

FACILITIES STUDY AGREEMENT

(PJM Queue Position #X3-028)

RECITALS

1. This Facilities Study Agreement ("Agreement"), dated as of **October 1, 2014**, is entered into by and between **Grain Belt Express Clean Line LLC** ("New Service Customer") and PJM Interconnection, L.L.C. ("Transmission Provider"), pursuant to Part VI of the PJM Interconnection, L.L.C. Open Access Transmission Tariff ("PJM Tariff").
2. Pursuant to Section 36.2 or Section 205 of the PJM Tariff, Transmission Provider has completed a Generation or Transmission Interconnection Feasibility Study or an Initial Study (as applicable) and a System Impact Study and has provided the results of those studies to New Service Customer.
3. Transmission Provider has informed New Service Customer that the estimated date for completion of a Facilities Study pursuant to Section 206 of the PJM Tariff is **August 3, 2015** and that New Service Customer's estimated cost responsibility for such Facilities Study, subject to revision as provided in this Agreement, is **\$127,500.00**.
4. New Service Customer desires that Transmission Provider commence a Facilities Study for the New Service Request with Queue Position **X3-028**.

PREVIOUS SUBMISSIONS

5. Except as otherwise specifically set forth in an attachment to this Agreement, New Service Customer represents and warrants that the information provided in section 3 of the Feasibility Study Agreement, dated **September 1, 2011**, by and between New Service Customer and Transmission Provider, and to the extent supplemented as set forth in section 4 of the System Impact Study Agreement, dated **February 15, 2013**, by and between New Service Customer and Transmission Provider, is accurate and complete as of the date of execution of this Facilities Study Agreement.

MILESTONES

6. Pursuant to Section 206.1 of the PJM Tariff, the parties agree that New Service Customer must meet the following milestone dates relating to the development of its generation or merchant transmission project(s) or New Service Request, as applicable, in order to retain the assigned Queue Position of its New Service Request(s) (as established pursuant to Section 201 of the PJM Tariff) while Transmission Provider is completing the Facilities Study:

- 6.1 Unless New Service Customer previously specified, in its initial drawing submitted to Transmission Provider, the location of the high-side of the generator step-up transformer, then on or before **June 1, 2016**, New Service Customer must provide evidence of an ownership interest in, or right to acquire or control the location which shall be on the high voltage side of the Customer Facility generator step-up transformer(s), or in the case of a Customer Facility with a single step-up transformer for multiple generators, the high voltage side of the facility step-up transformer. The evidence of site control shall be a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider.
- 6.2 To the extent New Service Customer intends to elect the Option to Build as provided in Appendix 2 to Attachment P of the Tariff, and to the extent any new or additional property is required to accommodate required Attachment Facilities, on or before **June 1, 2016**, New Service Customer must provide evidence of an ownership interest in, or right to acquire or control the location which shall be the location of the network substation which shall be built and subsequently transferred to the Interconnected Transmission Owner. The evidence of site control shall be a deed, option agreement, lease, or other similar document acceptable to the Transmission Provider.

Should New Service Customer fail to achieve any of the foregoing milestones, its New Service Request(s) shall be deemed to be withdrawn and terminated and it will have to resubmit its New Service Request(s) for reassignment of a Queue Position and re-initiation of the New Service Request study process.

PURPOSE AND SCOPE OF THE FACILITIES STUDY

7. Transmission Provider, in consultation with the affected Transmission Owner(s), shall commence a Facilities Study pursuant to Section 206 of the PJM Tariff to evaluate the Attachment Facilities, Local Upgrades and/or Network Upgrades necessary to accommodate New Service Customer's New Service Request assigned Queue Position **X3-028**.
 - A. **Scope of Facilities Study:** The purpose of the Facilities Study is to provide, commensurate with any mutually agreed parameters regarding the scope and degree of specificity described in Schedule A attached to this agreement, conceptual engineering and, as appropriate, detailed design, plus cost estimates and project schedules, to implement the conclusions of the System Impact Study regarding the Attachment Facilities, Local Upgrades and Network Upgrades necessary to accommodate the New Service Customer's New Service Request(s). Cost estimates shall be determined in a manner consistent with Section 217 of the PJM Tariff. The nature and scope of the materials that Transmission Provider shall deliver to the New Service Customer upon completion of the Facilities Study shall be described in the PJM Manuals.
 - B. **Facilities Study Cost and Time Estimate:** Transmission Provider's estimates of the date for completion of the Facilities Study and of New Service Customer's cost responsibility for the Facilities Study are stated in section 3 of this

