



# Grain Belt Express

An INVENERGY TRANSMISSION *Project*

## Missouri Agricultural Impact Mitigation Protocol

**For the construction of  
Grain Belt Express**

Invenergy

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## Introduction

Grain Belt Express LLC (“Grain Belt Express” or “Company”) will enact the following standards and policies as it constructs the Grain Belt Express transmission line (“Project”), an approximately  $\pm 600$  kV High Voltage Direct Current (HVDC) transmission line and related facilities, on agricultural land in Missouri. The standards and policies in this Missouri Agricultural Impact Mitigation Protocol (“Missouri Ag Protocol”, “Protocol” or “AIMP”) will serve to avoid, minimize, and/or mitigate negative agricultural impacts that may result due to transmission line and converter facilities construction and operation.

The AIMP shall remain valid for the entire construction period of the Project. The AIMP will also apply to future operation and maintenance actions needed for the Project. After the Project commences operations, the Company will revise and update the AIMP to reflect the most current standards, policies, and best practices for electric transmission line operational activities in agricultural lands.

The below prescribed construction standards and policies only apply to Project activities occurring partially or wholly on privately owned agricultural land. They do not apply to the construction activities occurring on highway or railroad rights-of-way, on other publicly owned land, or on land owned in fee by the Company.

The mitigative actions specified in the construction and operation standards set forth in this Protocol will be implemented in accordance with the conditions listed below.

## Definitions

### AC – Alternating Current

**Agricultural Land** - Land used for cropland, hayland, pasture land, managed woodlands, truck gardens, farmsteads, commercial ag-related facilities, feedlots, livestock confinement systems, land on which farm buildings are located, and land in government set-aside programs.

**Agricultural Inspector (AI)** – A special construction inspector employed by Grain Belt Express LLC to ensure that construction in agricultural land performed by or on behalf of the Company complies with the conditions of this Plan. The AI will typically have an agricultural background and has received specific training on the implementation of the Plan.

**Grain Belt Express LLC or Company** - References to Grain Belt Express LLC or the Company shall refer to Grain Belt Express LLC, and any contractor or sub-contractor in the employ of Grain Belt Express LLC or Invenergy Transmission LLC for the purpose of completing the Grain Belt Express project or any mitigative actions contained herein.

**Compaction** – The process where soil loses tilth and porosity as a result of the application of an external load. Compacted soils typically have high physical density, low water infiltration and percolation rates, and may have poor plant root penetration. Compaction can occur at both the soil surface and subsurface. Compare to Rutting.

**Completion of Construction** - The point in construction when all physical equipment has been installed and inspected for the complete Missouri portion of the Project.

**Cropland** - Land used for growing row crops and small grains, or hay.

**DC** – Direct Current

**Electric Line** - Includes the electric transmission line and its related appurtenances.

**Landowner** - Person(s) holding legal title to property from whom the Company is seeking, or has obtained, a temporary or permanent easement, or any person(s) legally authorized by a Landowner to make decisions regarding the mitigation or restoration of agricultural impacts to such Landowner's property.

**Protocol** - This Agricultural Impact Mitigation Protocol (AIMP or Protocol), pertaining to the construction and operation/maintenance of the Grain Belt Express HVDC line and related converter facilities located in Missouri.

**Project** - means the Grain Belt Express HVDC transmission line and related facilities to be constructed, owned, and operated/maintained by Grain Belt Express LLC.

**Right-of-way (ROW)** - Includes the permanent and temporary easements that the Company acquires for the purpose of constructing and operating the Project.

**Rutting** – Soil rutting typically occurs at the soil surface and is caused by plastic and fluid movement of soils when subjected to an external load. The affected soils lose all soil structure and the resulting movement can mix the soil surface with the subsurface under extreme conditions.

**Tenant** - refers to the person(s) primarily responsible for working or managing the Agricultural Land, if not the Landowner.

**Topsoil** - The uppermost layer of the soil that has the darkest color or the highest content of organic matter, more specifically defined as the "A" horizon.

