Offshore grid connection system Borssele

Scoping Document (Notitie Reikwijdte en Detailniveau)

Den Haag, March 30, 2015

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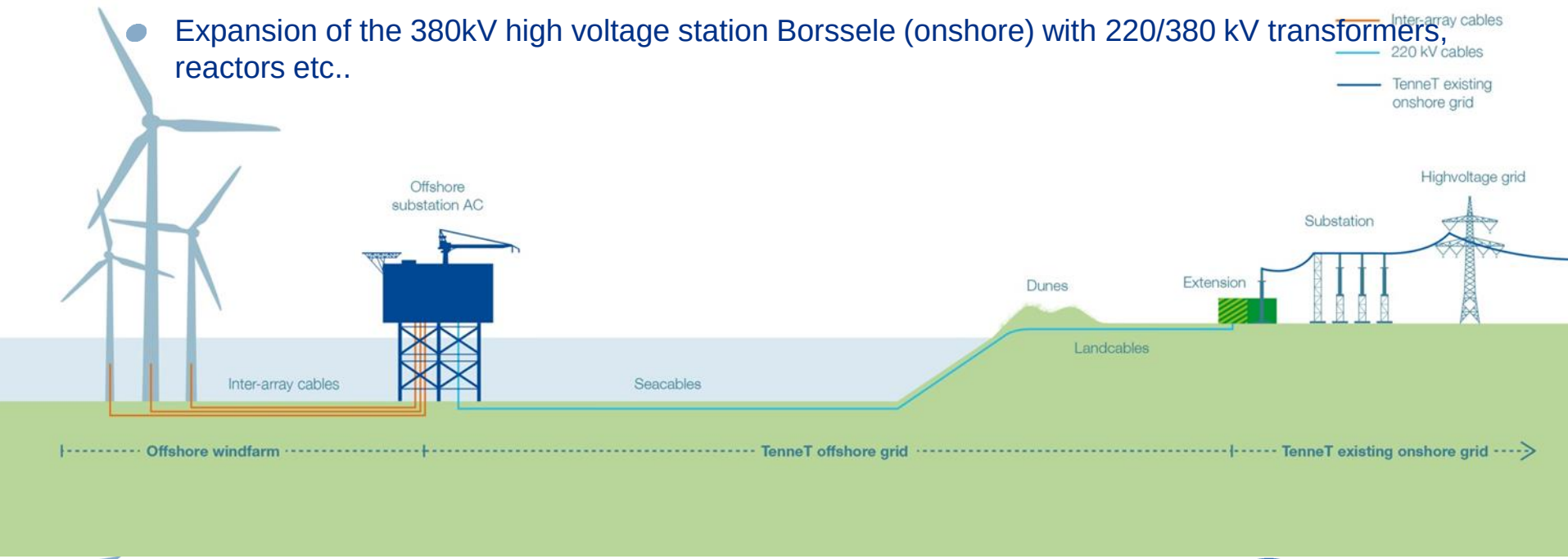
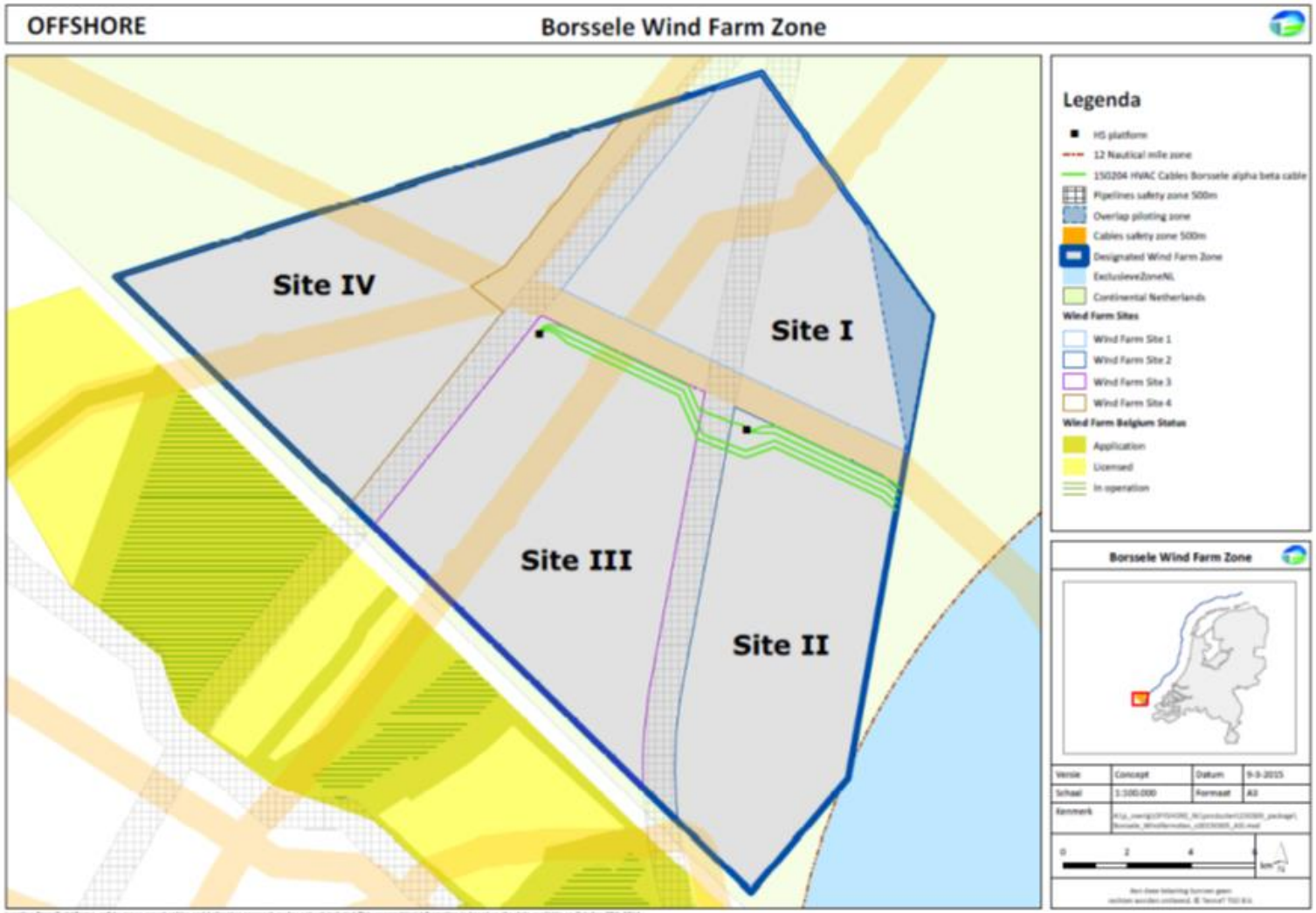
Rijkscoördinatieregeling Offshore grid Borssele

