Suedlink
Central Service Provider

Programme managing the planning, design and construction of the largest underground power cable in the world.

Trans-European Network
Suedlink connects with Nordlink, a subsea interconnector linking Germany and Norway. Therefore, when the sun is not shining, and the wind is not blowing, Suedlink can distribute energy from hydroelectric power generated in Norway.

Balancing wind & solar power
The climate in Northern Germany is favourable to wind farms, but in the South it favours solar generation. Therefore, depending on weather conditions and electricity demand, Suedlink will transport wind power from the north to the south, and solar power from the south to the north.

Route Description
Suedlink consists of two High Voltage Direct Current (HVDC) transmission lines between Wilster and the Grafenrheinfeld area (known as route 3) as well as Brunsbüttel and Großgartach (known as route 4). The two routes will run for the most part in parallel along the central trunk.

Germany’s Energy Transformation
Germany has a target to generate 65% of its power from renewable sources by 2030 and 80% by 2050. It also has a target to shut all nuclear reactors by 2022. The power grid needs to be significantly updated to accommodate this transition. Suedlink is the largest transmission cable in the network and, at a length of 700km, will be the longest underground power cable in the world.

‘New’ Jacobs Programme Offices
The Suedlink programme headquarters will be located in Würzburg, where central programme functions will be undertaken. In addition, the Jacobs team will establish up to 6 regional offices to coordinate the planning, design and construction services along the route.

Cable construction
Suedlink will be constructed using cable lengths of approximately 1200m. The number of trenches and the cable voltage is still to be optimised. One option is for each line (marked route 3 and 4 on the map) to have two parallel trenches, meaning four parallel trenches on the central trunk. For this option, each trench will contain 2 HVDC 320kv cables, as shown in the profile diagram below. Another option is for two trenches with each containing 2 HVDC 525kv cables.

Possible profile showing the trench and cable configuration for the 320kv variant. The exact configuration is to be confirmed.

Suedlink in numbers

- €10 billion investment
- 700km length of route
- 2,800-5600km total cable length
- 20 construction contracts
- 20,000 no. of landpoints the cable will cross
- 20 railway crossings
- 30 first and second order waterway crossings
- 65 Natura 2000 protected area crossings

Jacobs role

- Programme leadership & controls (schedule, cost, risk)
- Contract & purchasing management
- Project services (real estate, HR, IT)
- Planning coordination (approvals, design)
- Assurance (safety, environment, quality)
- Stakeholder management / support
- Land, permitting & rights of way
- Construction & logistics (coordination & supervision)

1. Depending on the planning phase these numbers are partly estimates.