## Mitigative Action Conditions

- A. All Grain Belt Express LLC employees and representatives of the Project engaged in coordination with landowners regarding agricultural issues will be trained in the implementation of actions and the specific policies described herein.
- B. All mitigative actions are subject to modification through negotiation by Landowners and a representative of the Company. Certain policies require the Company to consult with the Landowner and/or Tenant of a property
- C. The Company will engage in good faith efforts to consult with both Landowners and Tenants of a given property in accordance with the terms of this Protocol.
- D. For all actions described herein, the Company may negotiate with Landowners for Landowners to carry out certain mitigative actions that Landowners wish to perform themselves.
- E. Unless otherwise specified, the Company will, as practicable, complete the mitigative actions contemplated by these policies within 45 days of the Completion of Construction of the Electric Line, weather and Landowner permitting. Temporary repairs to agricultural drainage systems, conservation measures, or other necessary infrastructure will be made as needed by the Company during the construction process to minimize the risk of additional property impact. If weather delays construction or completion of any mitigative action, the Company will provide the Landowner with an estimate of the time needed for completion of the mitigative action.
- F. All mitigative actions pursuant to these policies will extend to associated future construction, maintenance, and repairs by the Company.

- G. In addition to notifying Landowners of mitigation actions, the Company will use good faith efforts to identify all affected Tenants along the route of the proposed transmission line. The Company will endeavor to keep Tenants informed of the Project's status and other factors that may have an impact upon their farming operations.
- H. The Company agrees to include this Plan as part of its submission to the Missouri Public Service Commission.
- I. The Company will implement the mitigative actions contained in these policies to the extent that they do not conflict with the requirements of any applicable federal, state, or local laws, rules, regulations, or other permits and approvals that must be obtained by Grain Belt Express LLC for the Project.
- J. To the extent a mitigative action provided in this Plan is determined to be unenforceable in the future due to requirements of other permits issued for the Project, the Company will so inform the Landowner and/or Tenant and will work with them to develop a reasonable alternative. In addition, no other provision herein shall be affected by the unenforceable provision, and the remainder of the Protocol shall be interpreted as if it did not contain the unenforceable provision.
- K. The Company will incorporate by reference the terms of this Protocol in easement agreements executed with Landowners on Agricultural Land. However, in the event of a conflict between this the conditions of this Protocol and an easement agreement, the easement agreement will control.

## Construction Standards and Policies

### 1. Landowner/Tenant Coordination

Prior to construction, Grain Belt Express LLC will coordinate with the Landowner and Tenant to identify the types of crops grown or livestock raised on the property, as well as identification and location of any agricultural infrastructure that may be located on the property and be potentially impacted by the Project (e.g., water wells, irrigation equipment, drainage systems, access roads/turn roads, equipment staging pads, etc.)

### 2. Advance Notice of Access to Private Property

Except in the event of an emergency, the Company will provide the Landowner with a minimum of 24 hours prior notice before accessing his/her property for the first time for the purposes of constructing, modifying or repairing the Electric Line.

Prior notice shall first consist of a personal contact or a telephone contact, whereby the Landowner is actually informed of the Company's intent to access the Landowner's land. If the Landowner cannot be reached in person or by telephone, the Company will mail or hand deliver to the Landowner's home a written notice of the Company's intent.

### 3. Reporting of Inferior Agricultural Impact Mitigation Work

Prior to construction of the electric line, the Company will provide the Landowner with a phone number and address to contact Grain Belt Express LLC should the Landowner observe inferior work relating to the agricultural impact mitigation work that is performed on the Landowner's property. The Company will respond to Landowner and Tenant telephone calls and correspondence within three business days.

In addition, the Company will provide the Landowner with the phone number and contact information for an Agricultural Inspector as discussed in Section 14 of this Protocol.

#### 4. Support Structure Type and Placement

- A. The use of guy wires on Croplands will be avoided to the extent practicable. If guy wires are required, they will be marked with highly visible guards. A concerted effort will be made to place guy wires and their anchors out of Croplands, placing them instead along existing division lines (e.g., property lines, section, quarter, and half section lines, field edges, and/or fence lines) and on land not used for Croplands.
- B. Grain Belt Express LLC will discuss structure placement issues with Landowners. To the extent reasonably practicable, support structures will be spaced in such a manner as to minimize their interference with Cropland.
- C. Grain Belt Express LLC will provide the Global Positioning System (“GPS”) coordinates of the Project support structure locations, including guy wire anchors, to all Landowners or Tenants.

