Missouri Landowners Alliance states, whether the attempted revocations of the franchises by the counties of Clinton, Caldwell, Chariton, Monroe and Ralls in 2014<sup>10</sup> are valid is a question for the Missouri courts, it is the opinion of Staff counsel that since none of the franchises include an explicit right to revoke the franchise, the attempted revocations, which are not based on any of the conditions in the franchises, are not valid.<sup>11</sup>

Schedule LDL-3 to the rebuttal testimony of Missouri Landowners Alliance witness Louis Donald Lowenstein (Ex. 306) shows that Grain Belt Express obtained the county franchises to use public rights-of-way that are prerequisites to a certificate of convenience and necessity for the HVDC transmission line and converter station in Missouri.

Much of the evidence and argument in this case is about the anticipated characteristics and impacts of the electricity expected to flow across Grain Belt Express' proposed transmission line and converter stations because Grain Belt Express' business plan and application are premised on there being a need for transmission

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<sup>8</sup> See *Missouri Public Service Company v. Platte-Clay Electric Cooperative, Inc.*, 407 S.W.2d 883, 889 (Mo. 1966) (Citing *State on inf. McKittrick ex rel. City of Trenton v. Missouri Public Service Corp.*, 351 Mo. 961, 174 S.W.2d 871, 879; *State ex inf. Chaney v. West Missouri Power Co.*, 313 Mo. 283, 281 S.W. 709, 713, 714; *State ex inf. McKittrick ex rel. City of Springfield v. Springfield City Water Co.*, 345 Mo. 6, 131 S.W.2d 525, 531; 43 Am.Jur. Public Utilities and Services § 17.).

<sup>9</sup> *State ex inf. Peach v. Melhar Corporation*, 650 S.W.2d 633 (Mo. App. 1983) (franchise forfeited for non-use where authorizing ordinance provided for forfeiture for non-use).

<sup>10</sup> Ex. 306, MLA witness Lowenstein rebuttal, Sch. LDL-4.

<sup>11</sup> In 1935 the Missouri Supreme Court found this Commission does not have authority to cancel certificates of convenience and necessity over the utility's opposition when the City of Sikeston sought for the Commission to cancel the certificate that the Missouri Utilities Company was operating under to provide electric service in Sikeston after it, with Commission authorization, acquired the Sikeston Electric Light Company, the company to whom the Commission originally issued the certificate. *State ex rel. City of Sikeston v. Public Service Commission of Missouri*, 336 Mo. 985, 995-96; 82 S.W.2d 105, 108-09 (Mo. 1935). See *State ex inf. Peach v. Melhar Corporation*, 650 S.W.2d 633, 636 (Mo. App. 1983) (A franchise is contractual in nature and city reserved right to revoke the franchise for non-use or forfeit the franchise for breaching conditions).

facilities to deliver electricity generated from wind in southwest Kansas into the MISO (northeast Missouri) and PJM markets (west-central Indiana). While those characteristics and impacts are important, the Commission should not forget that the requested certificate of convenience and necessity is for transmission facilities, not generation facilities, and that Grain Belt Express is prohibited by the FERC from using the nature of the resource from which electricity is generated as a basis for discriminating against who may obtain capacity to transmit electricity over those transmission facilities.

If, despite Staff's and other parties' arguments to the contrary, the Commission finds that Grain Belt Express has made a sufficient showing that it should be allowed to proceed with building its transmission line project, then, in combination with, or in lieu of, relying on studies for determining financial feasibility for completing the project, the Commission could rely on the results of the capacity auction that the FERC has authorized Grain Belt Express to employ—a broad, open solicitation process from which Grain Belt Express, based on not unduly discriminatory or preferential criteria, may select a subset of those responding to the solicitation to negotiate directly with for transmission right rates<sup>12</sup>—for that financial feasibility.<sup>13</sup> If firm financial commitments for transmission project capacity exceed all the financial costs of the project, the capacity auction would evidence financial feasibility.<sup>14</sup> Similarly, they would also be evidence of “need” for the project, since rational bidders would not seek transmission capacity unless they perceive that capacity is “needed.”

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<sup>12</sup> Ex. 118, GBE witness Berry direct, p. 7., ll. 1-20; Grain Belt Express LLC, 17 FERC 61,098 (2014) (May 8, 2014, Order Conditionally Authorizing Proposal and Granting Waivers, Docket No. ER14-409-000).