- 2 offshore platforms (AC from probably 66 kV to 220 kV) including 66 kV redundancy cable between platform Alpha and Beta;
- 4 offshore 220 kV AC offshore kabelsystems (3 phases per cable, 1 cable per system). 2 systems per platform;
- 4 onshore 220 kV AC land cable systems (1 phase per cable – 3 cables per system);
- Expansion of the 380kV high voltage station Borssele (onshore) with 220/380 kV transformers, reactors etc..



Locations of the platforms



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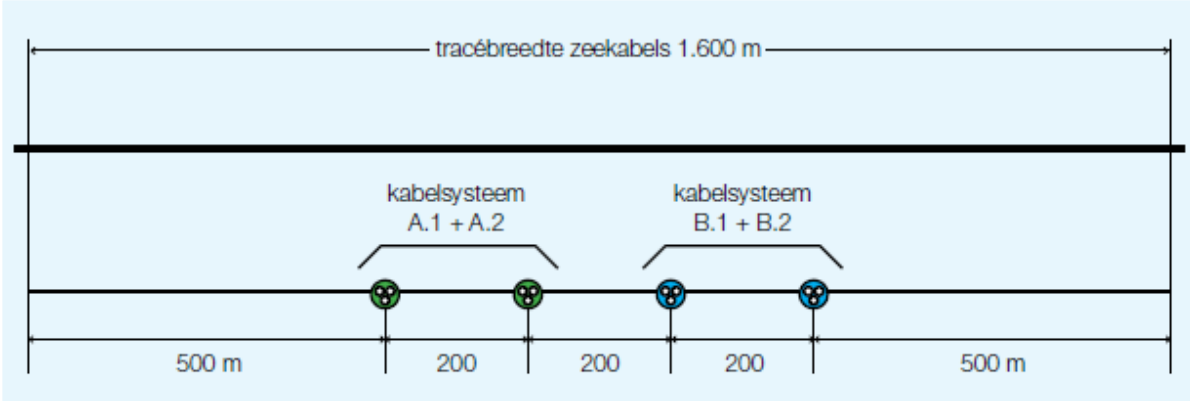
Location of the platforms

- Input from Ministry of EA and I&E, OWF's, RWS and TenneT
- Accessibility to the platforms for ships and helicopters
- Scenario based on 10 MW wind turbines
- Space for construction, installation and maintenance
- 500 meters maintenance zone around the platform
- Lowest LCoE; as short as possible inter-array cabling
- No inter-array cabling running through another Site
- Cables in the designated wind area shall be bundled

Cable corridors offshore and onshore

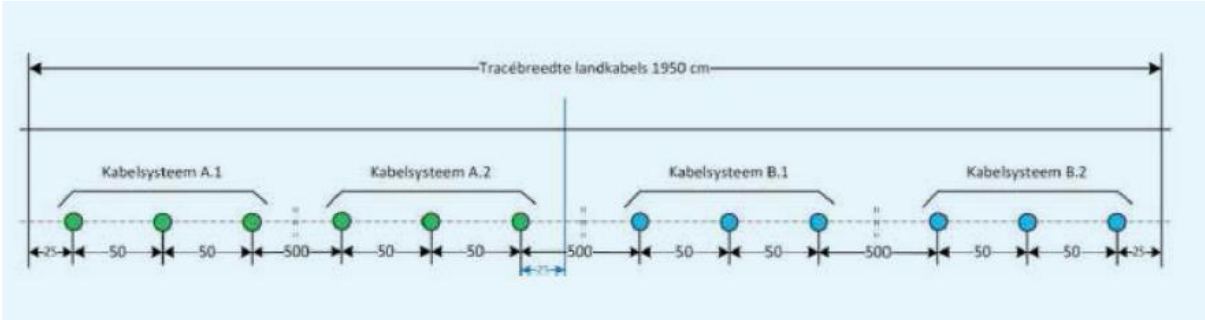
- **Offshore**

From both platforms two cables to the shore. The offshore system consists of 4 cables. The corridor width is 1600 meters.



- **Onshore**

Four underground cable systems with each three one phase cables. The corridor width is 19.5 meters.



Route screening workshops

Route workshops are held to develop a route that is supported by stakeholders

1. Defining routes based on:

- Combining existing infrastructure
- Less as possible cable crossings
- Avoid sensitive areas (residential areas, ecological network)
- Less as possible hindrance for other stakeholders
- Shortest cable route

