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Witness:	Mark Repsher
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MISSOURI PUBLIC SERVICE COMMISSION

FILE NO.

EA-2023-0017

DIRECT TESTIMONY

OF

MARK REPSHER

ON

BEHALF OF

GRAIN BELT EXPRESS LLC

August 24, 2022

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I. INTRODUCTION

Q. Would you please state your name, business address, and current position?

A. A. My name is Mark D. Repsher, and I work as a Member of PA's Management Group for PA Consulting Group, Inc. ("PA Consulting"). My business address is 1700 Lincoln Street, Suite 3550, Denver, CO 80203.

Q. What are your duties and responsibilities in your present position?

A. I am an energy advisor who for over twenty years has guided US and international clients through initiatives spanning strategic resource planning, wholesale market and ratepayer impacts, divestitures of non-core assets to enhance shareholder returns, mergers and acquisitions, project development, restructurings and other litigation, off-take contract structuring and valuation, asset financing, identification of concrete value "off-ramps" to realize investment returns for specific power assets, and best practice analyses. I have worked with and presented before various Boards of Directors, CEOs, CFOs and executive management teams of utilities, cooperatives, private equity, independent power producers, infrastructure funds, and market operators when delivering on these initiatives. Within these initiatives, I have analyzed assets spanning traditional thermal generating resources (*e.g.*, coal, natural gas, and oil), renewable generation resources (*e.g.*, geothermal, solar, and wind), emerging generating resources (*e.g.*, battery energy storage systems), and transmission projects (*e.g.*, merchant transmission lines, including offshore wind transmission lines).

Q. Please describe your education and relevant professional background.

A. I graduated from the University of Virginia with a Bachelor of Arts degree in Economics and Minor in Spanish in 2001. I have worked at PA Consulting for over 21 years. Prior to my current role, I was a managing consultant in the Global Energy & Utilities practice for over

10 years. Prior to that, I was a principal consultant for nearly six years in the Global Energy practice group.

Q. Please describe your background in performing market analyses?

A. During my 21 years at PA Consulting, I have conducted numerous market analyses for entities in the energy industry across North America and beyond. For example, I conducted an analysis on behalf of Invenergy and its affiliates regarding the inclusion of marginal losses in ERCOT's nodal prices and the potential economic harm to Texas ratepayers, served as an expert witness regarding the ratepayer impact analyses for Maryland residents seeking to benefit from US Wind's offshore wind facility of the coast of Maryland, and analyzed production cost and rate impacts to consumers—as well as arbitrage potential and emissions impacts—for high voltage direct current ("HVDC") transmission interconnecting different regions in North America.

I have led multiple assignments for a variety of independent power producers developing high voltage direct current transmission lines interconnecting different regions in North America, and analyzed production cost and rate impacts to consumer, arbitrage potential and emissions impacts in each project. I developed whitepapers summarizing these findings. I also provided expert testimony in a dispute regarding a heat rate call option. I have been qualified as an expert to testify is regulatory and judicial proceedings numerous times. My curriculum vitae is attached as Schedule MR-1.

Q. What is the purpose of this direct testimony?

A. Grain Belt Express LLC ("Grain Belt Express") engaged PA Consulting to analyze the market impacts of the Grain Belt Express transmission project ("Project"). I oversaw the preparation of the *Missouri Interstate Transmission Need: The Public Benefit of Grain Belt Express* report (the "PA Consulting Report") (provided herewith as Schedule MR-2) and am

testifying regarding the PA Consulting Report. The PA Consulting Report applies widely-used and accepted study methodologies to assess energy/capacity prices and economic impacts, and concludes that the Project will exert a downward pressure on wholesale market prices in Missouri.[1] These downward impacts will ultimately result in ratepayer electricity cost savings. The Project will also help Missouri achieve emissions reduction goals.

Q. Are you sponsoring any schedules or exhibits as part of your direct testimony?

A. Yes, I am sponsoring the following exhibits/schedules:

- Schedule MR-1 – My curriculum vitae
- Schedule MR-2 – The *Missouri Interstate Transmission Need: The Public Benefit of Grain Belt Express* report prepared by PA Consulting Group, Inc.