Agreement. In the event that Transmission Provider determines that it will be unable to complete the Facilities Study by the estimated completion date stated in section 3 of this Agreement, it shall notify New Service Customer and will explain the reasons for the delay. New Service Customer agrees that its estimated cost responsibility stated in section 3 is subject to revision as provided in sections 14, 15 and 16 of this Agreement.

8. The Facilities Study necessarily will employ various assumptions regarding New Service Customer's New Service Request(s), other pending New Service Requests, and PJM's Regional Transmission Expansion Plan at the time of the study. IN NO EVENT SHALL THIS AGREEMENT OR THE FACILITIES STUDY IN ANY WAY BE DEEMED TO OBLIGATE TRANSMISSION PROVIDER OR THE TRANSMISSION OWNERS TO CONSTRUCT ANY FACILITIES OR UPGRADES OR TO PROVIDE ANY TRANSMISSION OR INTERCONNECTION SERVICE TO OR ON BEHALF OF NEW SERVICE CUSTOMER EITHER AT THIS POINT IN TIME OR IN THE FUTURE.

CONFIDENTIALITY

9. New Service Customer agrees to provide all information requested by Transmission Provider necessary to complete the Facilities Study. Subject to section 10 of this Agreement and to the extent required by Section 222 of the PJM Tariff, information provided pursuant to this section 9 shall be and remain confidential.
10. Until completion of the Facilities Study, Transmission Provider shall keep confidential all information provided to it by the New Service Customer. Upon completion of the Facilities Study, Transmission Provider shall provide a copy of the study to New Service Customer, and to all other New Service Customers whose New Service Requests were evaluated in the Facilities Study, along with (to the extent consistent with Transmission Provider's confidentiality obligations in Section 18.17 of the Operating Agreement) all related work papers. Transmission Provider also shall post on its OASIS the existence of the Facilities Study. New Service Customer acknowledges and consents to such other, additional disclosures of information as may be required under the PJM Tariff or the FERC's rules and regulations.
11. New Service Customer acknowledges that, consistent with Part VI of the PJM Tariff, the affected Transmission Owner(s) will participate in the Facilities Study process and that Transmission Provider may disseminate information to the affected Transmission Owner(s) and may consult with them regarding part or all of the Facilities Study.

COST RESPONSIBILITY

12. A. New Service Customer shall reimburse Transmission Provider for all, or for an allocated portion of, the actual cost of the Facilities Study in accordance with its cost responsibility as determined under Section 206 of the PJM Tariff.

B. Prior to initiating the Facilities Study, Transmission Provider shall bill New Service Customer for New Service Customer's share of the cost of work on the study that is scheduled to be completed during the first three months after work commences. Thereafter, on or before the 5th business day of every third month, Transmission Provider shall bill New Service Customer for New Service Customer's share of the cost of work expected to be completed on the Facilities Study during the ensuing three months. New Service Customer shall pay each bill within twenty (20) days after receipt thereof. In the event New Service Customer fails, other than as provided below regarding billing disputes, to make timely payment of any invoice for work on the Facilities Study, its New Service Request shall be deemed to be terminated and withdrawn as of the date when payment was due. Notwithstanding the foregoing, in the event that the total estimated cost of the Facilities Study does not exceed the amount of the deposit required under Section 206 of the PJM Tariff, Transmission Provider shall apply the deposit in payment of the invoices for the cost of the Facilities Study. Upon written request by the New Service Customer pursuant to Section 206.4.1.1 of the PJM Tariff, Transmission Provider may provide a quarterly cost reconciliation. Subject to the following sentence regarding the final cost reconciliation upon completion of the Facility Study, such a quarterly cost reconciliation will have a one-quarter lag, e.g., reconciliation of costs for the first calendar quarter of work will be provided at the start of the third calendar quarter of work. Within 120 days after Transmission Provider completes the Facilities Study, Transmission Provider shall provide a final invoice presenting an accounting of, and the appropriate party shall make any payment to the other that is necessary to resolve, any difference between (a) New Service Customer's cost responsibility under this Agreement and the PJM Tariff for the actual cost of the Facilities Study and (b) New Service Customer's aggregate payments hereunder, including its deposits.