<sup>13</sup> Ex. 201, Staff witness Beck rebuttal, p. 11, ll.19-20; Staff witness Beck, Tr. Vol. 17, p. 1747, l. 25 to p. 1749, l. 10.

<sup>14</sup> *Id.*

## Conditions

Staff counsel stated in his opening statement, “In deciding whether to grant a certificate of convenience and necessity in this case, the Commission is tasked with deciding whether the benefits of the transmission line and associated facilities exceed the costs that are associated with them.”<sup>15</sup> Staff’s conditions that Grain Belt Express disputes are directed at ensuring the Commission has the opportunity to weigh all of the benefits against all of the costs of Grain Belt Express’ transmission project to Missourians and to protect Missouri landowners.

In its initial brief Grain Belt Express accurately states that it and Staff are not in agreement on the conditions Staff has numbered 1, 4.f., 4.g., 4.q. 4.u, 8, 12, 13, 14, 22 and 23 in its initial brief. Those conditions, with Staff’s responses to Grain Belt Express’ argument against them, follow:

1. That the line may only be constructed in Missouri in the location Grain Belt Express specified in its application and as Grain Belt Express represented to the landowners in aerial photos it provided (Ex. 141), unless an affected landowner agrees to a route change in writing or the Commission by a subsequent order expressly authorizes it.<sup>16</sup>

As Staff stated in its initial brief, Staff recommends this condition to address easement concerns. One of those concerns is who has a meaningful input into the transmission line route. With this condition, the owners of land over which the changed route will cross will be assured of meaningful input into any deviations from the route the Commission approves when it grants Grain Belt Express a certificate of convenience and necessity.

4. That, in Missouri, Grain Belt Express shall comply with the following construction, clearing, maintenance, repair, and right-of-way practices:

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<sup>15</sup> Tr., Vol. 10, p. 73, l. 25 to p. 74, l. 4.

<sup>16</sup> Ex. 201, Staff witness Beck rebuttal, p. 12, l. 10 to p. 13, l. 15, including footnote 1 and Schedule DB-2.

- f. Unless otherwise directed by the landowner, stumps will be treated to prevent regrowth.

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- g. Unless the landowner does not want the area seeded, disturbed areas will be reseeded with a blend of K31 fescue, perennial rye, and wheat grasses, fertilized, and mulched with straw.

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- q. All right-of-way maintenance contractors will employ foremen that are certified arborists.

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- u. Prior to commencing any vegetation management on the right-of-way, Grain Belt Express will meet personally with all landowners to discuss Grain Belt Express' vegetation management program and plans for their property, and to determine if the landowners do or do not want herbicides used on their property. If a landowner does not want herbicides used, they will not be used.

Staff disagrees with Grain Belt Express' characterization of its conditions numbered 4., f. and g. to "mandate the chemical treatment of stumps to prevent regrowth, as well as the application of a specific blend of grasses (to be fertilized and mulched with straw), regardless of the nature of the property or the environmental consequences."<sup>17</sup> Recognizing that Grain Belt Express, landowners and others may not agree, what Staff intends through these conditions is establish a default practice that Grain Belt Express must follow, unless the landowner directs or agrees otherwise.<sup>18</sup>

With regard to Staff proposed condition numbered 4.q. in its initial brief, Staff disagrees with Grain Belt Express that "it would be unreasonable to require every [right-

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<sup>17</sup> Initial Post-Hearing Brief of Grain Belt Express, p. 51.

<sup>18</sup> Staff witness Beck, Tr. Vol. 7, p. 1729, l. 4 to p. 1734, l. 8.



of-way maintenance contractor] foreman to be [a certified arborist].” This condition is important for addressing landowner easement concerns.<sup>19</sup>

In response to Staff’s condition numbered 4.u. in its initial brief that requires Grain Belt Express to meet personally with all landowners before starting any vegetation management on its right-of-way Grain Belt Express responds that this requirement should be eliminated representing, “The Company agrees to meet personally with landowners if that is their preference. Otherwise, Grain Belt Express should be permitted to communicate with landowners through means that are convenient and satisfactory to both parties.”<sup>20</sup> Similar to the constitutional due process obligation to provide the best notice available, Staff believes Grain Belt Express should be required to provide to landowners on its right-of-way the best notice it can before starting any vegetation management on its right-of-way—the best notice is personal, followed by mailed, then published notice, but if a landowner agrees beforehand to a lesser means of notice, then that agreed upon notice would be sufficient.