II. OVERVIEW OF THE PA CONSULTING REPORT

Q. At a high level, please describe the PA Consulting Report.

A. Grain Belt Express engaged PA Consulting to determine how expanding Project development from the status quo configuration (the "Certificated Project" or the "Status Quo Case") delivering 500 MW to Missouri, to a higher-capacity configuration delivering up to 2500 MW to Missouri (the "Expanded GBX Case"), will affect the power costs and emissions reduction outcomes in Missouri and other states. PA Consulting performed in-depth research and detailed analyses to study what value the Project could reasonably generate for the benefit of electric utility customers. The PA Consulting Report documents this research and analysis, as well as our conclusions with respect to cumulative cost savings for Missouri residents, in addition to the impact the Project has on emissions reduction.

[1] Missouri is comprised of the following wholesale power transmission zones: SPP KCPL, SPP Empire District Electric, SPP City of Independence, SPP City of Springfield, MISO Zone 5, and SERC AECI.

Q. Would you please summarize the results of your analysis and conclusions presented in this direct testimony?

A. My conclusion is that the Expanded GBX Case Configuration will collectively lower energy and capacity costs in Missouri by approximately six-point-one percent (6.1%) over the 2027-2066 period, resulting in over $17.6 billion of savings for Missouri residents, on an undiscounted basis.[2] Further, the Project is projected to reduce emissions of CO_2, SO_2, and NOx in Missouri by 9.3%, 19.2%, and 17.2%, respectively, enhancing local utilities' abilities to meet their climate and reliability goals while also delivering immediate local air quality and health benefits. Quantifying these emission reduction benefits to the State, the Expanded GBX Case Configuration could offer Missouri over $7.6 billion in social benefits from 2027-66, in addition to the over $17.6 billion in direct ratepayer savings in the energy and capacity costs over this same period—bringing the total cumulative benefit to over $25.3 billion by 2066.

III. PA CONSULTING REPORT METHODOLOGY

Q. Please explain the methodology behind the PA Consulting Report and its findings.

A. The PA Consulting Report uses a three-tiered methodology, with each building upon one another: (i) a project-specific analysis framework, which inputs into (ii) the wholesale market model, which in turn generates (iii) an energy, capacity and emissions savings calculation. Applied together, these models and calculations allow PA Consulting to robustly depict expected market conditions and the cost/benefit-impact from the Project in each market.

[2] Savings values noted here exclude the costs of the Project. As noted subsequently in my testimony, the Project is still likely to induce material ratepayer savings, even if one were to include its associated costs.

Q. Please explain the project-specific analysis framework.

A. First, the PA Consulting Report generates a project-specific analysis framework. Under this methodology, PA Consulting modeled the Eastern Interconnection, which serves as the network grid for the flow of energy to (among others) the MISO, SPP, and SERC AECI service territories covering Missouri (the "Missouri Service Territories"). PA Consulting modeled two (2) scenarios: (i) a scenario with approximately 2,500 MW of injection capacity in Missouri (the "Expanded GBX Case")[3] and (ii) a status quo scenario with 500 MW of injection capacity in Missouri (the "Status Quo Case"). The two scenarios were built utilizing PA Consulting's proprietary base case market assumptions, except for federal carbon pricing.[4] Under both scenarios, PA Consulting modeled using a "solar curtailment first" priority scheme, giving effect to the benefits associated with the expected Production Tax Credits. The two scenarios differed in their respective configurations; specifically, whether or not they delivered into PJM, as well as the capacity of the line and associated renewables. All other assumptions were held constant between the two scenarios to isolate the wholesale market impacts of the Expanded GBX Case. Importantly, PA Consulting's analysis does not alter future resource planning decisions between the two scenarios. For example, while the addition of Grain Belt Express could facilitate the additional

[3] The Expanded GBX Case also assumes GBX delivering an incremental 2,500 MW into PJM, starting 2030.

[4] For the purposes of the analysis, PA assumed that a national carbon pricing regime would be implemented in 2026. The carbon price is set at $24.55/short ton in 2026 (nominal dollars) and increases at 2.2% per year, tracking inflation throughout the study period. These assumptions are broadly representative of values commonly utilized in utility resource planning and regulatory processes in the region. The use of an alternative carbon price assumption (either higher or lower) will still result in directionally consistent outcomes (i.e., ratepayer savings), albeit with differences in specific benefits values. The assumption of a carbon pricing regime is a relatively common practice in utility (e.g., Ameren in their IRP) and ISO (e.g., MISO in their LRTP) planning processes. Carbon pricing can be reflected as a broad 'shadow cost' within fundamental market models to analyze varying regulatory outcomes, and the use as a modeling variable is not necessarily tied to/dependent on a single legislative outcome at the federal or state level.

future retirement of legacy thermal resources within the studied regions, such potential incremental retirements were not considered to ensure that changes in market dynamics could be attributed solely to Grain Belt Express, and to ensure that other confounding variables were not introduced. This 'one-factor' methodology is consistent with PA Consulting's approach in other regulatory proceedings.