2. Consultation of the routes

- Advantages and disadvantages of the routes

3. Short list of routes

- Based on the input of workshop 1 and workshop 2

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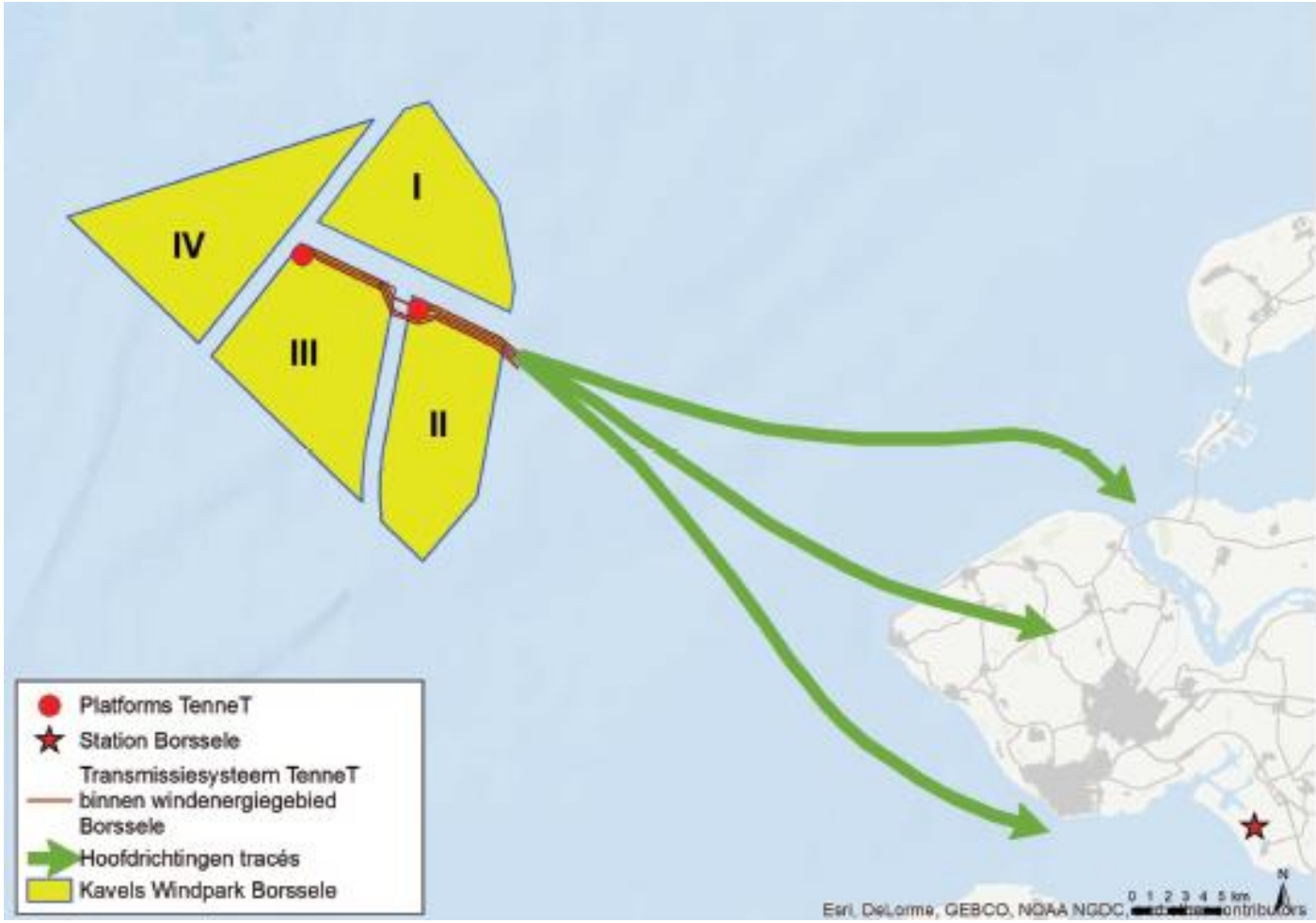
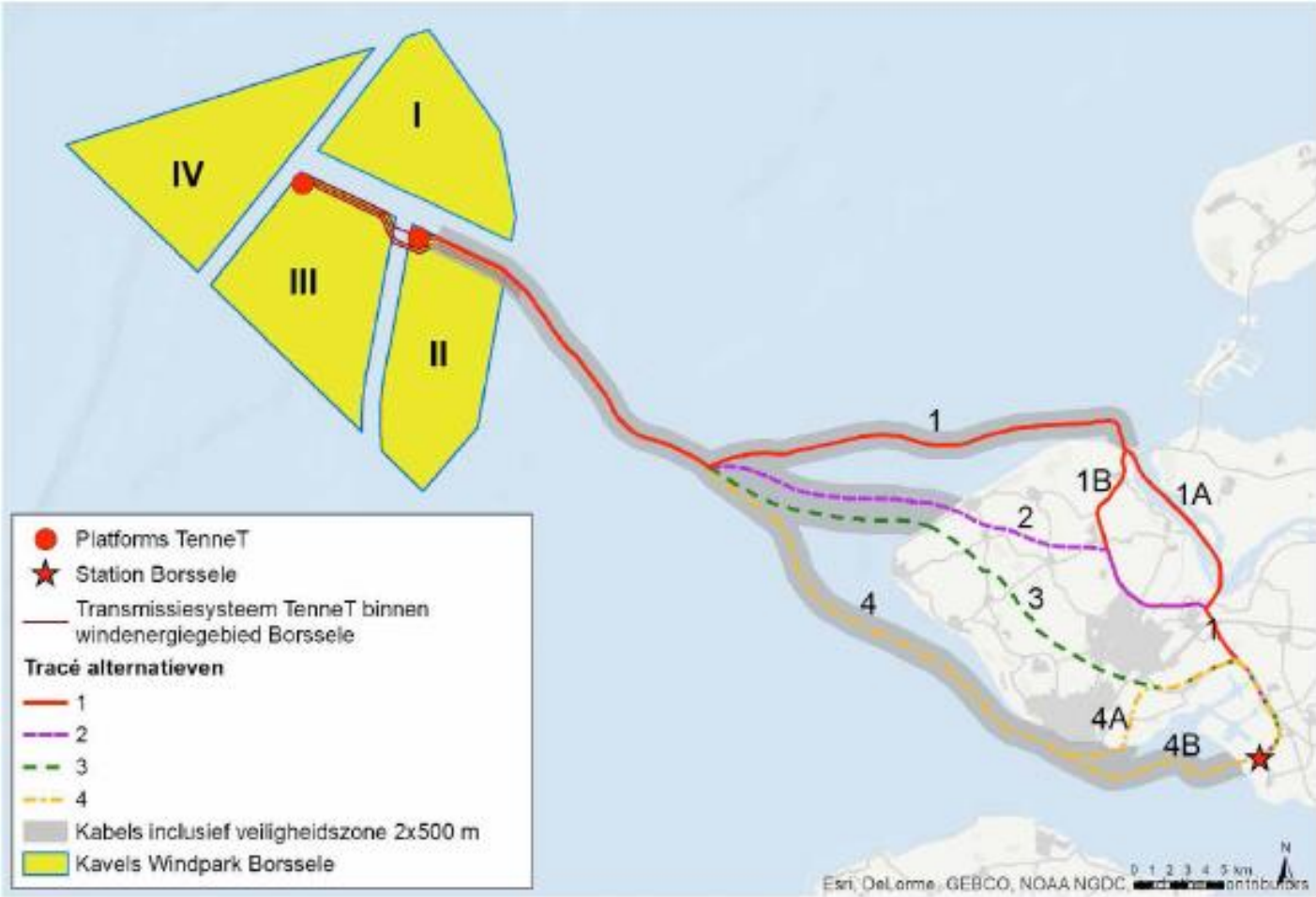
Global routes from the platforms to shore



