Phase 1 Grain Belt Express Transmission Project EIS

Draft Environmental Impact Statement Public Meetings / February 2025

U.S. Department of ENERGY

Loan Programs Office

TODAY'S SPEAKERS

Todd Stribley

Director, Environmental Compliance

U.S. Department of Energy (DOE)

Loan Programs Office (LPO)

Brad Pnazek

Vice President, Transmission Development

Grain Belt Express LLC

Jack Middleton

Senior Project Manager

Tetra Tech

HOUSEKEEPING

This meeting is being recorded.

You will be automatically muted.

Comments will be collected after the formal presentation. Please be respectful in your interactions and limit your comments to 5 minutes.

The slides and recording will be posted to the website by February 21, 2025.

AGENDA

DOE LPO’s Role

Phase 1 Grain Belt Express Transmission Project

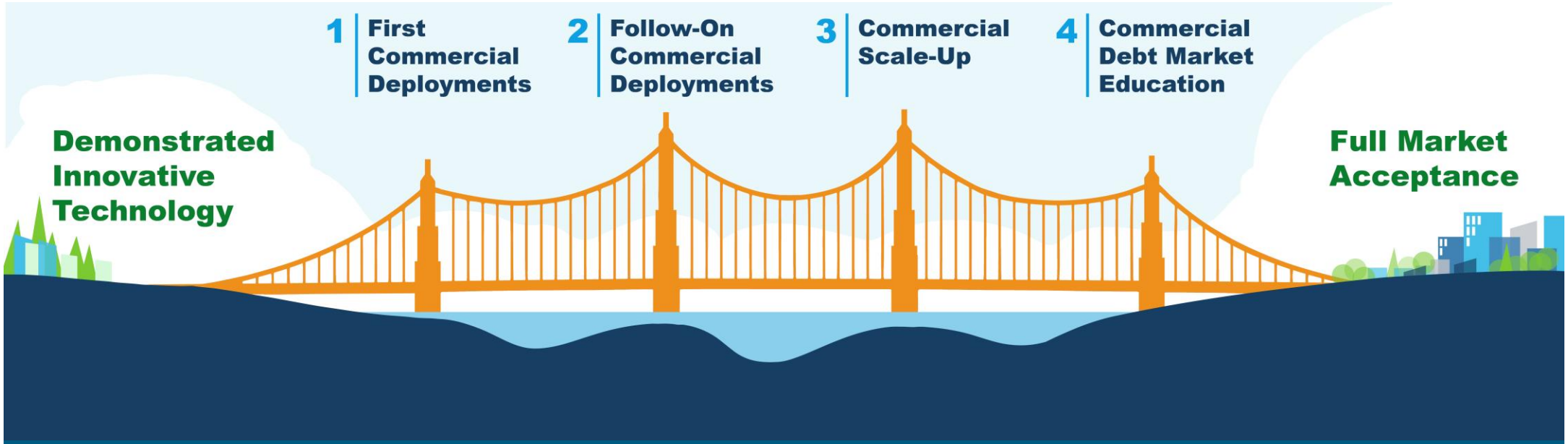
Draft Environmental Impact Statement

Your Role

DOE LPO

Introduction and role

INTRODUCTION TO LPO



The DOE LPO's mission is to help bring vital new technologies to wider acceptance in the energy industry
https://www.energy.gov/lpo/loan-programs-office