Q. How does the project-specific market model then interplay with the wholesale model?

A. PA Consulting fed the above assumptions generated from the project-specific framework into the wholesale market model. The wholesale market model uses an industry standard chronological dispatch simulation model called Aurora,[5] which simulates the hourly operations of the existing Eastern Interconnection, servicing the Missouri Service Territories. Aurora is widely used by electric utilities, power market regulators, independent system operators and other market consultants.

Using the assumptions generated by the project-specific framework, PA Consulting inputs various drivers, such as fuel and emissions prices, supply units, demand projections, transmission constraints and regulatory and policy factors into Aurora. For dynamic inputs not explored by the project-specific model, such as fuel prices, PA Consulting uses the GPCM Natural Gas Market Forecasting System ("GPCM"). Like Aurora, GPCM is used across the energy industry, including by government agencies such as the Federal Energy Regulatory Commission ("FERC") and the Canadian National Energy Board ("NEB"), as well as independent system operators. GPCM models natural gas production, existing pipeline flows and constraints, new pipeline construction, and natural gas demand from the power sector and residential, commercial and industrial sectors

[5] Aurora is licensed to PA Consulting by Energy Exemplar.

for the entire United States. PA Consulting then uses GPCM to develop a long-term forecast of both Henry Hub natural gas prices and the prices of regional natural gas pricing hubs applicable to the project regions.

Using these inputs, Aurora projects hourly prices, energy flows, the development of new power plants and the operating profiles of the power plants and transmission lines within a given system, which in this case included the Missouri Service Territories and other Eastern Interconnection regions. PA Consulting's wholesale market model includes both zonal and nodal configurations and energy prices for a twenty (20) year period.[6]

Q. How does PA Consulting then use these results to calculate Missouri likely cost impact?

A. Feeding the assumptions from the project-specific model into the wholesale model (coupled with PA Consulting's proprietary capacity compensation modeling) allows PA Consulting to calculate wholesale pricing and emissions outcomes in both scenarios.

The figures generated are then translated from a wholesale basis to a "State-level" cost to load basis using the following methodology. First, PA Consulting isolates the service territory. Here, that is the Missouri Service Territories consisting of SPP KCPL, SPP Empire District Electric, SPP City of Independence, SPP City of Springfield, MISO Zone 5, and SERC AECI. Next, PA Consulting allocated the share of Missouri's total energy demands to these zones, based on forecasted energy demand outcomes in each of these zones.[7] Then PA Consulting determined a proxy Missouri energy price based on the projected zonal prices from Aurora, and the shares of

[6] Aurora models these operations through 2041, and then PA employs a simplified trending approach to project results beyond 2041.

[7] Energy demand for MISO Zone 5 is based on the 2022 MISO LOLE report, while that for SPP is taken from the 2021 NERC ES&D, and AECI is based on the FERC 714 filing .

each of the zones that constituting the Missouri Service Territories. These prices were further augmented based on relevant nodal market conditions, such as the times when higher or lower load is expected to occur, as well as where on the system load is projected to be more (or less) concentrated, at different locations throughout the Missouri Service Territories. Finally, these augmented prices were applied to the energy demand outlook for Missouri to derive a view of Missouri energy costs.

Capacity costs were calculated in a similar manner. First, PA Consulting derived a forecast of peak demand for the State using the average Missouri energy demand and the projected load factors from Aurora. PA Consulting adjusted peak load for reserve margin requirements in both the SPP and MISO zones within Missouri.[8] Then, PA Consulting used the shares of MO demand that are attributable to SPP versus MISO, to derive a weighted-average State-wide capacity price, based on the underlying fundamental forecast of SPP and MISO capacity prices. Finally, the projected State peak demand, plus additional reserve requirement, was applied to the State-wide capacity price, to infer the Missouri capacity costs.

IV. MISSOURI RATEPAYER IMPACTS

Q. What were the results of the PA Consulting Report with regard to Missouri ratepayer impacts?

A. In short, the Expanded GBX Case is projected to lower wholesale energy pricing in Missouri in two ways: (i) the low-cost, high-capacity factor renewable generation feeding the Project is projected to put downward pressure on power pricing within the Missouri Service Territories, particularly during the evening peak hours when the output of other in-State renewable

[8] Note that PA Consulting ascribed SPP capacity prices to the AECI region as a proxy.

resources is significantly weaker than what the Project offers, and (ii) the incremental reliability-weighted capacity via Grain Belt Express will tend to increase the overall available supply in the Missouri Service Territories, putting downward pressure on capacity prices in the majority of years, when all else is equal. Together, these impacts will reduce costs to electric ratepayers across Missouri.