C. In the event of a billing dispute, Transmission Provider shall continue to perform its obligations under this Agreement so long as (1) New Service Customer continues to make all payments not in dispute, and (2) New Service Customer's aggregate deposits held by Transmission Provider under this Agreement while the dispute is pending exceeds the amount in dispute, or (3) New Service Customer pays to Transmission Provider or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If New Service Customer fails to meet any of these requirements, then its New Service Request shall be deemed to be terminated and withdrawn as of the date when payment was due.

13. Concurrent with execution of this Agreement, New Service Customer will pay Transmission Provider a cash deposit, as provided by Section 206 of the PJM Tariff, equal to the greater of \$112,500.00 or New Service Customer's estimated cost responsibility for the first three months of work on the Facilities Study. Notwithstanding the foregoing, an Interconnection Customer with a proposed Customer Facility that is: (a) equal to or less than 20 MW but greater than 2 MW shall pay a refundable deposit in the amount of \$50,000; or (b) equal to or less than 2 MW shall pay a refundable deposit in the amount of \$15,000. New Service Customer's quarterly estimated cost responsibility shall equal its estimated cost responsibility for the work on the Facilities Study that is scheduled to be completed during each three-month period after such work commences. If New Service Customer fails timely to provide the deposit required by this section, its

New Service Request shall be deemed terminated and withdrawn and this Agreement shall be null and void. New Service Customer acknowledges that it may become obligated to pay one or more additional deposits pursuant to sections 14 and 15 below. Except as otherwise provided in section 12.B above, Transmission Provider shall continue to hold the amounts on deposit under this agreement until settlement of the final invoice.

14. If the Facilities Study, as described in section 7.A of this Agreement, is to include evaluation of more than one New Service Request and one or more of those requests is terminated and withdrawn, subject to the terms of section 15 of this Agreement, Transmission Provider will redetermine and reallocate the costs of the Facilities Study among the remaining participating New Service Customers in accord with Section 206 of the PJM Tariff. In that event, and subject to the terms of section 15, within 30 days after the date for execution and return of Facilities Study Agreements as determined under Section 206 of the PJM Tariff, Transmission Provider will provide the New Service Customer with a written statement of the New Service Customer's revised responsibility for the estimated cost of the Facilities Study, determined in accordance with Section 206 of the PJM Tariff. In the event that New Service Customer's revised cost responsibility exceeds the sum of its previous deposits for the Facilities Study, it shall deliver to Transmission Provider, within 10 days after New Service Customer's receipt of its revised cost responsibility, an additional cash deposit equal to the amount of the excess. If New Service Customer fails timely to provide an additional deposit that is required under this section, its New Service Request shall be deemed terminated and withdrawn as of the date by which its additional deposit was due. In the event that New Service Customer's revised cost responsibility under the notice described in this section is less than the sum of its previous deposits for the Facilities Study, Transmission Provider shall return to New Service Customer, with its notice of the revised cost responsibility, the amount of the difference.
15.
 - A. This section shall apply prior to commencement of the Facilities Study (1) if the Facilities Study is to include multiple New Service Requests; and (2) if, in Transmission Provider's reasonable judgment, the termination and withdrawal of one or more of those New Service Requests significantly changes the group of New Service Requests to be included in the Facilities Study from the group that was included in the System Impact Study. For the purposes of this section, a change to the group of New Service Requests to be included in the Facilities Study shall be significant if, in Transmission Provider's reasonable engineering judgment, the change is likely to cause the system constraints relating to, and/or the facilities and upgrades necessary to accommodate, the group of New Service Requests remaining to be included in the Facilities Study to differ materially from the system constraints relating to, and/or from the facilities and upgrades necessary to accommodate, the group of New Service Requests that the System Impact Study evaluated.
 - B. In the event of a significant change to the group of New Service Requests that the System Impact Study evaluated, within 15 days after the date for execution and return of Facilities Study Agreements as determined under Section 206 of the PJM Tariff, Transmission Provider shall provide New Service Customer with an explanation of the