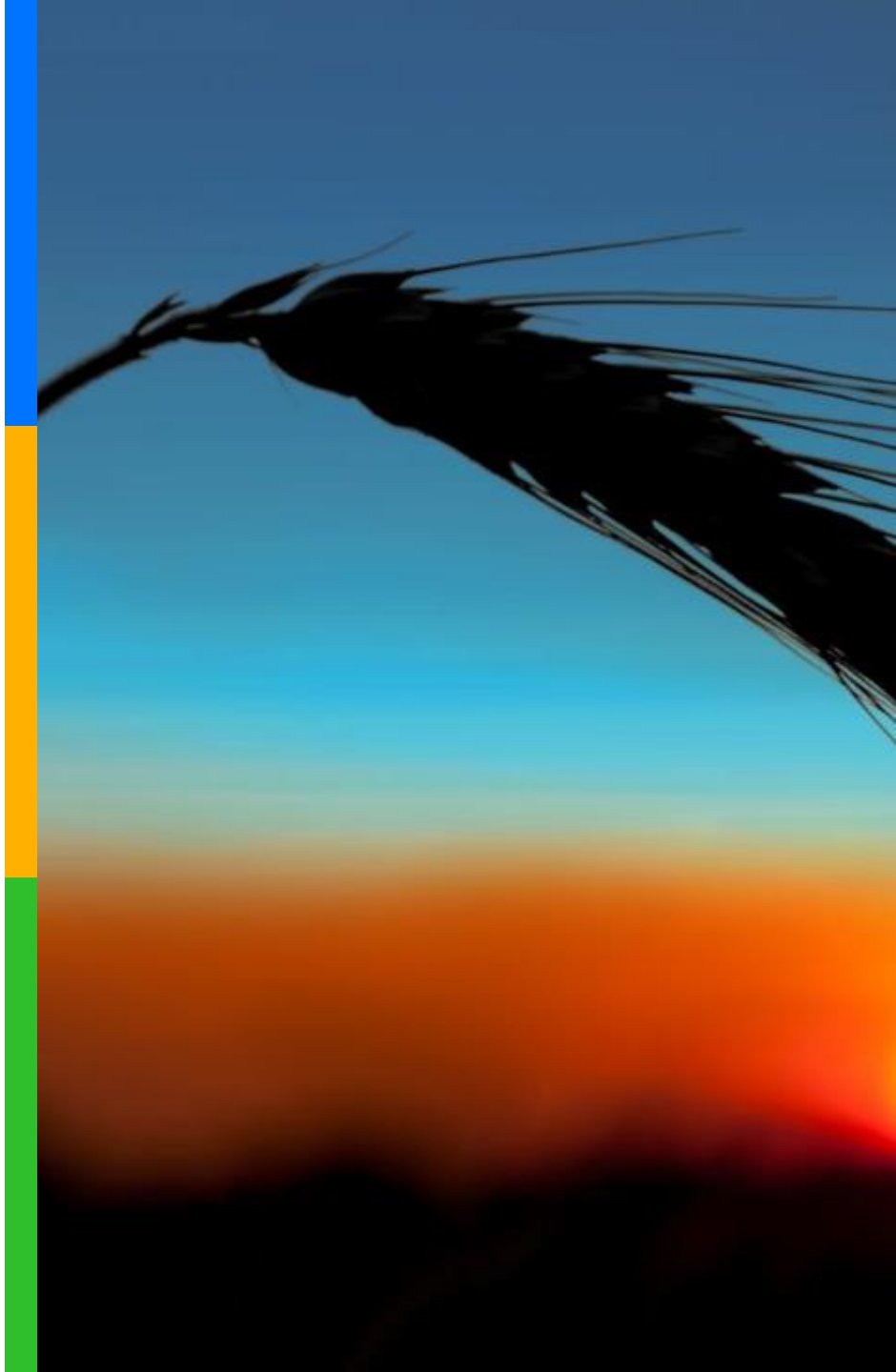
- ✓ This is achieved by providing financing to partners who are among the first to deploy those technologies to prove their viability.
- ✓ This addresses the funding gap for cutting-edge projects that banks and investors might be hesitant to support until similar projects are built elsewhere.

LPO AND GRAIN BELT EXPRESS

- The 2005 Energy Policy Act (EPAct) authorizes DOE LPO to make loan guarantees for projects that “avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases” and “employ new or significantly improved technologies… in the United States.”
- Grain Belt Express LLC, a subsidiary of Invenergy Transmission LLC, is seeking a loan guarantee from LPO to help fund the development, construction, and startup of the Project.
- If approved, they would receive a loan – backed by the LPO guarantee – which would be paid back with interest.
- The DOE LPO has granted Grain Belt Express conditional approval for a loan guarantee and is using the environmental review process to assist in determining whether to approve the request.

NEPA OVERVIEW

- The National Environmental Policy Act (NEPA) establishes a national environmental policy and a process to implement it.
- NEPA applies to actions taken directly by Federal agencies and actions taken by other entities requesting authorizations or financing support from the Federal government.
- NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions.
- NEPA requires performing due diligence and planning to avoid, minimize, or mitigate environmental impacts wherever possible.
- NEPA requires involving the public, agencies, Tribes, and other stakeholders in the process and informing them of findings in the EIS.



PHASE 1 OF THE GRAIN BELT EXPRESS TRANSMISSION PROJECT

PROJECT DESCRIPTION

Phase 1 of the Grain Belt Express Transmission Project includes **578** miles of primarily high voltage direct current (HVDC) transmission line and associated facilities extending from Ford County, Kansas, to Callaway County, Missouri.

In 2013, the Kansas Corporation Commission approved the route through Kansas. In 2019, Missouri Public Service Commission (MPSC) approved the route through Missouri. In 2023, the MPSC approved the addition of the Tiger Connector to connect into Missouri's electric grid.

In 2021, the Project applied for a loan guarantee from DOE LPO, which is the subject of the Draft EIS.

Each milestone requires coordination with property owners, elected officials, various stakeholders and agencies, and the general public.