Q. How does the Project compare with other in-state renewable resources?

A. Alone, the renewable resources delivered by the Project have considerably higher capacity factors than typical Midwestern (including Missouri) resources. Grain Belt Express wind has a thirteen percentage point (13%) average capacity factor increase over in-State wind, and Grain Belt Express solar has a four percentage point (4%) increase over in-State solar. When these complementary production profiles (Grain Belt Express wind and solar) are collectively transmitted over the Project, they have a respective forty percentage point (40%) and forty eight percentage point (48%) increase over in-State wind and solar. This is even more notable because the collective average capacity number for the Project—seventy-four percent (74%)—represents a "post-clipping" number (i.e., Grain Belt Express expects Project renewables to be oversized relative to the line in order to take full advantage of available transmission service, and therefore there are times (e.g., April afternoons) during which the renewable overproduction must be curtailed ("clipped") and the Project is at 100% utilization). These figures represent significant increases in the availability of renewable energy in the Midwest.

Q. What are the impacts on the energy price?

A. In short, the impacts on energy price are substantial. Low-cost energy from the Project displaces higher cost power from inefficient generators in MISO, SPP, and SERC AECI. It is projected that from 2027-2041, the Project will reduce around-the-clock zonal power prices

by an average of two-point-seven percent (2.7%) in the MISO Zone 5 region, one-point-one percent (1.1%) in the SPP South region[9], and four-point-one percent (4.1%) in the SERC AECI region. As I will discuss later, these benefits are even further accentuated on a load-weighted basis.

Q. What are the impacts on the capacity price?

A. The Expanded GBX Case capacity pricing is lower in the near term (when impacts of higher reserve margins dominate), and higher in the long term (when impacts of lowered spark spreads dominate). In general, the capacity price impacts depend largely on two competing factors:

First, injecting cheap, clean power into a zone lowers the energy prices and therefore spark spreads, all else equal. This in turn reduces power plants' earnings in the energy market. Capacity markets are intended to provide critical generators an incentive to remain online when energy prices fall; when energy prices rise, then those capacity payments are lower.

Second, adding additional capacity into a zone raises the zone's "reserve margin," (i.e., reliability-rated supply, relative to demand), which in turn lowers capacity prices.

As such, the injection of low-cost energy, such as from the Expanded GBX Case, may cause capacity price outcomes between the two scenarios to exhibit different effects over time. For example, Expanded GBX Case capacity pricing in MISO Zone 5 is slightly lower in the late-2020s through the mid-2030s because the effect of additional capacity on the zone is greater than the effect of reduced energy prices in the zone. However, in both the constituent SPP and MISO zones, Expanded GBX Case pricing is higher in the long term, when the effect of lowered spark spreads dominates. Note that PA Consulting's estimates of capacity cost savings are somewhat conservative, in that they assume the current market design is continued in perpetuity, and do not

[9] SPP South is a liquid trading hub that is broadly indicative of regional power price outcomes.

assume any major changes to capacity market constructs (e.g., reliability-must-run ("RMR") contracts, resource-specific procurement, etc.) over the study period when calculating capacity price impacts. This is a conservative assumption as market construct evolution may be necessary over time to adequately compensate resources for reliability and resiliency benefits in a quickly decarbonizing grid. Such a change in the capacity market construct – wherein "clean capacity" resources are paid a premium – will further accentuate the value of the Project.

Q. What are the impacts on the ratepayer?

A. In the Expanded GBX Case, the inclusion of the line and its associated renewable energy results in total energy and expenditures for Missouri residents that are over $17.6 billion lower (approximately 6.1%) from 2027-2066. Further, as explained in more depth later, when these savings are combined with the broader benefits of emissions reductions to the State of Missouri, the Expanded GBX Case could offer the State over $7.6 billion additional in savings from 2027-2066, bringing the total cumulative benefit to nearly $25.3 billion by 2066. In short, there are substantial monetary short-term and long-term cost-saving impacts for Missouri residents. Note that the benefits will accrue to Missouri ratepayers regardless of the offtake entity, given the interconnected nature of the power grid. Said differently, even if an in-State entity does not contract for the Project's output, Missouri ratepayers will still enjoy the benefits of the price suppression induced by the Project in the MISO, SPP, and SERC AECI balancing authorities.

