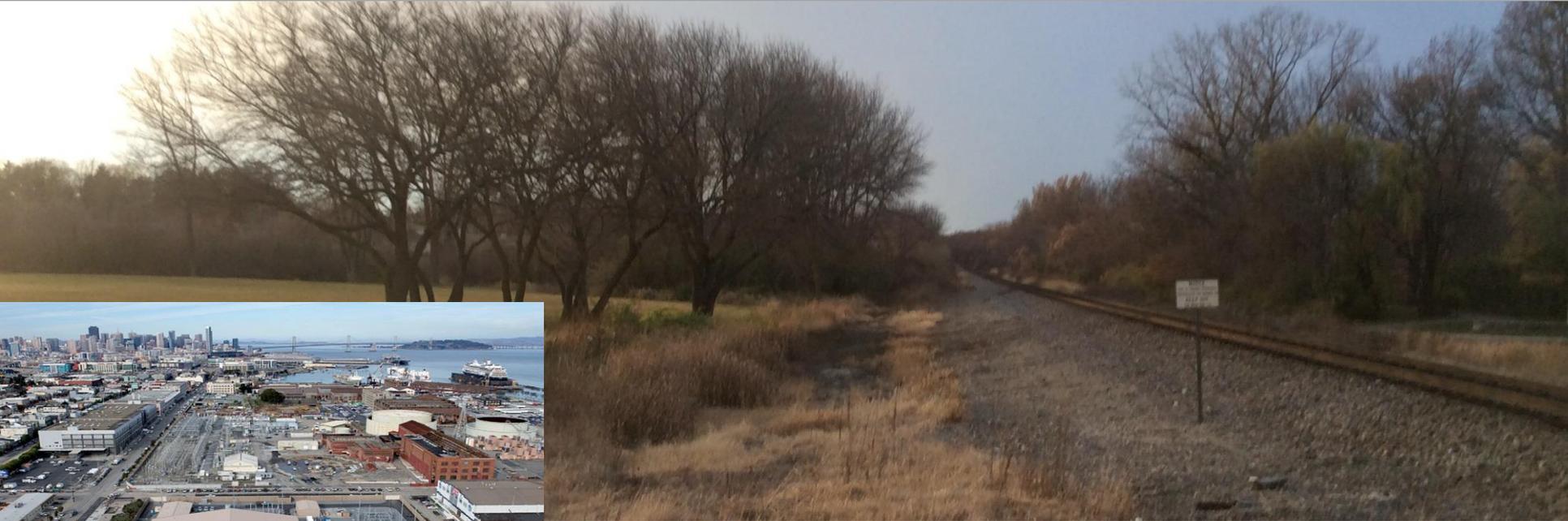


2,100 HVDC Transmission Line

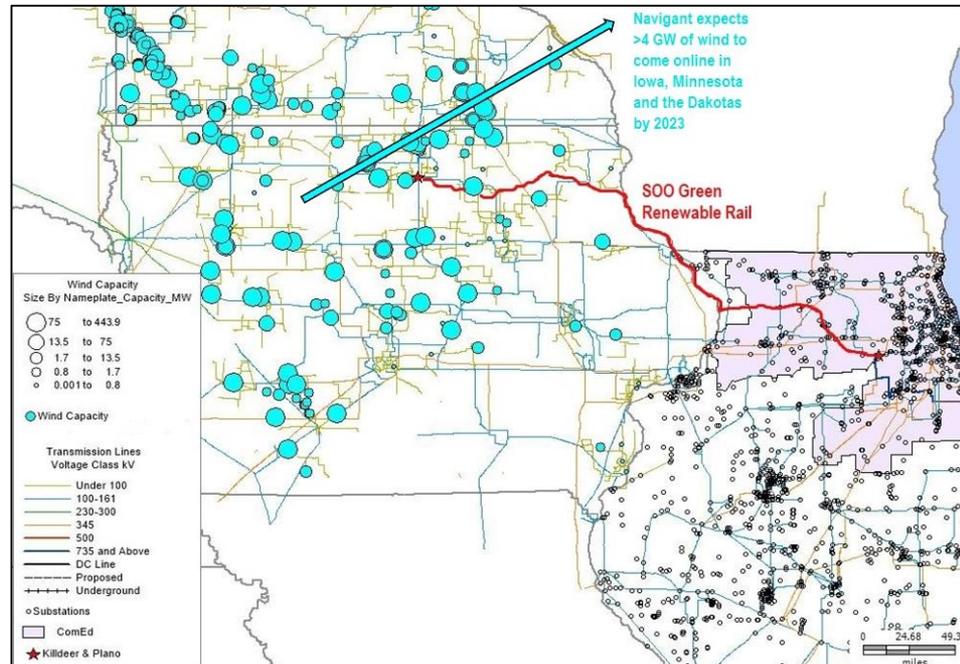
July 26, 2018



SOO GREEN  
RENEWABLE RAIL

# Project Overview

SOO Green Renewable Rail LLC (“SGRR” or the “Company”) an innovative project that seeks to replicate the model used to build America’s fiber optic network, by burying an underground high voltage direct current electric transmission line along an existing railroad to transport renewable energy. Shippers will procure energy, capacity and