#### 5. Above Ground Facilities

- A. Permanent above ground facilities in Cropland will be limited to support structures, conductors, communication lines, guy wires, and anchors.
- B. Temporary access roads, if needed, will be designed so as to not impede proper surface and subsurface drainage and will be built to accommodate mitigation measures for soil erosion, other conservation measures, and subsurface tile drainage. Upon abandonment, temporary roads may be left intact through mutual agreement of the Landowner and Grain Belt Express LLC unless otherwise restricted by federal, state, or local regulations.
- C. Permanent access roads, if needed, will be designed so as to not impede proper drainage and will be built to accommodate mitigation measures for soil erosion.
- D. Pull pads, construction pads, and tower pads will be needed on a temporary basis during construction. Pad sites will be designed so as to not impede proper drainage and will be built to mitigate soil erosion on or near the pad site locations. Pad sites will be sited in locations that avoid and/or minimize disturbance impacts to land and the farming operation, to the extent practicable.

#### 6. Drainage Tile

- A. Prior to Construction activities, Grain Belt Express LLC will send out letters to Landowners inquiring about the location of pre-existing drainage improvements (e.g., ditches, culverts, tiles, levees, or terraces) in areas where the Project facilities are planned. The Company will also request that Landowners coordinate with any Tenants that may also have information related to the request.
- B. If the Company is advised of possible interference with drainage improvements, it will make good faith efforts to relocate Project facilities to the extent practicable, to avoid and/or minimize drainage interference.

- C. If adverse effects to drainage improvement(s) are unavoidable, the Company will relocate or reconfigure the drainage improvement to the extent practicable and pursuant to an agreement between the Landowner and Grain Belt Express LLC. If drainage improvements are damaged as a result of construction and repair is necessary, the Company shall reference any available county Soil and Water Conservation District specifications to aid in the repair. Drainage improvements will be repaired with materials of at least the same quality and to an operating condition similar to or better than that which was damaged.
- D. The Company will complete all temporary repairs of drainage tiles within a reasonable time following the identification of an impacted tile. Unless otherwise agreed to by the Landowner, all permanent repairs will be performed within 45 days following final construction reclamation of the Project, weather permitting.
- E. Affected Landowners may elect to negotiate a fair settlement with the Company for the Landowner or Tenant to undertake the responsibility for repair, relocation, or reconfiguration of the damaged drainage feature; however, in these cases Grain Belt Express LLC will not be responsible for correcting repairs after completion of the electric line.

## 7. Irrigation Systems

- A. If the Project facilities intersect an operational center pivot or spray irrigation system, the Company will communicate with the Landowner or Tenant on the anticipated duration of construction and the amount of time the irrigation system may be out of service.
- B. If, as a result of construction activities, an irrigation system interruption results in crop damages, either on the right-of-way or off the right-of-way, Landowners and/or Tenants (as appropriate) will be compensated.
- C. The Company will work with Landowners and/or Tenants to minimize any permanent impacts to irrigation systems and will negotiate appropriate compensation for any permanent impacts in the easement agreements.

## 8. Restoration of Soils of Compaction and Rutting

- A. The Company will attempt to avoid and minimize the potential for compaction or rutting to occur as a result of construction and operation activities. Avoidance and minimization mechanisms for compaction may include, but are not limited to, defining travel corridors to reduce the area traversed by equipment, restricting construction equipment to timber mats, requiring the use of low psi tire or tracked equipment, and limiting construction during wet weather.
- B. The Company will restore rutted and compacted land to as near as practicable to its pre-construction condition. For example, soil remediation efforts for compaction may include decompaction or deep tillage as necessary. Depending on the severity, rutted land may require recontouring, liming, tillage, fertilization, or use of other soil amendments.
- C. Unless the Landowner opts to do the restoration work, or specifies other arrangements that are acceptable to Grain Belt Express LLC, the following remediation techniques will be performed on lands directly affected by compaction:

- 1) The Company will decompact soil to a depth of 18 inches any Cropland that has been compacted by construction equipment used for the construction or maintenance of the Project, and
  - 2) The Company will chisel to a depth of 12 inches any pasture or hayland that has been compacted by construction equipment used by Grain Belt Express LLC for the construction or maintenance of the Project.
- D. The Company will repair or pay to have repaired any compaction or rutting within 45 days, weather and Landowner permitting, of the Completion of Construction.