8. That the cost of the transmission line, converter stations and any AC collector system owned by Grain Belt Express will not be recovered through the SPP cost allocation process or from Missouri ratepayers.<sup>21</sup>

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13. That Grain Belt Express provide to the Commission documentation of:
  - a. Grain Belt Express’ commitment that it will not seek regional transmission organization cost allocation for its transmission project, nor for any transmission system upgrades necessary to safely accommodate it; . . . .<sup>22</sup>

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<sup>19</sup> Ex. 201, Staff witness Beck rebuttal, p. 12, l. 10 to p. 13, l. 15.

<sup>20</sup> Initial Post-Hearing Brief of Grain Belt Express, p. 52.

<sup>21</sup> Ex. 201, Staff witness Beck rebuttal, p. 13, l. 17 to p. 15, l. 17.

<sup>22</sup> Ex. 206, Staff witness Kliethermes rebuttal, p. 4.

In response to these conditions, which would not allow Grain Belt Express to recover any costs of its HVDC transmission project from Missourians through socialized regional transmission charges, e.g., as multi-value projects in the MISO or as priority projects in the SPP, Grain Belt Express proposes it not seek to employ MISO or SPP cost allocation without first getting authorization from this Commission in a new proceeding and argues that the SPP or the MISO may, without Grain Belt Express having any control over them, socialize part of the costs of any upgrades required for it to interconnect with the “grid” within their footprints.<sup>23</sup> It is Staff’s position that Missourians should not be responsible for paying for any of Grain Belt Express’ HVDC transmission project, including required regional transmission upgrades, except to the extent those Missourians, directly or indirectly, pay for transmission rights (auctioned or pursuant to a FERC-approved open access transmission tariff) for electricity they use that is transmitted over Grain Belt Express’ HVDC transmission line. Grain Belt Express’ purpose for undertaking this merchant project is profit, not reliability or safety. Staff notes that the Kansas Corporation Commission’s November 7, 2013, *Order Granting Siting Permit* to Grain Belt Express for this HVDC transmission project includes, among others, the following condition:

Grain Belt Express did not object to the conditions proposed by Staff, but offered alternative language for two of the conditions which Staff witnesses did not object to at the evidentiary hearing. The proposed alternative language is as follows:

- a. The cost of the Project and any AC Collector System owned by Grain Belt Express will not be recovered through the SPP cost allocation process or from Kansas ratepayers.<sup>24</sup>

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<sup>23</sup> Initial Post-Hearing Brief of Grain Belt Express, pp. 42-43.

<sup>24</sup> Ex. 201, Staff witness Beck rebuttal, Sch. DB-4-20.

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Staff understands that in the context of that order, the word “Project” does not include transmission upgrades regional transmission organizations require for interconnection with the transmission grid in their footprints. As can be seen by the wording, and as Staff witness Beck testified during the hearing, Staff’s condition numbered 8 in its initial brief was taken from this Kansas Corporation Commission order.<sup>25</sup>

In evaluating whether to impose this condition, Staff cautions the Commission from relying on Grain Belt Express’ late-filed exhibit no. 150 (Ameren Services Transmission Planning’s November 2014 *Midwest ISO SPA-2013-May-Missouri System Impact Study Final Report*) offered December 4, 2014. In its initial brief on page 34, Grain Belt Express refers to that report asserting that it “indicated there were ‘no injection-related constraints for the 500 MW Maywood Interconnection’ proposed by the Grain Belt Express Project.”<sup>26</sup> Grain Belt Express does not disclose is that the report also states:

*A. Thermal Contingency Analysis*

**As specified in the interconnection customer’s requested scope of work**, the scope of this J255 study was to be limited to identifying injection-related constraints for the Maywood interconnection based on single contingency NERC Category B events only. **No Local Planning Criteria were to be tested – except for transfer capability.** In addition, there was to be no testing for voltage-related constraints.<sup>27</sup>

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<sup>25</sup> Staff witness Beck, Tr. Vol. 17, p. 1735, l. 17 to p. 1736, l. 5.