V. ADDITIONAL BENEFITS

Q. Aside from the ratepayer savings you have detailed, you mentioned additional benefits for the State of Missouri. Can you tell us about those benefits?

A. Yes, the four largest additional benefits are the following: (i) emissions reductions that will substantially induce societal benefits in the State, (ii) enhanced grid reliability and

resilience in a time when that is a much-sought enhancement, (iii) potential to unlock deeper levels of renewables penetration, and (iv) potential to defer the need for a subset of future transmission projects.

Q. Please explain your findings regarding emissions reductions.

A. The Expanded GBX Case offers substantial emissions reductions within the State of Missouri, reducing emissions of CO_2, SO_2, and NOx in Missouri by 9.3%, 19.2%, and 17.2%, respectively over the 2027-2066 period. For comparison, in-State CO_2 emissions savings facilitated in the Expanded GBX Case are approximately equivalent to removing over 13 million gasoline cars from Missouri roads for one year.[10] This is particularly important in light of utility decarbonization commitments, such as Ameren's targets of 60% carbon emissions reductions by 2030, 85% by 2040, and net-zero by 2045 (all versus 2005 levels).

In all, the Expanded GBX Case facilitates nearly 67 million tons of CO_2 emissions reductions within (or attributable to) the State from 2027–2066. However, due to the regional nature of power grids (and the global nature of the CO_2 issue), these Missouri-only benefits do not tell the entire story. Over the 2027–2066 period, CO_2 emissions reductions in the broader Midwest region (excluding Missouri) due to the Project are over 369 million tons (over 5 times the reductions attributable to Missouri alone).

Q. Are there any other emissions benefits?

A. The Project also significantly reduces emissions of SO_2 and NOx criteria pollutants, providing even more tangible benefits to Missouri residents in the form of reduced air pollution (and therefore reduced respiratory illness and distress, saving lives and healthcare costs). This benefit is particularly salient considering the historically disproportionate impacts of air pollution

[10] Calculated from https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator.

on disadvantaged communities. By effectively injecting clean power into the Midwest, the Project considerably improves local air quality and human health.

Q. What are the potential social benefits of emissions reductions?

A. PA Consulting applied a social cost of carbon to the CO_2 emissions reductions (as well as providing appropriate financial benefit rates to SO_2 and NO_x emissions reductions). In all, there could be substantial short-term and long-term benefits of emissions reductions. Through 2041, Missouri could expect nearly $3.2 billion in social benefits, and over $7.6 billion from 2027–2066. These social benefits would be incremental to the direct ratepayer cost savings previously discussed.

Q. How does the Project enhance grid reliability and resilience?

A. All else equal, adding transmission capacity to the power grid improves reliability by creating more numerous and robust energy pathways from sources to loads, allowing more economic flow as well as having more capacity available in the case of transmission and/or generator outages. This is true of both AC and DC transmission lines.

The Project runs an HVDC line, which is considerably more efficient in transporting energy over long distances and can be controlled by system operators to improve system stability. Further, the fact that the Project enables inter-regional transfer capability increases the potential to further unlock decarbonization potential on the grid, allowing access to a greater diversity of resources. This diversity of resources can be both temporal (crossing time zones, which is especially helpful to meet peak hour demand) as well as spatial. For example, Kansas has a greater capacity factor for wind generation, so the Project gives the Missouri grid a method to harness a natural resource found in a more advantageous geography.

Q. Please explain how the Project could potentially enable deeper levels of renewables penetration.

A. In general, there is industry held view that major transmission projects such as the Project could unlock a greater degree of renewables penetration on the grid. Results from PA Consulting's nodal modeling here can be used to draw similar conclusions; specifically, the analysis demonstrates that the Expanded GBX configuration somewhat reduces network-wide renewables curtailment, and has slight positive impacts on the deliverability of renewables (by lowering system-wide congestion). More broadly, too, there is historical precedent of major transmission projects having led to increased renewables penetration; a salient example of this was with the approximately $7 billion CREZ transmission buildout in ERCOT from 2010-14, which led to substantial wind development in Texas.

Q. And how might the Project reduce the need for future transmission development in the region?

A. Across the Midwest and Great Plains, several potential transmission projects have been proposed over the next decade to address regional reliability needs, enable the delivery of power to load centers, reduce congestion, and unlock renewables potential. While there still may be a need for localized upgrades, given that the Project addresses these broader goals, it stands to logically reason that the Project could plausibly defer/eliminate the need for certain future major transmission developments.