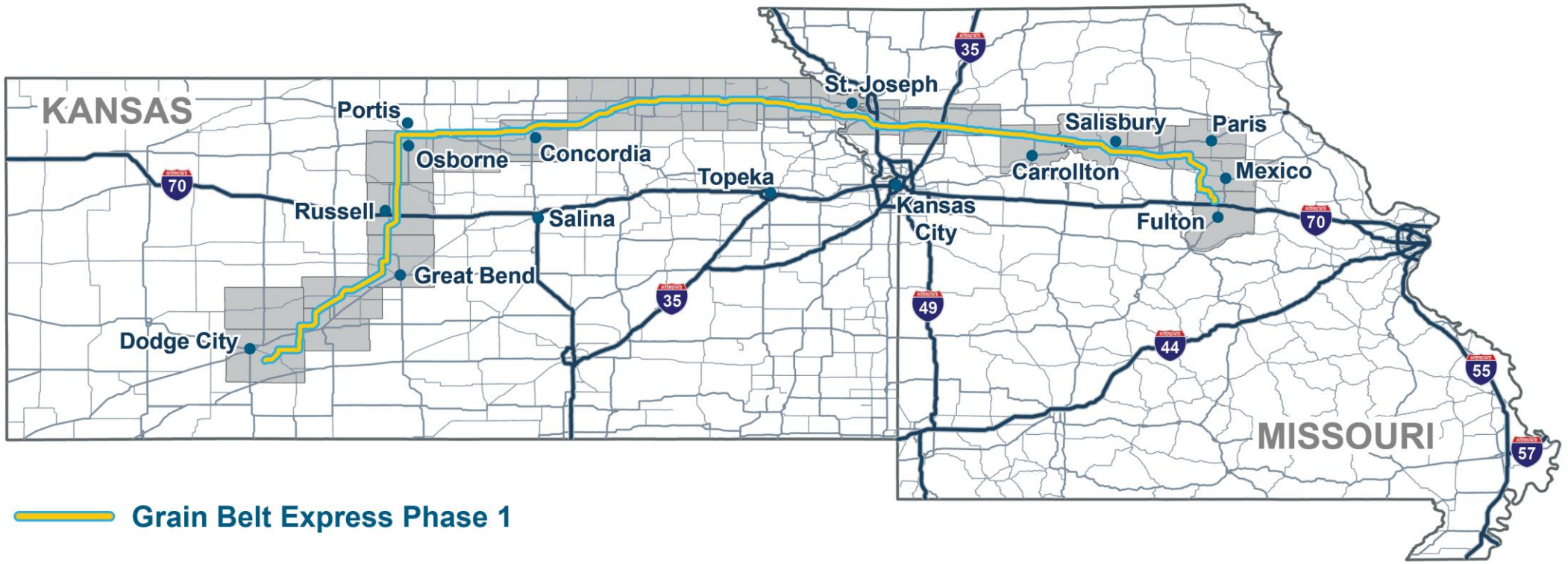
HVDC Transmission Line Rendering

PROJECT HISTORY

2011	2013	2019	2021	2023	NOW
Grain Belt Express Clean Line LLC approved to operate as a public utility by the Kansas Corporation Commission.	Kansas Corporation Commission approved the route through Kansas.	Missouri Public Service Commission approved the route through Missouri.	Grain Belt Express LLC applied for loan guarantee from the DOE LPO.	Missouri Public Service Commission approved the phasing of the Project and the Tiger Connector route.	The DOE LPO is using the NEPA process to inform the decision whether to issue a loan guarantee.

Each milestone requires coordination with property owners, elected officials, various stakeholders and agencies, and the general public.

PHASE 1 GRAIN BELT EXPRESS TRANSMISSION PROJECT ROUTE



PROJECT GOALS

Domestic Energy

- ✓ Unleash domestic energy resources to meet rapidly growing energy demand in energy-intensive manufacturing and artificial intelligence industries.

National Security

- ✓ Provide greater energy assurance for critical infrastructure and support U.S. leadership in energy technology innovation and deployment.

Economic Activity

- ✓ Support regional economic activity, including through jobs and wages for workers and new tax revenue.

Network Resiliency

- ✓ Help maintain service during electric grid emergencies caused by extreme weather events and other factors.

EIS PROCESS

SECTION TITLE

OVERVIEW OF THE DRAFT EIS

Overview: An EIS requires consideration of the potential impacts of the Proposed Action on the environment.

- The different aspects of the environment that are studied in an EIS are referred to as “environmental resources.”
- Impacts can be beneficial or adverse.
- Impacts can be short or long-term.

Purpose and Need

The **purpose** and **need** for the proposed action is implementation of DOE LPO’s Section 1703 authority to provide federal financial assistance via a loan guarantee for projects that avoid, reduce, utilize, or sequester air pollutants or anthropogenic emissions of greenhouse gases, and employ new or significantly improved technologies in the United States.

Proposed Action and Alternatives

Proposed Action: DOE LPO would issue a loan guarantee to Grain Belt Express LLC to support the Project.