4 route alternatives



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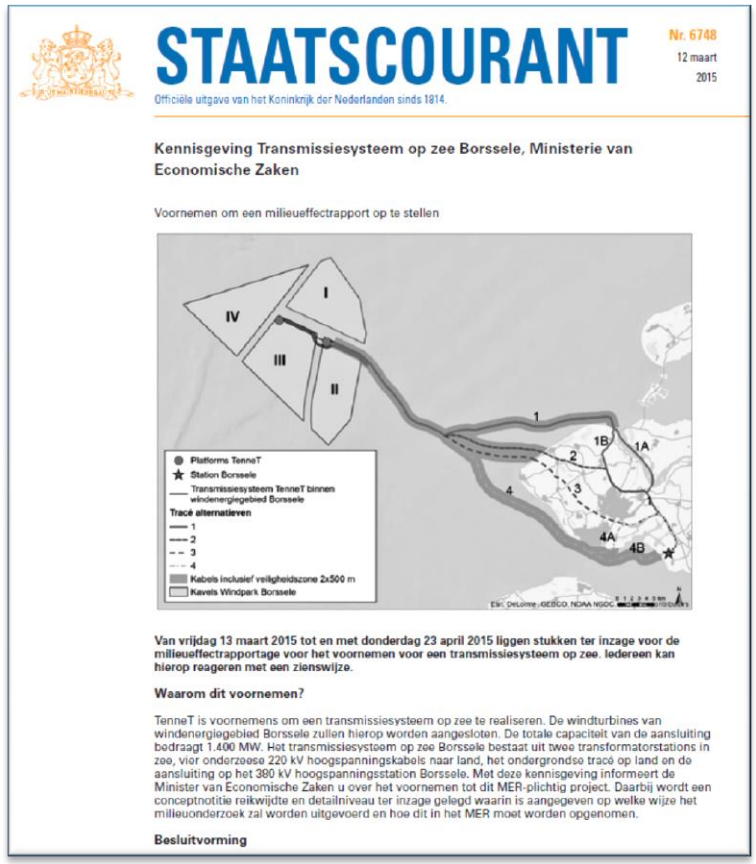
Environmental Impact Assessment

- The environmental effects of the offshore grid system Borssele are investigated in the EIA; construction, installation, maintenance and removal

- Final Scoping Document shall be published after consultation period, advice CieMER (Netherlands Commission for environmental assessment)

- Consultation reactions: www.bureau-energieprojecten.nl, Transmissiesysteem op zee Borssele



STAATSCOURANT

Nr. 6748
12 maart
2015

Officiële uitgave van het Koninkrijk der Nederlanden sinds 1814.

Kennisgeving Transmissiesysteem op zee Borssele, Ministerie van Economische Zaken

Voornemen om een milieueffectrapport op te stellen

Van vrijdag 13 maart 2015 tot en met donderdag 23 april 2015 liggen stukken ter inzage voor de milieueffectrapportage voor het voornemen voor een transmissiesysteem op zee. Iedereen kan hierop reageren met een zienswijze.

Waarom dit voornemen?

TenneT is voornemens om een transmissiesysteem op zee te realiseren. De windturbines van windenergiegebied Borssele zullen hierop worden aangesloten. De totale capaciteit van de aansluiting bedraagt 1.400 MW. Het transmissiesysteem op zee Borssele bestaat uit twee transformatorstations in zee, vier onderzeese 220 kV hoogspanningskabels naar land, het ondergrondse tracé op land en de aansluiting op het 380 kV hoogspanningsstation Borssele. Met deze kennisgeving informeert de Minister van Economische Zaken u over het voornemen tot dit MER-plichtig project. Daarbij wordt een conceptnotitie reikwijdte en detailniveau ter inzage gelegd waarin is aangegeven op welke wijze het milieuonderzoek zal worden uitgevoerd en hoe dit in het MER moet worden opgenomen.

Besluitvorming

- Publication period of 6 weeks: March 13 – April 23

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Next steps? Definition of the preferred alternative (voorkeursalternatief VKA)

- Input of the route workshops led to 4 alternative routes
- Environmental impact assessment of the routes (EIA)

- Preferred alternative will be decided upon, based on:
  - Environmental Impact Assessment
  - Economic aspects (costs)
  - Technical feasibility (available techniques, time)
  - Other social considerations (support)

- The preferred alternative shall be included in the Draft-Spatial Plan
- Final route in Spatial Plan after appeal