<sup>26</sup> GBE Initial Brief p. 34.

<sup>27</sup> Ex 150. MISO System I System Impact Study Final Report impact Study Final Report, p. 5.

#### *D. Stability Analysis*

**At the customer's request, analysis was not performed to determine whether the study connection would have any adverse impacts on the stability of the transmission system.<sup>28</sup>**

#### *E. Summary of Costs*

**At the customer's request, no cost estimates will be provided as part of this System Impact Study – including the cost to physically connect the customer's 345kV ac bus to the Maywood 345kV bus.<sup>29</sup>**

#### **(Emphases Added).**

12. Although the report discloses that Grain Belt Express requested that it not be part of this study, for Grain Belt Express to interconnect its project to Ameren Missouri's substation in Ralls County, Missouri, Grain Belt Express must mitigate all injection, stability, and short circuit constraints, as well as any local planning criteria violations, resulting from the incremental increase in network resource generation.<sup>30</sup> Because of the limited scope of the work performed for the report, it cannot take the place of the MISO definitive planning phase for an accurate analysis of the impacts of the Grain Belt Express project on the Missouri electrical grid and whether any transmission upgrades will be required to alleviate congestion caused by the project. Since Grain Belt Express' evidence is inadequate to show that its HVDC transmission line and converter stations will not require upgrades to the existing transmission grids in the MISO or the SPP footprints, the Commission should require that Grain Belt Express pay for any regional transmission upgrades, as determined by the MISO or the SPP, resulting from the Grain Belt Express project regardless of any incidental benefits they may have to Missouri ratepayers. If the Commission does not impose this condition, any regional transmission upgrade costs may be allocated to Missouri utilities by their regional transmission organizations, and if they are, they would ultimately impact Missouri retail rates, decreasing any economic benefit of the Grain Belt Express project. That Grain Belt Express perform the following studies, designed after Staff and other parties have had the opportunity to provide meaningful input regarding the quality of the data and the reasonableness of the inputs used for (1) load assumptions for the year 2019, (2) generator capacities, efficiencies, dispatch stack, or bid amounts

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<sup>28</sup> Id at 6.

<sup>29</sup> Id.

<sup>30</sup> Id. at 8.

for the year 2019, (3) the wind delivery used for the year 2019, (4) the level of precision used in modeling factors such as generator heat rate curve, transmission loading curves, or other inputs to the PROMOD model used for the studies, and provide them to the Commission for it to determine whether they show the transmission line and converter station in Missouri is needed, economically feasible and/or promotes the public interest in Missouri:

- a. Production modeling that incorporates:
  - day-ahead market prices to serve load;
  - real-time market prices to serve load;
  - ancillary services prices to serve load;
  - day ahead market prices realized by Missouri-owned or located generation;
  - real-time market prices realized by Missouri-owned or located generation;
  - ancillary services prices realized by Missouri-owned or located generation; and
  - an estimate of the impact of Grain Belt Express' transmission project on the operational efficiency of Missouri-owned or located generation.<sup>31</sup>
  
- b. Production, transmission, and economic modeling or analysis to determine:
  - the cost of transmission upgrades that may be economical to resolve the transmission constraints that its energy injections will cause or exacerbate;
  - the impact of using the entire design capacity of the Missouri converter station;
  - the net impact to Missouri utilities of picking up Missouri energy by day for export to PJM or SPP.; and
  - whether the variability of the injected wind could be better managed in the SPP prior to injection.<sup>32</sup>

Grain Belt Express states in its initial brief that its witness' adjusted production cost analysis shows total estimated savings to Ameren Missouri of \$1.0 million in its cost to serve load in 2019.<sup>33</sup> While Staff agrees that, as modeled, the Grain Belt Express project will reduce the LMP at the Palmyra injection point, Staff is concerned

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<sup>31</sup> Ex. 206, Staff witness Kliethermes rebuttal, p. 3.

<sup>32</sup> Ex. 206, Staff witness Kliethermes rebuttal, p. 3-4.