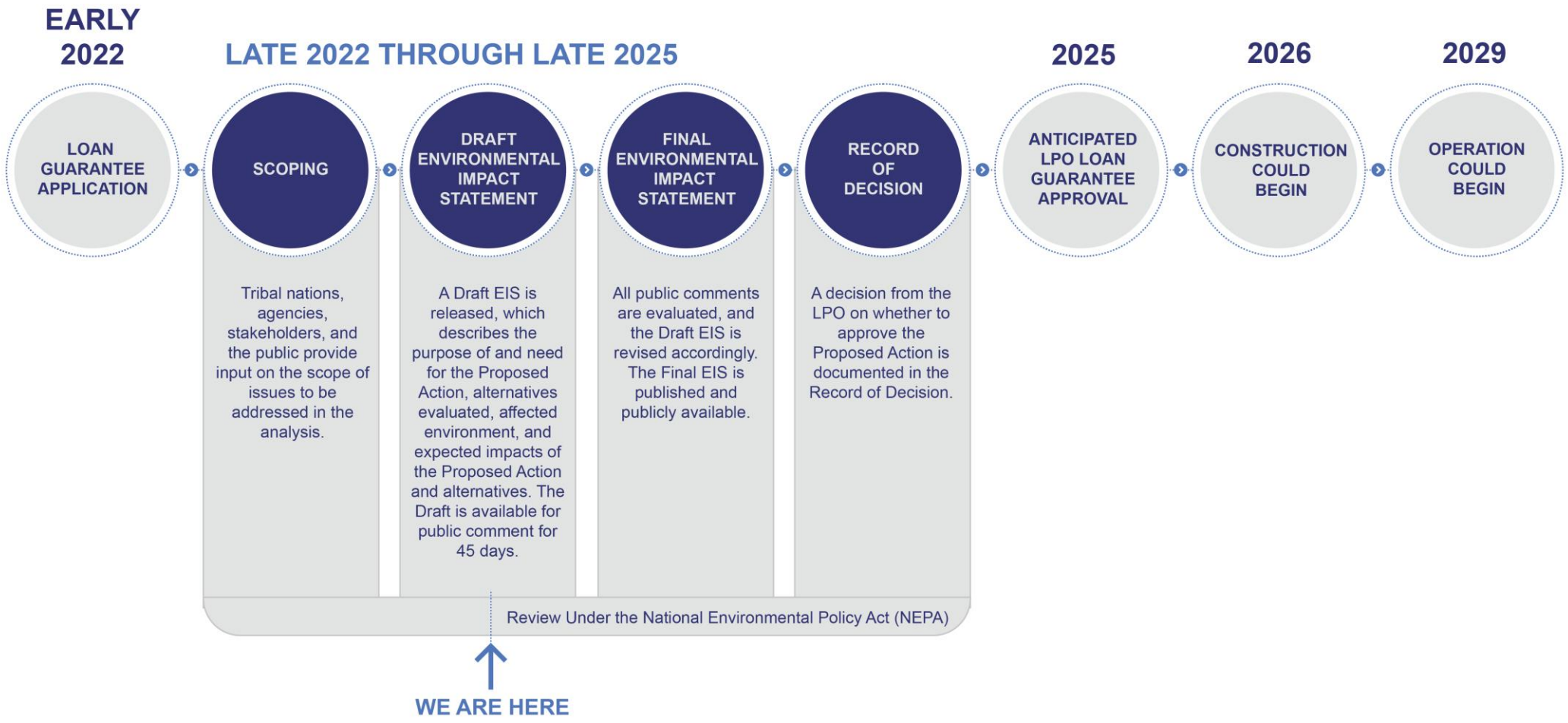
No Action Alternative: DOE LPO would not provide a loan guarantee.

COOPERATING AGENCIES

U.S. Army Corps of Engineers (USACE), the National Park Service (NPS), and the U.S. Environmental Protection Agency (EPA) are cooperating agencies in the NEPA process:

- USACE is a cooperating agency and has jurisdiction pursuant to Section 10 and Section 408 of the Rivers and Harbors Act and Section 404 of the Clean Water Act.
- NPS is a cooperating agency and has expertise in cultural resource preservation, assessing and analyzing impacts to National Historic Landmarks (NHLs), managing NHLs under Section 110(f) of the National Historic Preservation Act, and administering National Historic Trails and their associated resources as defined by and outlined in the National Trails System Act.
- EPA is a cooperating agency and has jurisdiction over protection of the environment and human health and has expertise in air quality and water quality issues.