RECs in the MISO power market and sell these products into the ComEd PJM market.

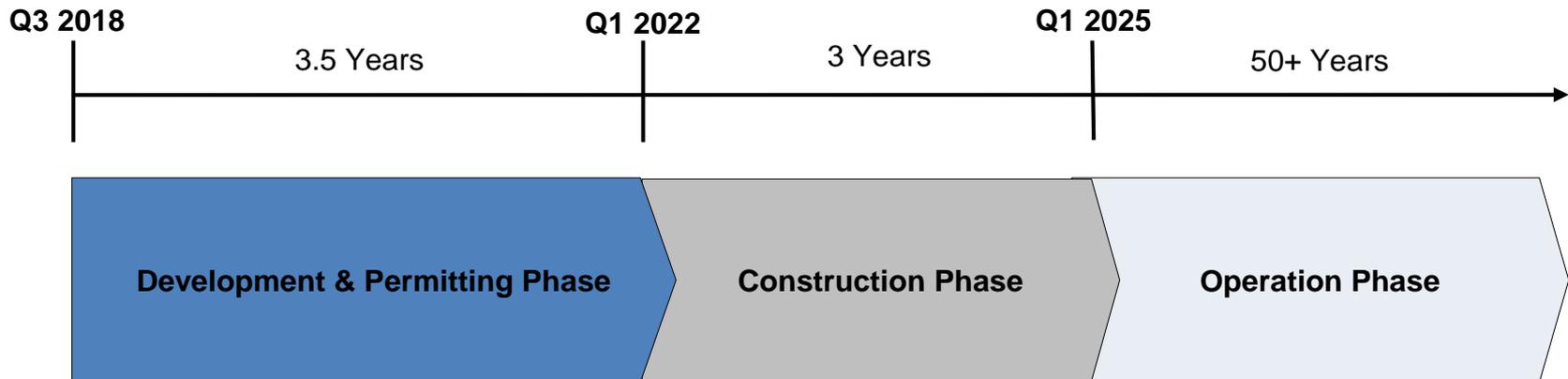


SOO Green is the owner of a 349-mile underground transmission cable project (the “Project”) which consists of a high voltage direct current (“HVDC”) cable (the “Transmission Line”) and two AC/DC converter stations (“Converter Stations”). Construction financial close (Construction Financial Close) is planned for Q4 2021. The Project’s commercial operation date (“COD”) is targeted for Q1 2025.

