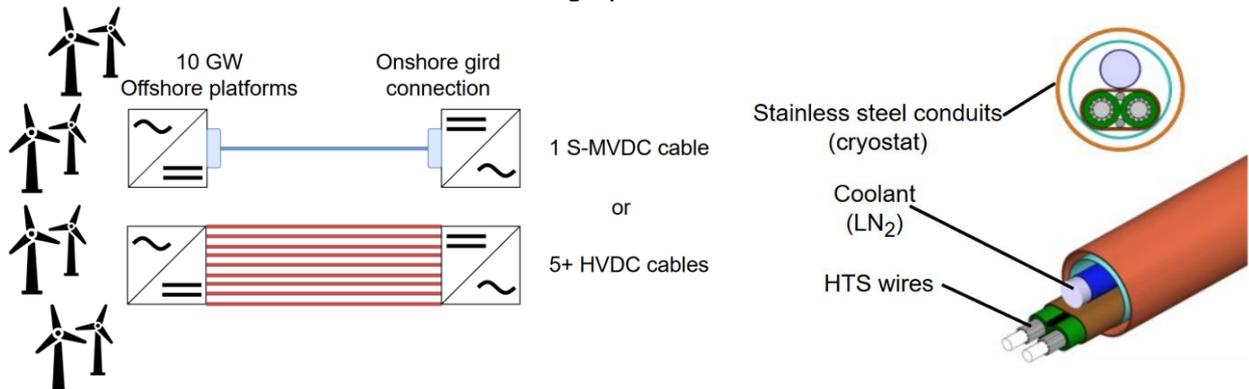


Superconducting Medium Voltage DC (S-MVDC): High-Power, Efficient Interconnections

The Challenge: *Lofty goals: 300 GW of offshore wind power by 2050*

- Multi GW connections are needed
- HVDC limited scalability beyond 1 -2 GW
- Power losses across distances
- Land use and grid congestion in future

The Solution: *HTS cables for high-power interconnections*



HTS-Technology: *State-of-the-art components that power modern electricity grids*

MVDC converter and cooling stations

- 25, 50 kV enough to transmit GWs
- 20 kA @ 50 kV vs. 2 kA @ 500 kV
- Smaller converter stations

Superconducting cable

- 10-20 x the power of copper cables
- Multi GW power transmission possible
- Robust cables with stainless steel

Benefits: *Enabling an efficient energy transition*

- No electrical losses
- No voltage drop
- Less material usage
- Lower OPEX
- Shorter deployment time
- Smaller trench width
- Less environmental impact

Recent Projects: *Making HTS cables a reality*

SCARLET

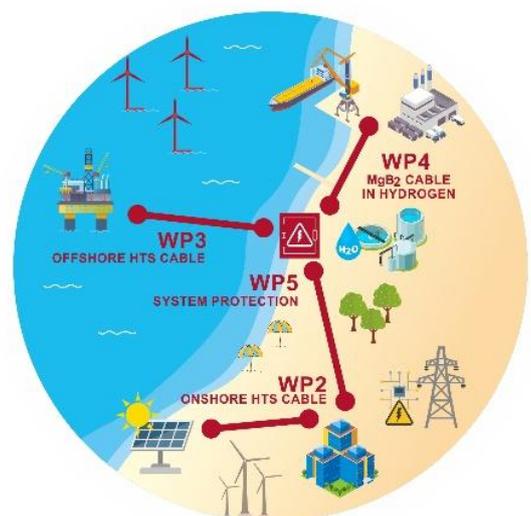
Development of off- and onshore cables

STERNA 2050

Highlighting the benefits of HTS cables in the North Sea

SupraMarine

Demonstrating HVAC HTS cable



For more information contact us at: info@vesc-superbar.de