GRAIN BELT EXPRESS EIS PROCESS



IMPACTS SUMMARY

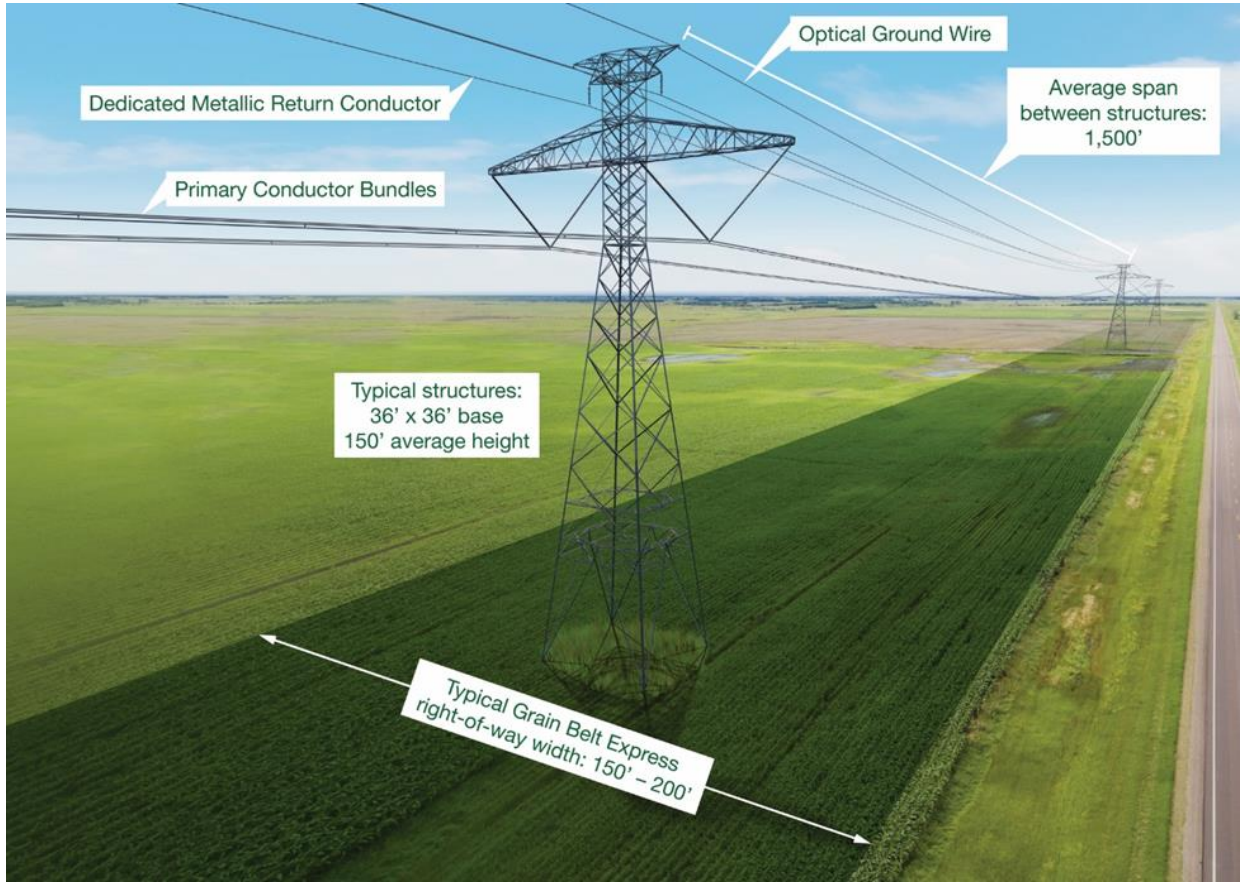
PROJECT OVERVIEW

Construction

- Expected to last ~3 years.
- Active construction at any given location along the line would take place over approximately 4 weeks.
- Temporary disturbance would include access routes, multi-use yards, pull or tension sites, helipads and fly yards, and workspaces around transmission structures.

Operations & Maintenance

- Expected to last >80 years.
- Consists of regular inspections and maintenance of the transmission line.



ENVIRONMENTAL PROTECTION MEASURES (EPMS)

Grain Belt Express LLC has developed and committed to over 100 EPMs as part of the Project design, construction, operations and maintenance, and decommissioning to further avoid or minimize effects to environmental resources. Examples include*:

- Designing the temporary and permanent components of the Project to avoid impacts to wetlands, waterbodies, floodplains, cultural resources, sensitive Tribal areas, and sensitive wildlife habitat to the greatest extent possible.
- Avoiding sensitive resources or using specialized equipment during construction, including timing restrictions for certain wildlife resources.
- Developing plans to address inadvertent discovery of archaeological or paleontological resources during construction.
- Implementing measures during construction to control dust, minimize erosion, and minimize the spread of weeds.
- Contracting with compliance monitors to ensure adherence to environmental commitments during construction.

*The full list of EPMs is included in Appendix 2.4 of the Draft EIS.

RESOURCES EVALUATED IN THE DRAFT EIS

- Air Quality
- Cultural Resources
- Land Use
- Noise
- Paleontology and Soils
- Public Health and Safety
- Recreation
- Socioeconomics
- Transportation
- Vegetation
- Visual Resources
- Water Resources
- Wildlife
- Cumulative Impacts

Scan here to review potential impacts to these resources in the Draft EIS:

TOP RESOURCE CONCERNS FROM SCOPING MEETINGS

Resource	% of Total Comments
Land Use	37.2%
Wildlife	30.1%
Socioeconomics	26.3%
Soils and Paleontology	25.6%
Public Health and Safety	25.6%
Vegetation	21.8%
Air Quality and Greenhouse Gases	19.2%

SUMMARY OF POTENTIAL IMPACTS – LAND USE & SOILS

Analysis Area
~10,943 acres (80%) of prime farmland or farmland of statewide importance in analysis area.
Most soils are not susceptible to compaction or wind erosion.
Most soils are susceptible to water erosion.