**The Project will take advantage of the total arbitrage between the low priced wind abundant MISO and constrained ComEd PJM markets facilitated through burying the Transmission Line along a CP railway for the vast majority of the route**

# Project Overview

Maximum Transmitted Power	2,100 MW	Target NTP	Q1 2022
Peak Delivered Power	2,022 MW	Target COD	Q1 2025
End to End Peak Loss of Transmitted Power	3.7%	HVDC Technology	Siemens 525kV VSC
Projected Line Utilization	69%	Cable Technology	525kV XLPE
MISO Interconnection/ Line Start	345kV Killdeer Substation	Maximum (Minimum) Project Length	349 miles (334 miles)
PJM Interconnection/ Line End	765kV PJM System via ComEd's Plano Substation	Route Buried Underground	>99%
Development Financial Close	Q2 2018	Route Secured to Date	~85%
Construction Financial Close	Q4 2021		

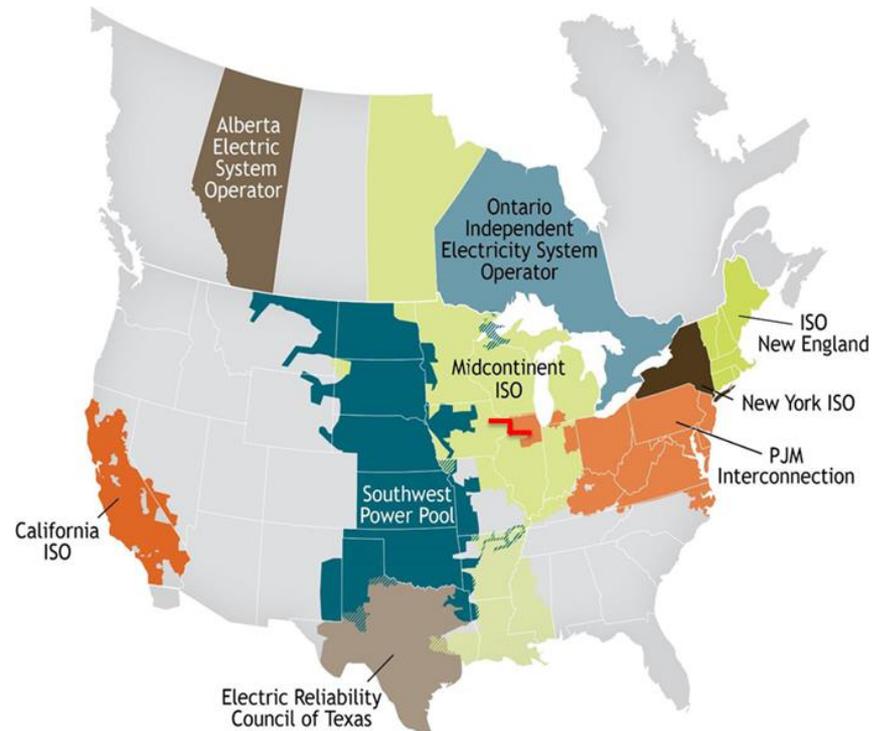
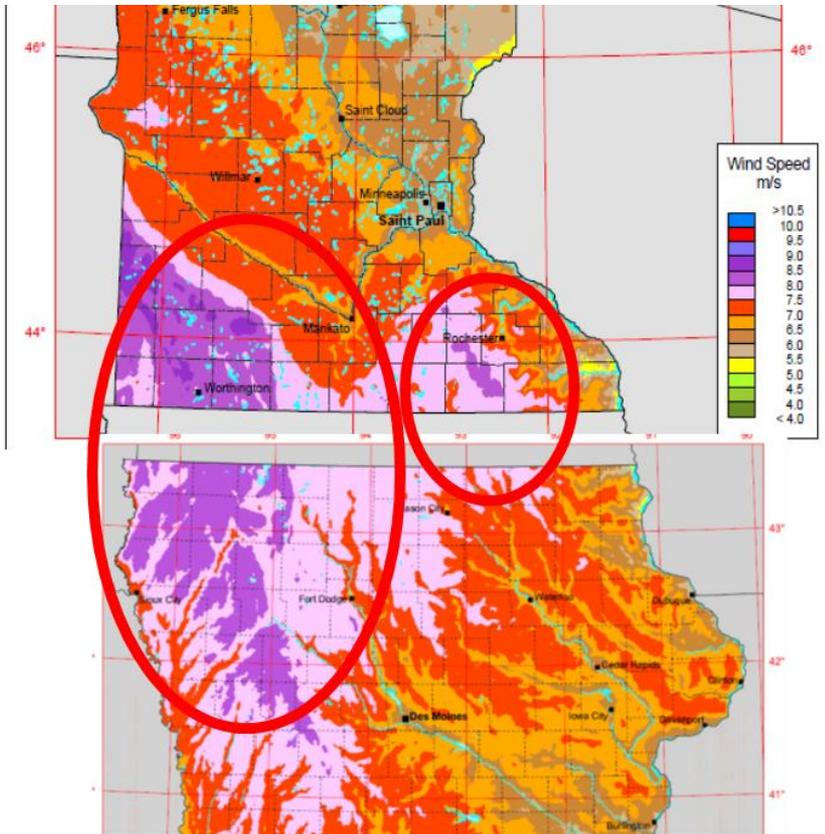