VI. THE PROJECT MEETS THE *TARTAN* FACTORS FOR ISSUING A CCN

Q. Are you familiar with the Commission's factors for granting a CCN, referred to as the "*Tartan* Factors"?

A. While I am not an attorney, yes, it is my understanding that, in its review of CCN applications, the Commission has traditionally applied several criteria, which it refers to as the "*Tartan* Factors." Other Grain Belt Express witnesses address several of the *Tartan* Factors in their testimonies. In this testimony, I provide support for the first, fourth, and fifth *Tartan* factors, which provide:

- There must be a need for the service;
- The applicant's proposal must be economically feasible; and
- The service must promote the public interest.

A. The Project is Needed to Advance a Number of Missouri Energy Goals and Policies.

Q. Is there a need for the Expanded GBX Case?

A. Yes. As the PA Consulting Report shows, the Expanded GBX Case satisfies a number of Missouri-specific needs, including creating a more robust transmission network; diversifying available energy resources to meet growing demand (2022-41 CAGR of approximately 0.2% p.a.) while also backfilling expected retirements in the Midwest over the next decade (approximately 44 GW in MISO and SPP through 2031); stimulating local economies; providing effective solutions for load-serving entities like Ameren to meet their decarbonization goals; acting as a tailwind for public policy goals (including meeting St. Louis's 100% clean electricity by 2035 standard and Kansas City's 100% GHG reduction from electricity by 2030 target; and furthering the State's RPS progress beyond 15% by 2021); and encouraging economic growth in the region by connecting energy-rich environments with larger markets.

B. The Expanded GBX Case is Economically Feasible.

Q. Is the Expanded GBX Case economically feasible?

A. Yes. As the PA Consulting Report illustrates, the Project creates immense economic benefits compared to the Project costs.

Q. What are the total costs of the Project?

A. I have been informed by Grain Belt Express that the total projected cost to construct the Amended Project and place it into operation is approximately $4.95 billion. This figure encompasses the entire Amended Project cost including the Kansas, Missouri, Illinois and Indiana segments, but not including any estimated network upgrade costs for interconnections for which Grain Belt Express will be responsible. If estimated network upgrade costs are included, the total cost is approximately $5.7 billion.

Q. Will the economics of the Expanded GBX Case sustain the cost to build the Amended Project?

A. Yes. As discussed above, the anticipated direct reduction in energy and capacity costs (ignoring any incremental social benefits from avoided emissions) in Missouri is $17.6 billion. Even without accounting for the additional energy and capacity cost reductions in other states (that the Project will enable), the $17.6 billion in savings in Missouri provides plenty of headroom for ratepayers to absorb the Grain Belt Express investment.

C. The Project Promotes a Number of Missouri Public Interests.

Q. Does the Project promote Missouri Public interests?

A. Yes. As the PA Consulting Report shows, the Project will support a number of fundamental Missouri public policies. These include energy security, providing cheaper and more reliable energy, causing economic growth and opportunity, reducing dependence on foreign energy resources, acting as a potential and effective tailwind for public policy goals (including meeting

St. Louis's 100% clean electricity by 2035 standard and Kansas City's 100% GHG reduction from electricity by 2030 target; and furthering the State's RPS progress beyond 15% by 2021); and reducing sources of pollution affecting Missourians, Missouri air, and the Missouri environment.

VII. CONCLUSION

Q. Does this conclude your testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Grain Belt Express LLC for an Amendment to its Certificate of Convenience and Necessity Authorizing it to Construct, Own, Operate, Control, Manage, and Maintain a High Voltage, Direct Current Transmission Line and Associated Converter Station	)))))))	File No. EA-2023-0017

AFFIDAVIT OF MARK D. REPSHER

1. My name is Mark D. Repsher, and I work as a Member of PA's Management Group for PA Consulting Group, Inc. ("PA Consulting"). My business address is 1700 Lincoln Street, Suite 3550, Denver, CO 80203.

2. I have read the above and foregoing Direct Testimony and the statements contained therein are true and correct to the best of my information, knowledge, and belief.

3. Under penalty of perjury, I declare that the foregoing is true and correct to the best of my knowledge and belief.

DocuSigned by:
Mark Repsher
9FBBAB7DB6E7436...

Mark D. Repsher
Member
PA Consulting Group, Inc.

Date: 8/22/2022