#### **9. Fertilization and/or Seeding of Disturbed Soil**

- A. If desired by the Landowner, within 45 days of Completion of Construction of the electric line, weather and Landowner permitting, Grain Belt Express LLC will agree to apply fertilizer and lime to cropland that has been disturbed by construction and maintenance of the electric line in order to help restore fertility to disturbed soils and to promote establishment of vegetative cover. The Company will apply the fertilizer at a rate established by the local NRCS, FSA, or Agriculture Extension office, unless the Landowner specifies other arrangements that are acceptable to the Company.
- B. If necessary to reduce erosion in cultivated crop lands or to reclaim managed hay or pasture lands, The Company will reseed disturbed lands with an appropriate cover crop. The Company will coordinate with the landowner as well as the local NRCS office to determine the appropriate seed mixtures.
- C. The Company will reimburse Landowner, on a timely basis, for all agricultural production inputs (i.e., fertilizers of all types and kind) needed to restore crop productivity to the right-of-way, temporary work space(s), or any other portion(s) of Landowner's property where diminished crop yields are directly attributable to the Company's construction, repair, maintenance, and inspection activities. The Landowner must reasonably demonstrate diminished crop yields resulting from the above activities.
- D. If the Landowner chooses to apply fertilizer, manure, and/or lime, the cost of those inputs will be included in the damages paid to the Landowner.
- E. The Company shall make available to the Landowner the name and contact information of a person acting on behalf of the Company with whom the Landowner can communicate information with regard to diminished crop yields, and need for reimbursement of cost of agricultural inputs. That person will have a background related to soil productivity and crop production.

#### **10. Repair of Damaged Soil Conservation Practices**

- A. The Company will repair any damage to soil conservation practices (e.g. terraces, grassed waterways, etc.), that is caused by construction of the electric line.



- B. If the Company is responsible for repairing any damage to soil conservation practices, the repairs will be made in accordance with county Soil and Water Conservation District practices, consistent with existing farm plans, and any other local, state, or federal requirements, as applicable.
- C. The Company will repair or pay to have repaired any damage to soil conservation practices within 45 days, weather and Landowner permitting, of the Completion of Construction of the electric line.

## 11. Preventing Erosion

- A. The Company will work with Landowners to prevent or correct excessive erosion on all lands disturbed by construction by implementing reasonable methods to control erosion. The Company will follow the recommendations of the county Soil and Water Conservation District and any other required permit conditions.
- B. The Company will use all reasonable efforts to ensure that erosion control measures are implemented within 45 days, weather and Landowner permitting, of the Completion of Construction of the electric line.
- C. For soil disturbance activities during construction or operations that would require a permit under the National Pollutant Discharge Elimination System, the Company will incorporate Best Management Practices as identified in a Storm Water Pollution Prevention Plan.

## 12. Removal of Construction Debris

As agreed to by the Landowner and Grain Belt Express LLC, the Company will remove any construction debris from Landowner's property within 45 days, weather and Landowner permitting, of the Completion of Construction of the electric line. Litter generated by construction crews will be removed daily.

## 13. Damage to Private Property

If construction or related activities for the Grain Belt Express damage any private property, the Company will use commercially reasonable efforts to repair any such damaged private property within 45 days, weather and Landowner permitting, of the Completion of Construction of the electric line. If the Landowner is paid to perform the repair work, the Company will pay the ongoing commercial rate for that work.

## 14. Agricultural Inspector(s)

- A. The Company will employ one or more Agricultural Inspector(s) for the Project to verify Grain Belt Express LLC's compliance with the provisions of this Protocol. The Agricultural Inspector will work collaboratively with any other Company representatives in achieving compliance with this Plan. The Agricultural Inspector(s) will be directly available to Landowners and Tenants to address their concerns, after construction is underway.
- B. The Agricultural Inspector(s) will have the authority to stop construction activities that are determined to be out of compliance with this Protocol.

- C. The Company will document instances of noncompliance and work with construction personnel to identify and implement appropriate corrective actions as needed.
- D. The Company will train construction personnel and the Agricultural Inspector on the provisions of this Protocol, company plans and procedures, the Project construction sequences and processes, and provide field training on specific topics as needed.
- E. The Company will employ an Agricultural Inspector with a professional background in production agriculture, soil and water conservation, and general farm operations or practices.