# Project Overview



# Value Proposition

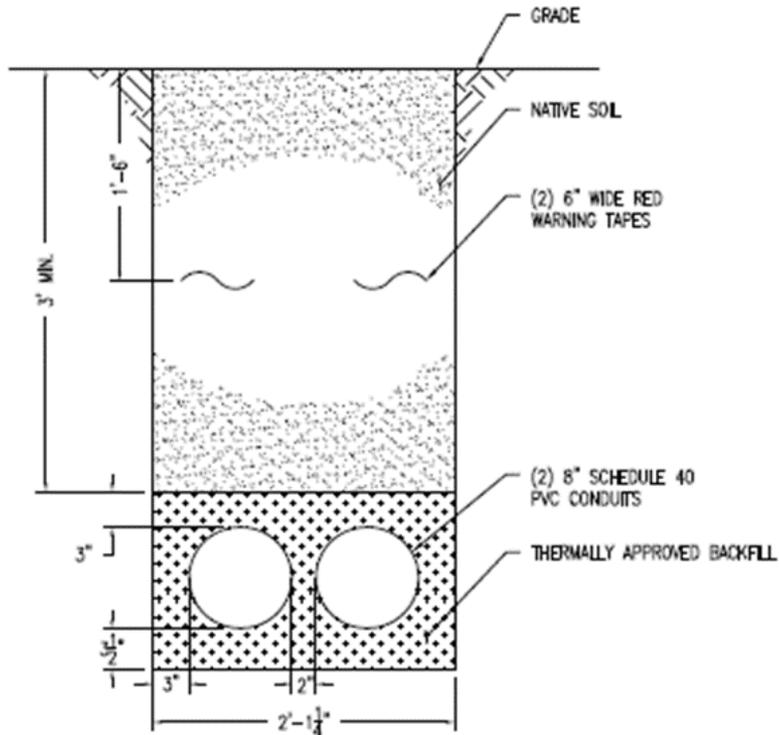
Some of the best wind resources in the world can be found in the upper Midwest U.S., and the Project brings that cheap renewable energy to eastern markets. Crossing the PJM/MISO seam allows the owners of the Project's firm transportation capacity to arbitrage the energy, REC and capacity differences between the two markets, creating substantial value



# Real Estate

The viewshed and environmental impact of overhead transmission lines creates significant landowner resistance

Underground



Overhead



The Project utilizes two slender buried cables approximately five inches in diameter. The compact layout occupies two-and-a-half feet of railroad right-of-way (ROW) at a five foot depth.

# Permitting

## Boring under sensitive environmental habitat along an existing railroad ROW simplifies the Project's permitting and has garnered support at the local, state and federal level

### Agency Meetings

- In June 2016, SOO Green met with the following relevant federal and state environmental and regulatory permitting agencies to introduce the Project, solicit inputs and refine SOO Green's strategy and budget:
  - USFWS
  - USACE
  - U.S. Coast Guard ("USCG")
  - Iowa Utility Board ("IUB")
  - Illinois Commerce Commission ("ICC")
  - State governors
- Meetings with USFWS, USACE and USCG went exceedingly well, with the federal agencies concluding this is "precisely the kind of project that [the United States] needs to responsibly build out its infrastructure" and that they would like to be viewed as a "partner" with SOO Green. The Project was also well received by the ICC, IUB, Iowa Governors Branstad and Reynolds, and representatives of Illinois Governor Bruce Rauner.

