

# SuedOstLink

## Powerlink

A Brand of Prysmian Group

**Prysmian Group**, the world leader in the energy and telecom cable systems industry, will support Germany and Europe in their energy transition goals through the development of three vital HVDC cable projects, including the **SuedOstLink** project.

 **270 km**  
Prysmian cable route

 Planned completion:  
**2025**

 **550 km**  
of Prysmian HVDC underground cables

 Type of cable:  
**±525 kV P-Laser**



**The SuedOstLink project will transmit energy through a HVDC underground cable connection to link the wind energy rich northern region to the energy-hungry South.**

The project was awarded to Prysmian Group by German grid operator TenneT TSO GmbH with the assignment to deliver a **±525 kV HVDC** underground cable system, with transmittable power of more than 2 GW on a single system for the first time.

Prysmian will install a HVDC cable system on a **270 km route**, starting at the Southern Germany connection point at Isar, close to Landshut in Bavaria, to deliver reliable and eco-friendly power transmission, confirming its strategic role in the shift towards a low-carbon economy and to drive the energy transition forwards with smarter, more reliable and more sustainable solutions.

### **Prysmian own developed innovative P-Laser insulation technology**

The project is the first to use extruded cables at this highest voltage level, combined with large copper conductor cables and Prysmian own developed innovative P-Laser insulation technology, which allows higher power transmission capacity. High-quality and efficient installation will be assured with optimized long length solutions, **exceeding 2 km**, overseen by a strong and dedicated local project engineering and management team.

**P-Laser**

 Innovative **HPTE** insulation up to **600 kV DC** for underground and submarine applications

 Over **30,000 km** experience in MV networks

 Higher thermal performance properties for increased power transmission capability

 Operating temperature range increased

 Reduction of CO<sub>2</sub> emissions by up to **30%**  
**100% eco-friendly** and fully recyclable materials\*

\*Refers to the end-of-life phase of Life Cycle Assessment (LCA) evaluation

TenneT selected Prysmian's **P-Laser insulation technology** for the benefits of this innovative product based on High Performance Thermoplastic Elastomer. With a solid history in Medium Voltage application, this is a fully qualified high-performance insulation system that has evolved after rigorous testing and extensive trials. P-Laser is suited for the highest voltage levels delivering enhanced thermal performance and high intrinsic reliability that enable more flexible and sustainable solutions. It is fully recyclable, and with increased productivity and **30% lower CO<sub>2</sub>** emissions in production, has much higher environmental credentials compared to more conventional technologies.

## CABLE LAYERS

**1 Conductor** - The conductor is built of bare copper wires, its nominal cross-section area is 3000 mm<sup>2</sup>.

**3 Insulation** - Material: P-Laser, based on HPTE insulation material which is fully recyclable and compatible with existing cable accessories.

**8 Welded Aluminum Foil** - The smooth metallic sheath is constituted by a longitudinally welded aluminium tape applied over the insulation screen and semi-conducting longitudinal water barrier to provide radial water-tightness, mechanical protection and to carry fault currents.  
Material: Aluminum

**2 Inner semi-conductive layer** - It works to control and have smooth electrical stresses at insulation interfaces.

**4 Outer semi-conductive layer** - It works to control and have smooth electrical stresses at insulation interfaces.

**6 Fiber optic elements** - HVDC cable will include 4 integrated fiber optic elements, with in each one both multi-mode and single-mode fibers.

**9 Outer sheath** - An extruded layer of red coloured polyethylene compound is provided over the metallic sheath. An extruded black semi conductive layer will be applied over the outer sheath.  
Material: HDPE



 Indicative diameter: **152 mm**

 Indicative cable weight: **41 kg/m**