Construction	Operations & Maintenance
Temporary disturbance of 5,745 acres, primarily cultivated crops and pasture.	Permanent loss of ~0.03 acres of land per structure for most structures and up to 0.1 acres in some cases where farm equipment use could be limited.
83% of temporary disturbance overlaps prime farmland.	Permanent loss of 210 acres of prime farmland in Kansas and Missouri.
~10 acres of temporary disturbance per mile.	~0.4 acres of permanent loss per mile.
Erosion, rutting, or compaction could occur.	Impacts to soils, including compaction, during maintenance activities.
Interference with farm equipment or livestock movement could also occur.	Agricultural use would not be restricted under the lines.

SUMMARY OF POTENTIAL IMPACTS – WILDLIFE & VEGETATION

Analysis Area
71% agricultural and developed vegetation in analysis area (831,706 acres)
89,203 acres of forest/woodland, 189,960 acres of shrub/herb, and 18,172 acres of wetlands in analysis area
Potential habitat for 23 state or federally-listed special status species

Construction	Operations & Maintenance
Temporary disturbance of 5,745 acres.	Permanent loss of 212 acres of potential wildlife habitat.
4,800 acres of disturbance are in agricultural, developed, or non-vegetated areas.	204 acres of disturbance are in agricultural, developed, or non-vegetated areas.
Disturbance of 850 acres of shrub/herb and 86 acres of forest/woodland vegetation.	Disturbance of 2 acres of shrub/herb vegetation. Permanent conversion of 1,596 acres of forest/woodland to shrub/herb vegetation
~10 acres of total disturbance per mile.	~0.4 acres of total disturbance per mile.
Impacts including injury or mortality, ground-disturbance of nests, and temporary noise and light disturbance causing avoidance of the area.	Occasional impacts from maintenance activities, including from mowing and vegetation clearing, driving vehicles over habitat, and noise.

SUMMARY OF POTENTIAL IMPACTS – SOCIOECONOMICS

Analysis Area
14 counties in Kansas and 9 counties in Missouri.

Construction	Operations & Maintenance
Peak of ~1,100 employees for construction.	Two full time workers at each converter station and approximately 10 operations staff.
Temporary increase in demand for short-term lodging and public services.	Not likely to impact short-term lodging and public services.
Estimated that 14,375 jobs would be created including direct, indirect, and induced.	Estimated that 205 jobs would be created including direct, indirect, and induced.
Estimated total earnings of $936 million in KS and $586 million in MO.	Average annual property taxes paid over the first 20 years of the Project's life would represent an approximately 0.8 percent increase in local revenues ($6.7 mil in KS and $9.2 mil in MO, annually).
Estimated total economic output of $1.5 billion in KS and $986 million in MO.	Impacts to property values are not known but could range between no impact to a reduction in value up to 9%.

SUMMARY OF POTENTIAL IMPACTS – AIR QUALITY

Analysis Area
14 counties in Kansas and 9 counties in Missouri.
All counties in the analysis area have air quality below levels of concern defined by the EPA.

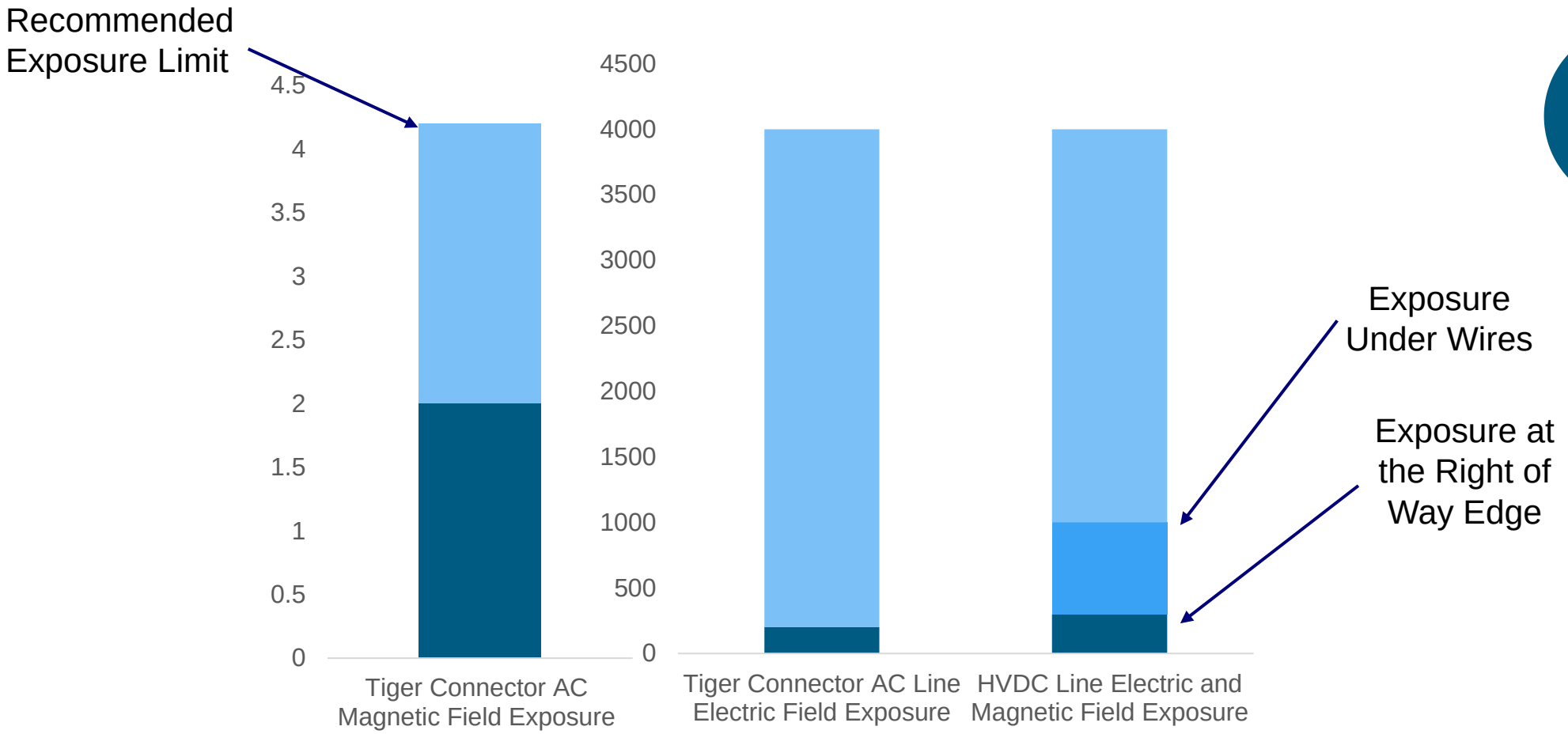
Construction	Operations & Maintenance
Impacts include equipment emissions and potential for dust.	Impacts include equipment emissions and potential for dust.
Total greenhouse gas emissions equivalent to 6,069 homes' energy use (45,191 tons).	Yearly greenhouse gas emissions equivalent to 102 homes' energy use (762 tons). Yearly reduction of emissions equivalent to 690,000 homes' energy use (~5.15 mil tons).
Counties would maintain air quality below levels of concern.	Counties would maintain air quality below levels of concern.