### Permitting Overview

- E&E conducted a critical issues analysis in November 2015 and found no critical issues or constraints that would prevent construction of any of the route options for the Project
- The Project's underground railroad co-location model within an existing pre-disturbed privately-owned ROW avoids or minimizes the typical impacts of overhead transmission line construction on sensitive areas, including wetlands and forested areas
  - E&E believes that the anticipated reduced impacts of the Project should translate into a shorter construction period

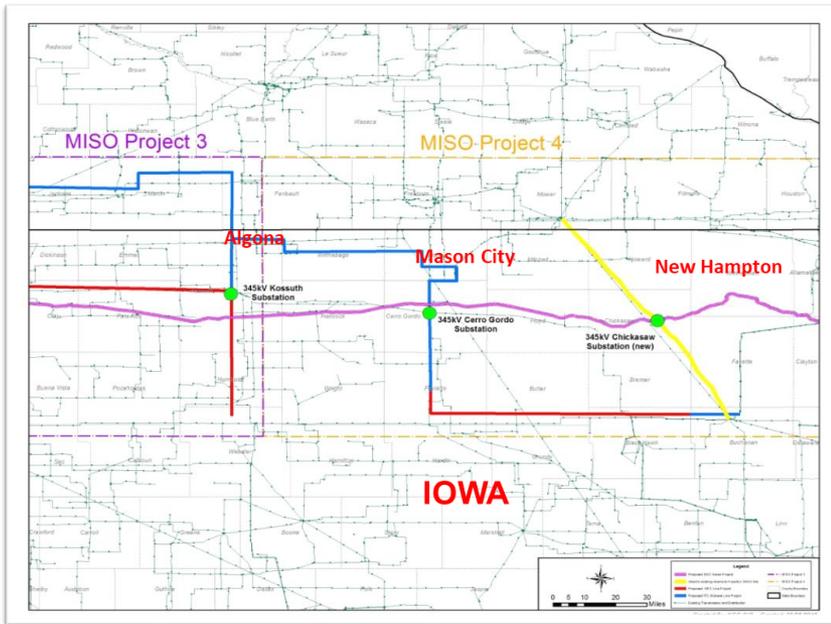
### Key Permits

- The USACE concluded that it would be the lead federal agency and that only a USACE Nationwide Permit 12 would be needed and that permit process would cover both Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act
- USACE also stated that it would only need to prepare an Environmental Assessment (as opposed to an Environmental Impact Statement) under NEPA
- In Iowa, an Electric Transmission Line Franchise must be obtained from the IUB
- A September 2017 Illinois Supreme Court decision obviates the need for SOO Green to obtain ICC approvals to construct the Project, including a CPCN. SOO Green will instead be required to obtain various routine county and local-level approvals along its route