nature and extent of the change in the affected group of New Service Requests and of the extent to which Transmission Provider has determined that it must re-assess the results of the System Impact Study. Within 30 days after it provides the explanation described in the preceding sentence, Transmission Provider shall provide New Service Customer with a revised estimate of the time needed, and of the likely cost, to complete the Facilities Study, and, if the study continues to include evaluation of more than one New Service Customer's New Service Request(s), New Service Customer's allocated share of the estimated cost of the revised Facilities Study, determined in accord with Section 206 of the PJM Tariff.

C. In the event that New Service Customer's revised cost responsibility exceeds the sum of its previous deposits for the Facilities Study, it shall deliver to Transmission Provider, within 10 days after New Service Customer's receipt of its revised cost responsibility, an additional cash deposit equal to the amount of the excess. If New Service Customer fails timely to provide an additional deposit that is required under this section, its New Service Request shall be deemed terminated and withdrawn as of the date by which its additional deposit was due. In the event that New Service Customer's revised cost responsibility under the notice described in this section is less than the sum of its previous deposits for the Facilities Study, Transmission Provider shall return to New Service Customer, with its notice of the revised cost responsibility, the amount of the difference.

16. A. If the Facilities Study includes New Service Customer's New Service Request(s) only, New Service Customer may terminate its participation in the study at any time by providing written notice of termination to Transmission Provider. New Service Customer's notice of termination (1) shall be effective as of the end of the business day following the day that Transmission Provider receives such notice and (2) concurrently shall have the effect of terminating and withdrawing New Service Customer's New Service Request(s). New Service Customer will be responsible for all costs of the Facilities Study that Transmission Provider incurred prior to the effective date of the notice of termination. Within thirty (30) days after the effective date of New Service Customer's notice of termination, Transmission Provider will deliver to New Service Customer a statement of New Service Customer's responsibility for the costs of the Facilities Study incurred up to the date of termination. In the event that New Service Customer's cost responsibility as of the date of termination exceeds the sum of its deposits then held by Transmission Provider for the Facilities Study, Transmission Provider's statement will include an invoice in the amount of such excess. New Service Customer will pay that invoice within ten (10) days after it receives it. In the event that New Service Customer does not pay the invoice within ten (10) days after receipt, New Service Customer shall owe the invoice amount plus interest at the applicable rate prescribed in 18 C.F.R. § 35.19a (a)(2)(iii), accrued from the day after the date payment was due until the date of payment. In the event that New Service Customer's cost responsibility as of the date of termination was less than the sum of its deposits for the Facilities Study, Transmission Provider's statement will include a payment to New Service Customer in the amount of the difference.

B. If the Facilities Study includes any New Service Request(s) other than that (those) of New Service Customer, termination and withdrawal of New Service Customer's New Service Request(s) at any time after Transmission Provider has commenced the Facilities Study will not alter New Service Customer's responsibility for the costs of the Facilities Study under this Agreement and the PJM Tariff.

