Energinet.dk HVDC Links

700 km DC Installed

(North) 50 Hz

(Central Europe) 50 Hz
Krigers Flak (ITT out soon)

- Krigers Flak (VSC - bipole)
  - Krigers Flak
    - 2 x 82 km submarine cable
      - 2 x single core extruded HVDC cable
    - 2 x 6 km underground cable
      - 2 x single core extruded HVDC cable
  - 320kV, 600 MW

**EXTRUDED BECAUSE:**

- To OWF => needs to be VSC on platform
- Requirement to magnetic deviation in danish waters => Bundled cable!
- No (1) sea joints on bundled cables
- Cheaper?
- Better delivery times
- (Alternatives allowed!!)
Cobra (OK in DK BOD)

- Connection to the Netherlands (VSC – bipole)
  - COBRAcable
    - 2 x 320 km submarine cable
    - 2 x 50 km underground cable
    - 320kV, 700 MW

EXTRUDED BECAUSE:
- Probably VSC anyway
- Requirement to magnetic deviation in danish waters => Bundled cable!
- Fewer sea joints on bunled cables
- Cheaper?
- Better delivery times
- (Alternatives allowed!!)
DK1-UK (under eval.)

- DK1 – UK (VSC - bipole)
  - DK1-UK
    - 2 x ≈600 km submarine cable
    - 2 x ≈ 50 km underground cable
    - 320kV, 700/1400 MW - Extruded?

EXTRUDED BECAUSE:
- Cable deside VSC or LCC
- Requirement to magnetic deviation in danish waters => Bundled cable!
- Fewer sea joints on bunled cables
- Cheaper – Cable
- Better delivery times
- (Alternatives allowed!!)
Extruded DC cables

What will Energinet.DK look for:

- Testing (CIGRE TB 496)
  - Development
  - Prequalification
  - Type Test
- Technical Knowledge
  - Material
  - DC fields, Space Charges
- Experience