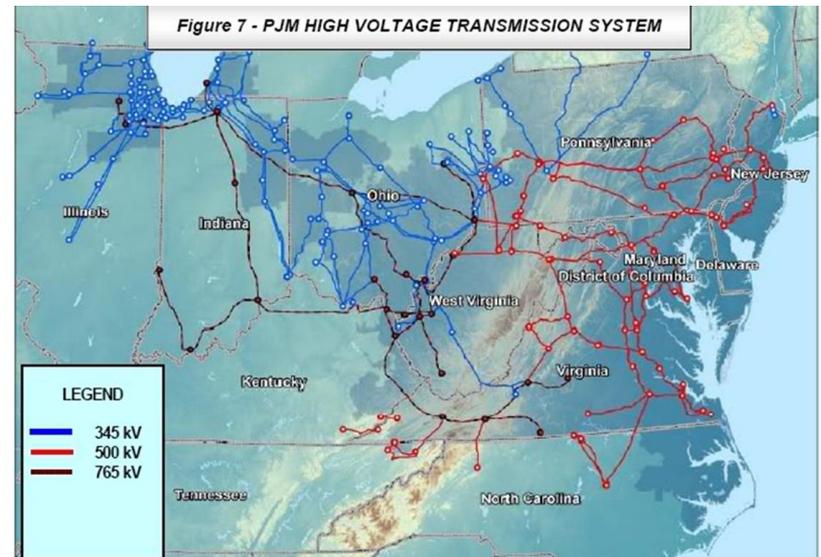
# Interconnection

The Project connects to a strong point on the MISO system, as opposed to acting as a generator tie. This strong system interconnection allows the Project to draw wind energy from across the entire region. The geographic diversity increases the hours in which wind energy can utilize the line, thus increasing the RECs, energy and capacity payments that can be sold into PJM

## MISO



## PJM

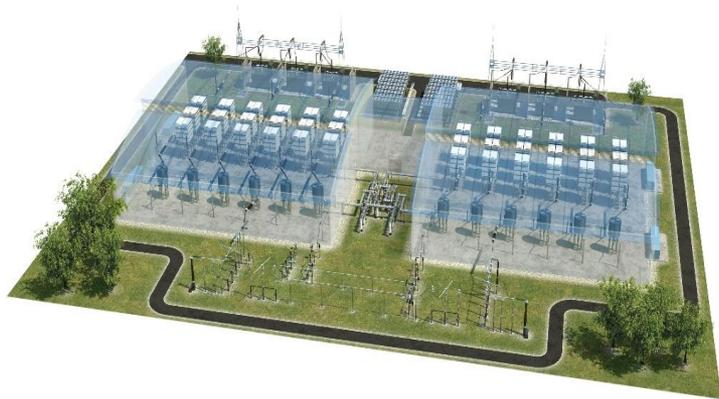


The Project's PJM POI is located on one of the most robust points on the North American grid, ComEd's 765kV extra high voltage transmission system

# Technology – Converter Stations

The Project's two Converter Stations will be built by Siemens with state-of-the-art, self-commutated VSC power conversion technology