DISCLAIMER OF WARRANTY, LIMITATION OF LIABILITY

17. In analyzing and preparing the Facilities Study, Transmission Provider, the Transmission Owners, and any other subcontractors employed by Transmission Provider shall have to rely on information provided by New Service Customer and possibly by third parties and may not have control over the accuracy of such information. Accordingly, NEITHER THE TRANSMISSION PROVIDER, THE TRANSMISSION OWNERS, NOR ANY OTHER SUBCONTRACTORS EMPLOYED BY TRANSMISSION PROVIDER MAKES ANY WARRANTIES, EXPRESS OR IMPLIED, WHETHER ARISING BY OPERATION OF LAW, COURSE OF PERFORMANCE OR DEALING, CUSTOM, USAGE IN THE TRADE OR PROFESSION, OR OTHERWISE, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH REGARD TO THE ACCURACY, CONTENT, OR CONCLUSIONS OF THE FACILITIES STUDY. New Service Customer acknowledges that it has not relied on any representations or warranties not specifically set forth herein and that no such representations or warranties have formed the basis of its bargain hereunder.
18. In no event will Transmission Provider, the Transmission Owners or other subcontractors employed by Transmission Provider be liable for indirect, special, incidental, punitive, or consequential damages of any kind including loss of profits, arising under or in connection with this Facilities Study Agreement or the Facilities Study, even if Transmission Provider, the Transmission Owners, or other subcontractors employed by Transmission Provider have been advised of the possibility of such a loss. Nor shall Transmission Provider, the Transmission Owners, or other subcontractors employed by Transmission Provider be liable for any delay in delivery, or for the non-performance or delay in performance, of Transmission Provider's obligations under this Agreement.

Without limitation of the foregoing, New Service Customer further agrees that the Transmission Owners and other subcontractors employed by Transmission Provider to prepare or assist in the preparation of any Facilities Study shall be deemed third party beneficiaries of this provision entitled "Disclaimer of Warranty/Limitation of Liability."

MISCELLANEOUS

19. Any notice or request made to or by either party regarding this Facilities Study Agreement shall be made to the representative of the other party as indicated below.

Transmission Provider

PJM Interconnection, L.L.C.

2750 Monroe Blvd.
Audubon, PA 19403

New Service Customer

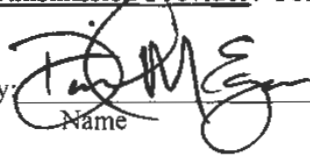
Grain Belt Express Clean Line LLC
1001 McKinney Street, Suite 700
Houston, TX 77002
Attn: Mr. Deral Danis

20. No waiver by either party of one or more defaults by the other in performance of any of the provisions of this Agreement shall operate or be construed as a waiver of any other or further default or defaults, whether of a like or different character.
21. This Agreement or any part thereof, may not be amended, modified, assigned or waived other than by a writing signed by all parties hereto.
22. This Agreement shall be binding upon the parties hereto, their heirs, executors, administrators, successors, and assigns.
23. Neither this Agreement nor the Facilities Study performed hereunder shall be construed as an application for service under Part II or Part III of the PJM Tariff.
24. The provisions of Part VI of the PJM Tariff are incorporated herein and made a part hereof.
25. Capitalized terms used but not otherwise defined herein shall have the meaning ascribed to them in the PJM Tariff.
26. This Facilities Study Agreement shall be effective as of the date of the New Service Customer's execution of it and shall remain in effect until the earlier of (a) the date on which the Transmission Provider tenders the completed Facilities Study and, as applicable, a proposed Interconnection Service Agreement or Upgrade Construction Service Agreement to New Service Customer pursuant to Section 212 or Section 213, respectively, of the PJM Tariff, or (b) termination and withdrawal of the New Service Request(s) to which the Facilities Study hereunder relates.
27. **No Third-Party Beneficiaries**
This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the parties, and the obligations herein assumed are solely for the use and benefit of the parties, their successors in interest and where permitted, their assigns.
28. **Multiple Counterparts**
This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

29. **No Partnership**
This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the parties or to impose any partnership obligation or partnership liability upon either party. Neither party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other party.
30. **Severability**
If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the parties shall negotiate in good faith to restore insofar as practicable the benefits to each party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.
31. **Governing Law, Regulatory Authority, and Rules**
For Interconnection Requests, the validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the state of NJ (where the Point of Interconnection is located), without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations. Each party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.
32. **Reservation of Rights**
The Transmission Provider shall have the right to make a unilateral filing with FERC to modify this Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and the Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Agreement under any applicable provision of the Federal Power Act and FERC's rules and regulations; provided that each party shall have the right to protest any such filing by the other party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations, except to the extent that the parties otherwise agree as provided herein.

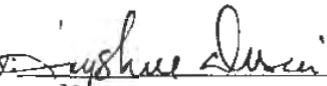
IN WITNESS WHEREOF, Transmission Provider and the New Service Customer have caused this Facilities Study Agreement to be executed by their respective authorized officials.

