

DC Round Table

## Update on ongoing and upcoming DC projects in Sweden

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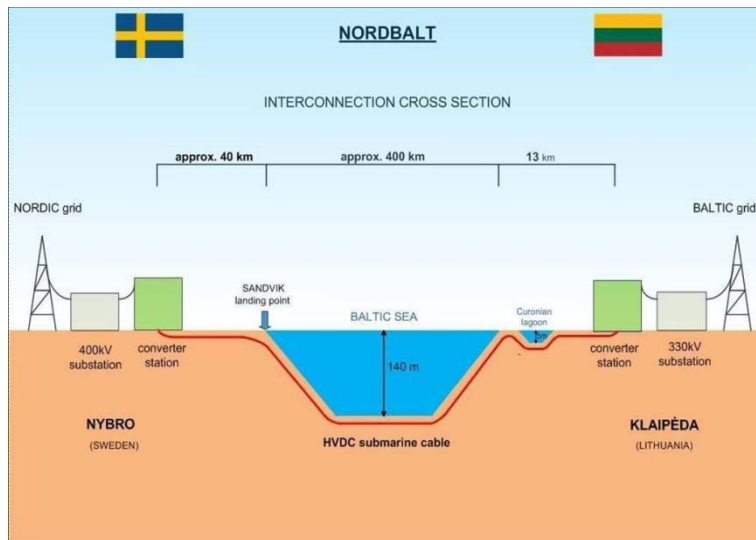
# Major DC Cable Projects in Sweden

1. Nordbalt Link (Sweden – Lithuania)
2. South - West Link
3. Gotland Links

**Extruded DC 300 kV**

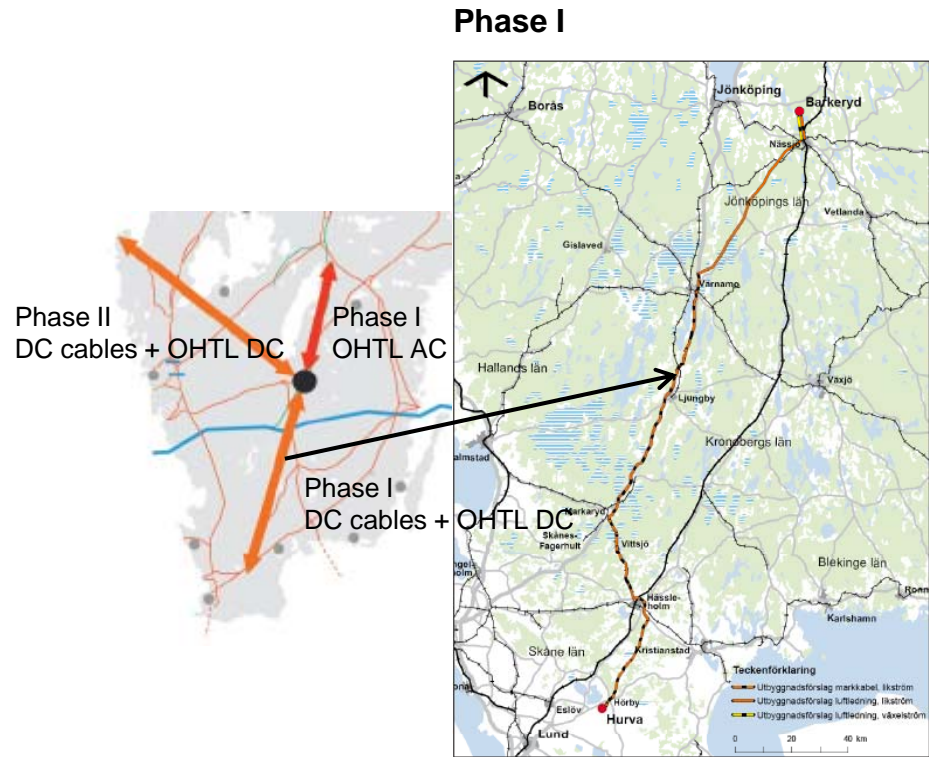


# 1) Nordbalt



- Connects the Baltic states with the Nordic countries
- 300 kV / 700 MW – extruded DC
- Conductor: 1700 Al (Submarine) and 2000 Al (Land)
- Submarine cable part: ~ 2x400 km
- 140 m water depth
- Land cable part: ~ 2x53 km
- In operation: 2015/2016
- Budget: 550 M€
- Partly financed by EU (175 M€)

## 2) South West Link (Phase I)

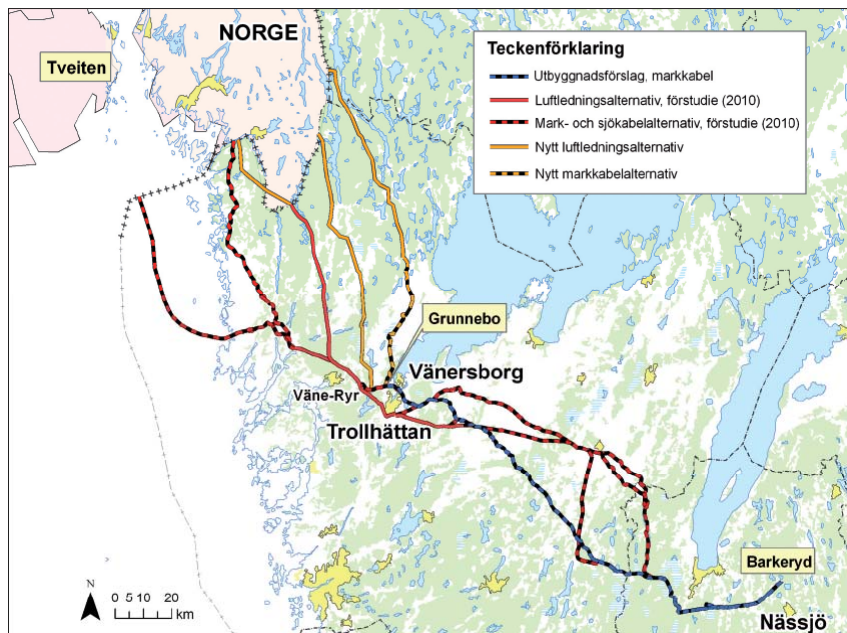


- Reinforcement of the swedish ac grid (south-north)
- 300 kV / 2x600 MW – extruded DC
- DC cables: 4x10 km +4x173 km
- OHTL DC: 63 km
- In operation: 2014/2015



## 2) South West Link (Phase II)

Phase II



- Reinforcement of the grids between Sweden-Norway (south-west)
- 300 kV / 2x600 MW – extruded DC
- Barkeryd-Trollhättan: DC cables 4x190 km
- The remaining route up to Oslo (140 – 230 km) is still under consideration
- In operation: 2016/2017

### 3) Gotland Links ( Phase I and II)



- Extension of wind power generation on Gotland – 500 MW in two phases
- 300 kV / 1x500 MW (+ 1x500 MW) – extruded DC
- The route length is 100 km including land cable part
- Phase I: In operation: 2016/2017
- Phase II: In operation 2020

## Conclusions

- Extruded DC technology is selected in combination with VSC converter technology
- The voltage level is selected to  $\pm 300$  kV
- There are plans and expectations on multi-terminal converters to create a future DC grid – the selection of voltage level is therefore important
- The yearly investment budget for SvK (Swedish TSO) will increase by a factor of 15 from the year 2000 to 2015 (40 M€ to 600 M€)