<sup>33</sup> GBE Initial Brief p. 32.

that Grain Belt Express understates the significance of the fact that Missouri's load serving entities that may purchase energy through the Grain Belt Express project are required to pay the differential between the LMP at the Palmyra injection point and the LMP at the location where the energy is used to serve load. Grain Belt Express' witness Mr. Berry agreed that Missouri load-serving entities that may purchase energy delivered over the Grain Belt Express transmission line would be responsible for paying the LMP differential.<sup>34</sup> Based on Grain Belt Express' modeling, Staff concludes that the LMP differential between Palmyra, where the wind energy will be injected, and the locations within Ameren Missouri's territory where that energy may be used to serve load results in approximately \$2.3 million per year of additional congestion costs, which results in a net increase of \$1.3 million per year to Ameren Missouri's cost to serve its load.<sup>35</sup>

As Staff pointed out in its initial brief, the generic, off-the-shelf data package that Grain Belt Express relied on to perform its modeling is inadequate for predicting the price of power at a specific location because it does not account for important factors such as unit-specific heat rate curves, Missouri-specific characteristics, such as specific fuel contracts that may cause a utility to modify its bid strategy.<sup>36</sup> Staff asserts that the data and inputs Grain Belt Express used in its modeling are generic assumptions designed to be used for comparing test cases, not for predicting specific outcomes.<sup>37</sup> Therefore, because Grain Belt Express' studies are not sufficiently reliable, Staff is recommending these conditions that require the studies listed above be performed so that if they show the benefits and costs the Commission relied on when the Commission

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<sup>34</sup> GBE witness Berry, Tr. Vol. p. 1161-1162.

<sup>35</sup> Staff witness Kliethermes, Tr. Vol. 117, p. 1584, ll. 9-19.

<sup>36</sup> Staff witness Kliethermes, Tr. Vol. 17, p. 1580, l. 25 to p. 1581, l. 10.

<sup>37</sup> GBE witness Cleveland, Tr. Vol. 14, p. 1078, l. 11 to p. 1079, l. 19.

decided to grant Grain Belt Express a certificate are less, or more, respectively, than the Commission found them to be at that time, it may reconsider whether Grain Belt Express should be permitted to build the HVDC transmission line segment and converter station in Missouri.

14. That Grain Belt Express provide to the Commission for it to determine whether they show the transmission line and converter station in Missouri is needed, economically feasible and/or promotes the public interest in Missouri, the following for the proposed transmission project:

- completed Storm Restoration Plans,
- the Interconnection Agreement with SPP,
- the Interconnection Agreement with MISO,
- the Interconnection Agreement with PJM,
- the MISO Feasibility Study,
- the MISO System Planning Phase Study,
- the MISO Definitive Planning Phase Study,
- the SPP Dynamic Stability Assessment,
- the SPP Steady State Review,
- the SPP System Impact Study,
- the PJM Feasibility Study,
- the PJM System Impact Study,
- the PJM Facilities Study, and
- each other study necessary or required for interconnection with SPP, MISO or PJM.<sup>38</sup>

Staff is recommending these conditions so that if the HVDC transmission line and converter station in Missouri have ramifications that are not presently known, and those ramifications have costs that the Commission should consider when evaluating all the costs and benefits of Grain Belt Express' transmission project on Missouri, then the Commission will have the opportunity to consider not only those costs, but also any presently unknown benefits, after they are known and determine whether, in light of them, Grain Belt Express should still have its certificate of convenience and necessity, or if that certificate should be modified. For example, if the MISO or the SPP require

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<sup>38</sup> Ex. 203, Staff witness Lange rebuttal.

upgrades to their transmission systems for Grain Belt Express to interconnect with them, upgrades which are not currently contemplated, then the Commission should reweigh the benefits and costs of Grain Belt Express' transmission line project in light of those upgrades, *i.e.*, they should be viewed as a material change to Grain Belt Express' certificate.