Transmission Provider: PJM Interconnection, L.L.C.

By:  David M. Egan 11-5-14
Name Title Date

Printed Name

New Service Customer: Grain Belt Express Clean Line LLC

ES By:  Exp 10/31/14
Name Title Date

JAI SHREE DESAI
Printed Name

Schedule A
Details of Design and Cost Estimates/Quality
For the Facilities Study

Additional Analysis Required

1 Dynamic Performance Analysis:

This study assesses the dynamic performance of an HVDC project to disturbances on both the DC and AC system. It is typically performed using various simulation tools like PSS/E, EMTDC, EMTP, HYPERSIM, MATLAB/SimPower, etc. The dynamic performance is demonstrated by time domain analysis for a list of system disturbance cases generally based on applicable NERC, Regional, PJM and Interconnected Transmission Owner criteria that will include, but not limited to;

- ✚ DC side faults
- ✚ Energization of DC Facility
- ✚ DC facility step response
- ✚ Blocking and De-Blocking of DC facility
- ✚ AC side faults (Temporary or Permanent, single phase or multi-phase) considering reclosing, breaker failure, delayed clearing, and loss and recovery performance of DC tie for faults near converter or inverter terminal.
- ✚ Tripping of generation or Switching of large loads in the proximity of DC terminal

Assessment of the dynamic performance will also include analysis of possible dynamic overvoltages/undervoltages on the AC network. In addition to the above listed phenomena, additional events to be studied, but not limited to

- ✚ Switching of HVDC facility's AC filters, bus voltage control devices
- ✚ Switching of nearby transformers, reactors, capacitor banks etc.

Typical cost of Dynamics Study will be about \$60,000.

2 Subsynchronous Torsional Analysis

Torsional perturbations in a turbine-generator could cause modulations of the generator's rotor speed, which in turn could cause variations in the generator's terminal voltage. If a HVDC converter terminal is in the electrical proximity, this could cause variations in the DC side voltages and currents. Regulator within the DC terminal could respond to these changes, which in turn could cause changes in the machine's electrical torque. If this change in torque is out of phase with the change in speed, it could provide negative

damping to the torsional vibrations amplifying their effects, which could damage the turbine-generator shaft.

The possibilities of torsional interactions between HVDC converter and the generator would depend on relative coupling between the two, their relative sizes, and the phase lag from perturbation in generator speed to the perturbation in generator electrical torque including the actions of the HVDC controls.

Typical studies would first involve a screening study to determine if there is any risk of torsional interactions over the entire range of expected operating conditions. If a risk of torsional interactions is identified, more detailed studies would be required to help design HVDC controls to minimize such a risk, and to design Torsional Protection for the generator at risk.

Expected cost of screening study will be about \$40,000.

3. Dynamic Over voltage Analysis

- * Switching of HVDC facility's AC filters, bus voltage control devices
- * Switching of nearby transformers, reactors, capacitor banks etc.

Typical dynamic over voltage analysis will cost about \$60,000

4. AC System Harmonic Analysis

This study is to assess the impact of an HVDC project on the power quality of the local ac electrical system and to validate the suitability of the design of AC filters associated with the DC terminals over the range of operation of the facility. The study is performed to demonstrate that there will be no unacceptable harmonic impact of the ac system, and that the facility will meet performance criteria and standards on power quality. If necessary, mitigation solutions would be identified. IEEE Std. 519 will be used if no local utility standard is available.

Typical harmonic analysis will cost about \$60,000.

5. Studies required by Interconnected Transmission Owner's FERC 715 report

In addition to the studies listed in 1-3 above PJM and affected ITO will require verification of design and/or expected performance of the proposed HVDC facilities to meet requirements as listed in the ITO's FERC 715 filing.

Typical Technical Specification Review will cost about \$70,000.

- 6. 345 kV AC Ferroresonance Study**
Evaluate the results of the Ferroresonance Study to be performed by Grain Belt Clean Line LLC

Estimated cost is \$5,000
- 7. Power Line Carrier Filter Performance Verification**
Evaluate the results of the power line carrier blocking filter design study to be performed by Grain Belt Clean Line LLC.