## **15. Topsoil Segregation**

In locations where construction activities will include excavating or removing soil, such as for structure foundations, the Company will segregate the topsoil layer from the subsoil and maintain separate spoil piles within designated areas of the construction workspace. Upon completion of construction activities, subsoil and topsoil will be replaced in the reverse order removed. Topsoil will be replaced to the approximate locations from which it was removed. After backfilling is completed, the topsoil would be levelled and graded to match pre-construction contours. Some temporary mounding may be necessary to account for settling.

## **16. Soil and Rock Removal from Support Structure Holes/Foundations**

Excess soil material and possibly rocks may be generated from the area displaced by grading or the excavation associated with foundations for the support structures. The Company will consult with the Landowner as to the disposition of any excess soil material or spoils generated from foundation construction and will remove the same if necessary.

If the Company is to remove excess soil materials or spoils or rocks, the Company will do so within 45 days following Completion of Construction of the electric line, weather and Landowner permitting.

## **17. Clearing of Trees and Brush from the Easement**

- A. If trees are to be removed from privately owned land, the Company will conduct an appraisal of the trees to determine if they have commercial value.
- B. If there are trees of commercial value, the Company will allow the Landowner the right to retain ownership of the trees with the disposition of the trees to be negotiated at least thirty (30) days prior to the commencement of land clearing, if it is determined by the parties that the trees can be removed safely.
- C. The Landowner will be compensated for trees of commercial value based on the most current timber market rates based on the age and type of the timber that will be removed.
- D. The Company's intent is to chip or mulch trees and brush not of commercial value; however, it will follow the Landowner's desires, if reasonable and legally permitted, regarding the disposition of trees and brush of no commercial value to the Landowner by windrowing, burial, chipping/mulching or removal from any affected property.

## 18. Organic Farms

Grain Belt Express LLC will send letters to all Landowners and Tenants prior to construction inquiring about the presence of organic farm production methods. When notified by Landowners of organic farm production and when preferred by the Landowner, the Company will avoid use of treated wood for construction matting and avoid herbicide and fertilizer application.

The Company will coordinate with the owners of any organic farms crossed by the Project regarding the specific certifications of that farm. The Company will work with the organic farmer to develop an Organic Farm Site Plan for the individual farm crossing. The Plan will identify specific certifications or accreditations, and the process by which reclamation will occur on the property to ensure no loss of certifications or accreditations.

## 19. Indemnification

The Company will indemnify all Landowners and Tenants of Agricultural Land upon which such electric line is installed, their heirs, successors, legal representatives, and assigns (collectively "Indemnitees"), from and against all claims by third parties and losses incurred thereby, and reasonable expenses, resulting from or arising out of personal injury, death, injury to property, or other damages or liabilities of any sort related to the design, construction, maintenance, removal, repair, use or existence of such electric line, including damages caused by such electric line or any of its appurtenances, except where claims, injuries, suits, damages, costs, losses, and expenses are caused by the negligence or intentional acts, or willful omissions of such Indemnitees provided further that such Indemnitees shall tender any such claim as soon as possible upon receipt of notice thereof to the Company.

## 20. Gates

Construction, operation, and maintenance of the Project may require temporary and permanent gates be installed and maintained where the ROW intersects existing fences. Unless otherwise requested by the landowner, temporary gates will be removed following construction. Permanent gates, as needed, will be constructed and maintained to protect against the escape of livestock. The Company will coordinate with the landowner on the type of livestock that are found on the property, and ensure gates are adequately constructed with the appropriate materials.

During construction and operation ingress/egress, the Project will ensure all gates, including existing off-ROW gates used for access, are left as found. Gates that are found to be closed upon approach, will be immediately closed following entry. Gates that are found open upon approach, will be left open.

## 21. Communication Circuits

In instances where the Landowner's communication circuits are diminished due to the location of the transmission structures, the Company will seek to relocate satellite dishes or similar Landowner communication equipment, at the Company's expense, if such relocation would reasonably improve performance of the equipment. If interference should develop between the Company's new facilities and a landowner's communication circuits that impair performance of the circuits, the Company will seek to eliminate such interference at its own expense within 45 days of receiving a verbal or written notice from the affected Landowner.

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## 22. Agricultural and Conservation Programs

If any impacts associated with the Project cause the landowner's property to be unenrolled from an agricultural land conservation program (e.g., Conservation Reserve Program, CRP), the Company will compensate the landowner from lost revenue resulting from removal of the land from the conservation program. Compensation will be based on the previous payments being made to the Landowner by the conservation program administrator.