15. That Grain Belt Express complete and make public regional transmission organization interconnection studies based on the Missouri converter station having one GW of capacity and based on the potential of the transmission project for exporting energy from the MISO and the PJM, and importing energy into the SPP, with an opportunity for parties to review the studies and bring issues before the Commission, prior to Grain Belt Express commencing any eminent domain proceedings in Missouri.<sup>39</sup>

Grain Belt Express asserts that the converter station will only be used to inject 500 MW of wind energy in Missouri. However, this begs the Commission to consider why Grain Belt Express would build a 1000 MW converter station if only 500 MW will be injected in Missouri. In direct contradiction to its assertion, Grain Belt Express itself answered this question stating, "the smallest converter station should be rated between 20-30% of the largest converter station so that during fault conditions, the equipment in the smaller station is not over stressed."<sup>40</sup> Moreover, Grain Belt Express acknowledged that the Missouri converter station will be capable of continuously delivering up to 1000 MW and that the decision to limit the injection to 500 MW was based on market reasons, as opposed to technical limitations.<sup>41</sup> Clearly Grain Belt Express contemplated

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<sup>39</sup> Ex. 202, Staff witness Stahlman rebuttal.

<sup>40</sup> Ex. 113, GBE witness Galli surrebuttal, p. 21.

<sup>41</sup> Ex. 111, GBE witness Galli Direct, p. 4, FN 1 ("The Maywood converter station...will be rated at 1,000 MW in the event market demand later necessitates it"); Ex. 113, GBE witness Galli surrebuttal. p. 21, ll. 20-21. *See also* Tr. 1684, ll. 13-25 (Dr. Wayne Galli's response to Staff Data Request 0162 indicated that "the converter station in Missouri will be designed with a maximum continuous rating capable of delivering a total of 1,000 megawatts to the MISO system in Missouri"); *Id.* at p. 1685, ll. 1-11 (Indicating that the converter station would be rated at 1007 MW to account for losses so that the converter station would be capable of continuously delivering 100 megawatts to the MISO system in Missouri.)



the possibility that more than 500 MW, and potentially up to 1000 MW, of wind energy would flow through the Missouri converter station, even if only under fault conditions.

16. With this fact in mind, and as stated by Staff witness Michael Stahlman in his rebuttal testimony, limiting the scope of the studies to 500 MW underestimates the amount of energy that could travel through the station and thus limits the review of upgrades that may be necessary to safely handle a larger injection of energy.<sup>42</sup> That Grain Belt Express may not commence any eminent domain proceedings until after the actual construction of at least 25% of the completed cost, excluding engineering, planning, and land purchase costs, of the Missouri converter station.<sup>43</sup>

Although, as Grain Belt Express states in its initial brief, Grain Belt Express has “agreed unconditionally to install the Missouri converter station as part of constructing the Project (the transmission lines (HVDC and AC) and converter stations, but not regional transmission organization-required transmission upgrades)” and “has agreed not to construct and install any transmission facilities on easement property until it has obtained the financing needed to construct the Project,” Staff believes this condition is still needed to minimize the likelihood Grain Belt Express will start then abandon construction of the HVDC transmission line and converter station in Missouri and to better assure Grain Belt Express builds the converter station in Missouri.

### **Conclusion**

For all the foregoing reasons, Staff recommends the Commission find Grain Belt Express is a public utility that requires a certificate of convenience and necessity from the Commission to operate in the state of Missouri, but find Grain Belt Express has not shown that segment of its multi-state HVDC transmission line that would cross Missouri or its proposed converter station to be located in Ralls County, Missouri, are needed,

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<sup>42</sup> Ex. 202, Staff witness Stahlman rebuttal.

<sup>43</sup> *Id.*

economically feasible or promote the public interest and, therefore, not grant Grain Belt Express a certificate of convenience and necessity for them.

However, if the Commission finds Grain Belt Express has shown the transmission line and converter station are necessary or convenient, then Staff recommends the Commission limit the authority it gives in that certificate to require that the entire multi-state HVDC transmission line be built with dedicated metallic return conductors and with protection and control safety systems that will automatically de-energize it when an abnormal or fault condition occurs, impose each of the conditions on that certificate that Staff is recommending, grant Grain Belt Express relief from complying with Commission rules 4 CSR 240-3.145, 4 CSR 240-3.175, and 3.190(1), (2) and (3)(A)-(D), and explicitly state in its order that the grant of the certificate of convenience and necessity is not a determination of the ratemaking treatment of the costs associated with the transmission line or converter station in Missouri.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that copies of the foregoing have been mailed, hand-delivered, transmitted by facsimile or electronically mailed to all counsel of record this 22<sup>nd</sup> day of December, 2014.

**/s/ Nathan Williams**