Estimated cost is \$5,000
- 8. Field Investigation of Existing AC System Harmonic Content**
Measure and analyze the existing harmonics and negative phase sequence content at the point of interconnection between the AEP system and the Grain Belt Clean Line LLC HVDC project.

Estimated cost is \$20,000
- 9. Incremental Available Transfer Capability Revenue Rights**
Estimate the Incremental Available Transfer Capability Revenue Rights associated with the Interconnection Customer's required facilities or upgrades which the Interconnection Customer has cost responsibility pursuant to Section 41.5.4 of the PJM Tariff.

Estimated cost is \$5,000
- 10. Incremental Auction Revenue Rights**
Estimate the Incremental Auction Revenue Rights associated with the Interconnection Customer's required facilities or upgrades which the Interconnection Customer has cost responsibility on up to three (3) pairs of point-to-point combinations pursuant to Section 41.5.5 of the PJM Tariff.

Estimated cost is \$5,000.
- 11. Stability Analysis**
Evaluate the stability impacts of the HVDC connection on the transmission system.

Estimated cost is \$60,000.
- 12. Evaluate MISO Impacts**
Evaluate the impacts of the HVDC connection within the MISO transmission system.

Estimated cost is \$20,000

13. Light Load Study Coordination with MISO

Evaluate the stability impacts of the HVDC connection within the MISO transmission system.

Estimated cost is \$20,000

14. Stability and Reactive Power Study

Evaluate the stability impacts of the HVDC connection with an updated model as referenced in the X3-028 System Impact Study

Estimated cost is \$20,000

Additional Studies		Fac. Cost Est.	3 Mo. Est.
Dynamic Performance Analysis	PJM	\$60,000	\$15,000
Sub-synchronous Torsional Analysis	PJM	\$40,000	\$10,000
Dynamic overvoltage analysis	PJM	\$60,000	\$15,000
AC System Harmonic Analysis	PJM	\$60,000	\$15,000
Technical Specification Conformance	PJM	\$70,000	\$17,500
AC Transmission Ferro-resonance Study	PJM	\$5,000	\$1,250
Power Line Carrier Filter Performance Verification	PJM	\$5,000	\$1,250
Field Investigation of Existing AC System Harmonic Content	PJM	\$20,000	\$5,000
Incremental Available Transfer Capability Revenue Rights	PJM	\$5,000	\$1,250
Incremental Auction Revenue Rights	PJM	\$5,000	\$1,250
Stability Analysis	PJM	\$60,000	\$15,000
Evaluate MISO Impacts	MISO	\$20,000	\$10,000
Light Load Study Coordination with MISO	PJM	\$20,000	\$10,000
Stability and Reactive Power Study with updated model	PJM	\$20,000	\$10,000
	Total	\$450,000	\$127,500

Schedule B
Previous Submissions

Pursuant to Section 5 of this Facilities Study Agreement, New Service Customer represents and warrants that the information provided in this Schedule B (which updates section 3 of the Feasibility Study Agreement, dated September 1, 2011, by and between New Service Customer and Transmission Provider, and to the extent supplemented as set forth in section 4 of the System Impact Study Agreement, dated February 15, 2013, by and between New Service Customer and Transmission Provider) is accurate and complete as of the date of execution of this Facilities Study Agreement:

Planned date the proposed facilities or increase in capability will be in service:

March 1, 2019

Grain Belt Express Clean Line LCC (“Clean Line”) is undertaking a state-by-state approach to procuring siting authority across the four states that the Grain Belt Express Project (the “Project”) will traverse (Kansas, Missouri, Illinois, and Indiana). At this time the Project has achieved status as a utility in Kansas and Indiana and has an open docket to become a utility in Missouri. Clean Line will apply for utility status in Illinois in 2015 and expects a decision by the Illinois Commerce Commission by the end of 2015. With environmental permitting underway and an expected three-year construction timeline for the Project, Clean Line has targeted an In-Service-Date (ISD) of Q1 2019. As such, we request a change to the ISD of the Project to March 1, 2019.

Schedule B to FSA