SUMMARY OF POTENTIAL IMPACTS – PUBLIC HEALTH

Analysis Area
Soil contamination within the analysis area may exist.
Existing sources of electrical effects are present within the analysis area.

Construction	Operations & Maintenance
The Project would be built to meet or exceed requirements of the North American Electric Safety Code.	The Project would be built to meet or exceed requirements of the North American Electric Safety Code.
	HVDC lines do not impact objects near the line. Tiger Connector could cause a nuisance shocks from objects just outside the right of way. Design parameters limit the amount of induced current and intensity of nuisance shocks.
Risks to public health include pollution, risks to worker safety, and accidents or intentionally destructive acts.	Conducive objects near the right of way could build up a small electric charge.
	HVDC Line and Tiger Connector would be below the recommended exposure limits for electric and magnetic fields.

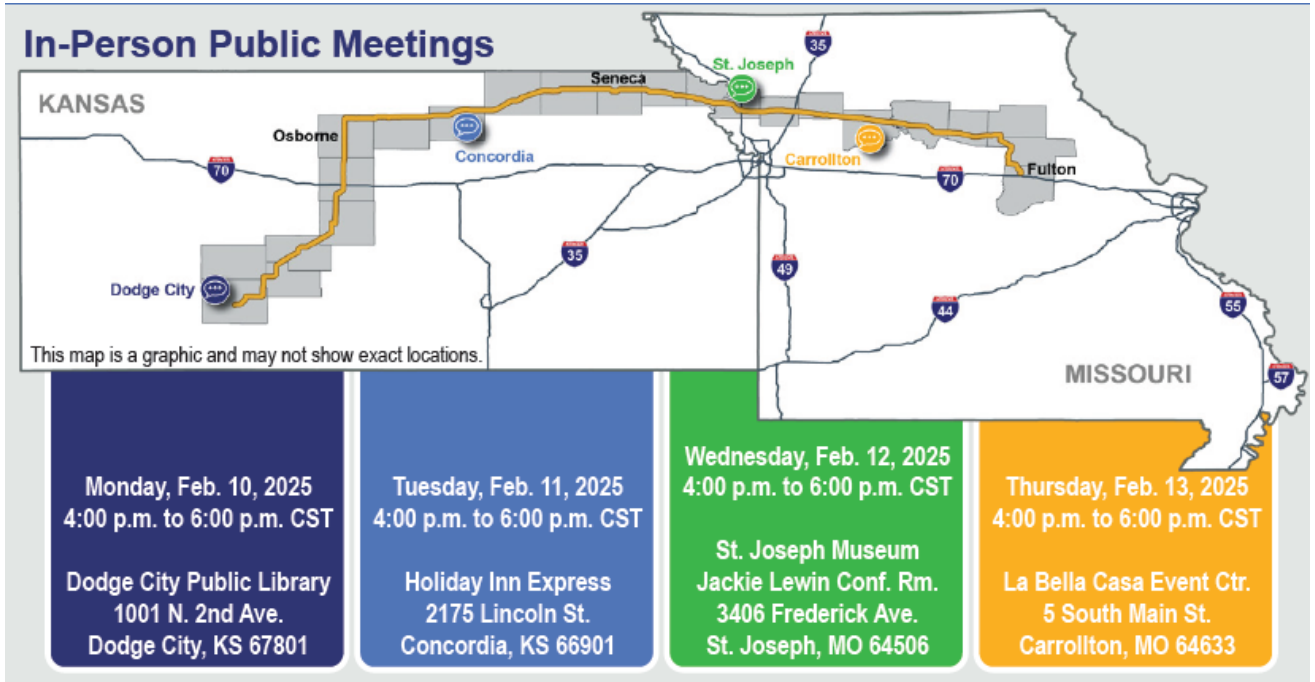
SUMMARY OF POTENTIAL IMPACTS – PUBLIC HEALTH