## Siemens Converter Station Technology



## INELFE (Spain) – 2,000 MW Siemens VSC Converter Station

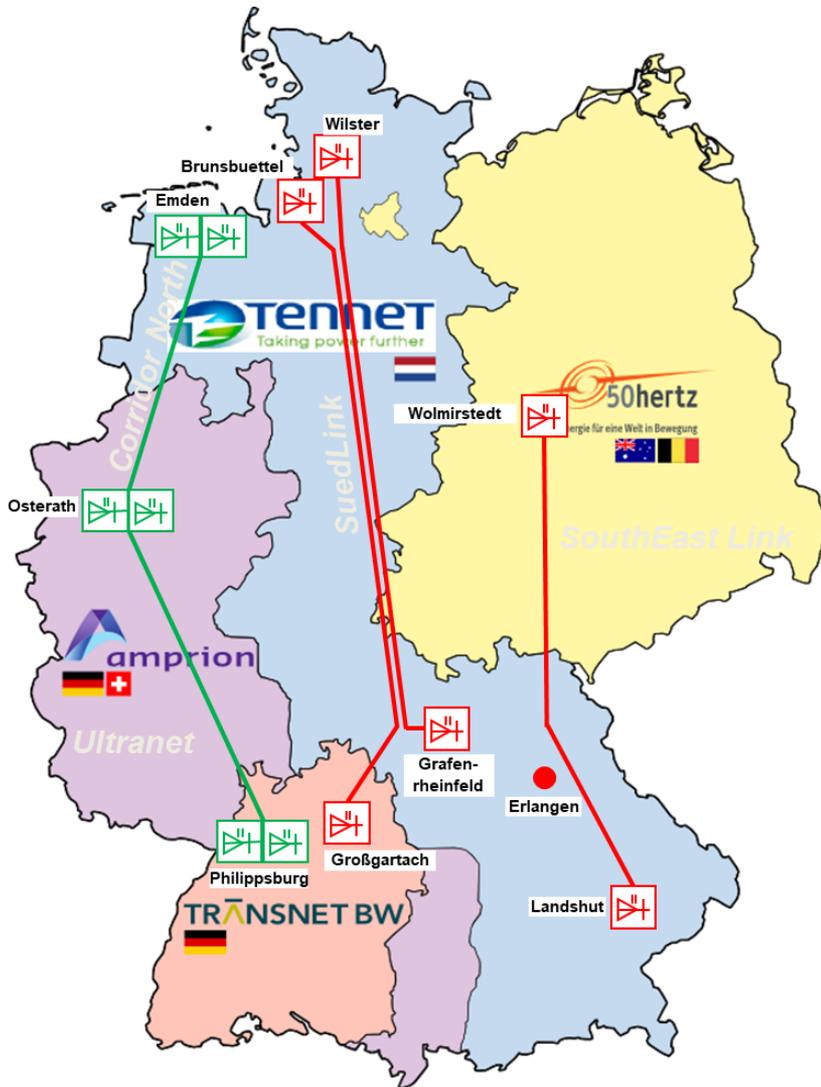


Source: Siemens



Source: Siemens

# Underground HVDC in Germany



Source: German HVDC Grid Extension Plans

- Due to public opposition, the German government decided its national HVDC grid will similarly use 525kV XLPE underground cables so as to not further delay the permitting process for the required HVDC Links to power the country's southern industrial base
- As part of its 525kV XLPE cable tender, Germany is currently completing supplier qualification testing with five leading cable OEMs

Corridor	Sending Station	Receiving Station
Corridor North	Amprion	Amprion
Ultranet	Amprion	TransnetBW
SuedLink Track 1	Tennet	TransnetBW
SuedLink Track 2	Tennet	Tennet
SouthEast Link	50 Hertz	Tennet

 400kV VSC DC

 525kV VSC DC

Total Transfer Capacity (2025): 8 GW

# Construction

SOO Green will bore under environmentally sensitive areas, including the Mississippi River. The cable and conduit footprint is relatively compact

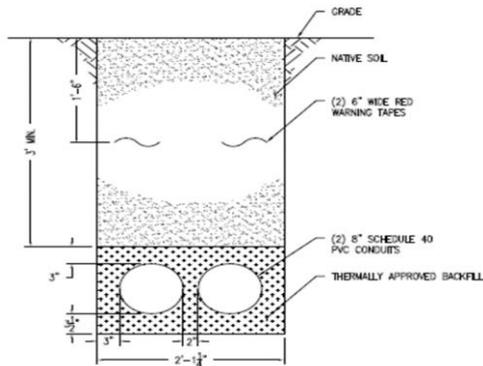
## Construction Status

- Completed Hyrail Tour of Project route with Jingoli Power, POWER Engineers, Inc. (POWER Engineers), CP and E&E
- Videotaped the entire tour and input construction field comments and photos into geographical information systems (GIS) database
- Completed conceptual engineering and construction plans, including logistics and number of cable splices
- Received bids from HVDC Cable & inverter OEMs
- Conducted cable RFP
- Assembled detailed construction estimate and timeline
- Two-and-a-half feet between conduits, five foot depth

## Construction Process

- SOO Green intends to complete civil work and install conduit along a given stretch of rail prior to installing the electrical cable
- Trenches can be closed after conduit installation to limit safety issues and allow for better coordination with rail operations
- The electrical cable will be pulled at a later date, and then spliced
- Civil and electrical work will be staggered along the length of line to keep crews fully utilized

## SOO Green Construction



Source: SOO Green



# Project Partners

SOO Green has partnered with CP, Siemens and the very best experts in the industry to support the successful development and operation of the Project



# Direct Connect Development Co, LLC

---

## Contacts

All communications or inquiries relating to the project should be addressed to project developer Direct Connect Development Co, LLC. Please direct all inquiries to the following professionals:

**Joseph DeVito**  
President  
(512) 608-8448  
jdevito@soogreenrr.com

**Trey Ward**  
CEO  
404.783.7757  
tward@soogreenrr.com