YOUR ROLE IN THE NEPA PROCESS

PUBLIC MEETINGS

To gather public feedback on the Draft EIS, open house public meetings are being held both in-person and virtually. Two meetings are being held in Kansas and two meetings are being held in Missouri.



Virtual Public Meetings

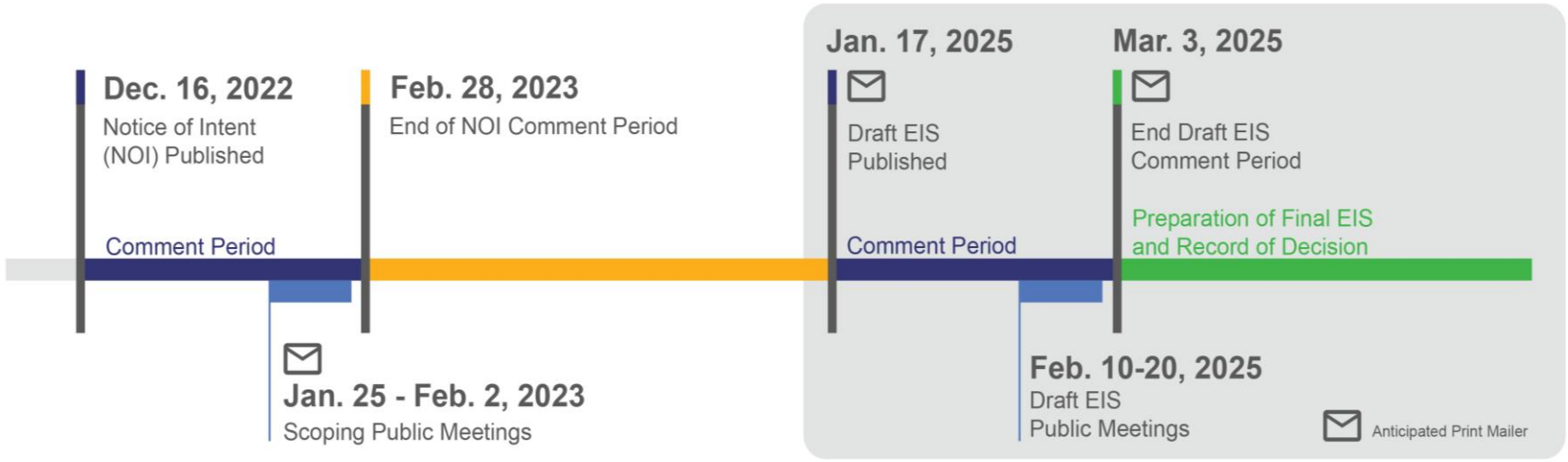
Wednesday, February 19, 2025,
from 11:00 a.m. to 1:00 p.m. CST

Thursday, February 20, 2025,
from 4:00 p.m. to 6:00 p.m. CST

To register for a virtual meeting please visit https://www.energy.gov/lpo/eis-0554-grain-belt-express-transmission-line and fill out the registration form.

PUBLIC OUTREACH PROCESS

We Want to Hear from You! Meaningful public outreach is a vital part of the NEPA process; this involves sharing honest, transparent information with you while giving you the opportunity to be heard, listening to your comments, and answering your questions. As information received during scoping was reviewed and considered for inclusion in the Draft EIS, information received in during the Draft EIS meetings will be evaluated and considered for inclusion in the Final EIS.



WE WANT TO HEAR FROM YOU

Comments for the Draft EIS will be accepted through March 3, 2025.

Website – Option 1

Visit
https://www.energy.gov/lpo/eis-0554-grain-belt-express-transmission-line
to submit your comments.

Mail

U.S. Department of Energy
Loan Programs Office, LP 30
Grain Belt Express EIS
c/o: T. Stribley, NEPA Compliance Officer
1000 Independence Avenue SW
Washington, DC 20585

Website – Option 2

Visit **Regulations.gov**
and search for Docket No.
DOE-HQ-2023-0020

E-mail

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PHASE I GRAIN BELT EXPRESS
TRANSMISSION PROJECT
THANK YOU FOR YOUR
PARTICIPATION