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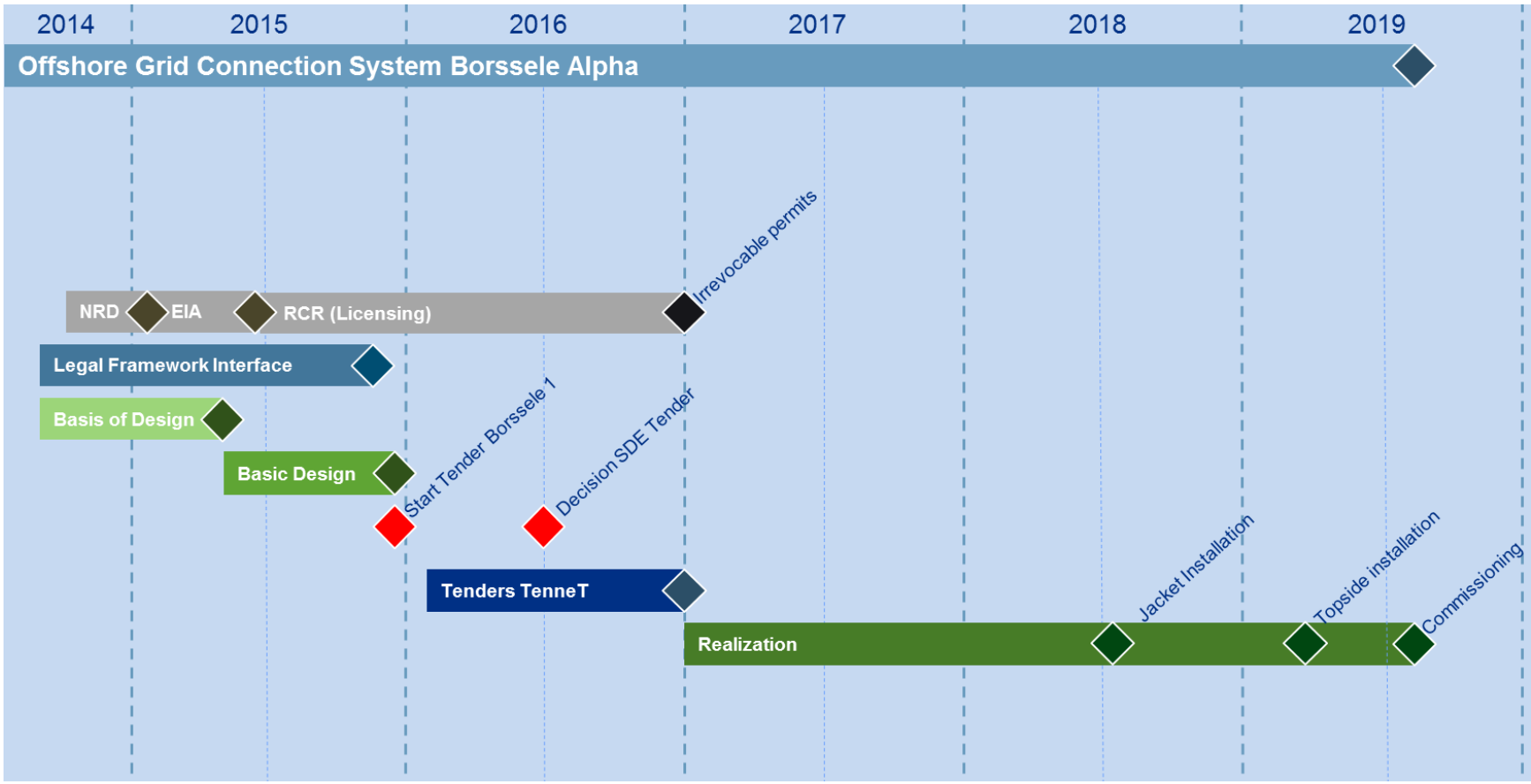
Planning Spatial planning and licensing

- Publication period of 6 weeks: March 13 – April 23
- EIA: February – September
- Publication of draft permits and spatial plan: Dec 2015
- Irrevocable permits and spatial plan: Q4 2016

Planning Borssele Alpha



TenneT is de eerste grensoverschrijdende elektriciteitstransporteur van Europa. Met 20.000 kilometer aan hoogspannings-verbindingen en 36 miljoen eindgebruikers in Nederland en Duitsland behoren we tot de top 5 elektriciteitstransporteurs van Europa. Onze focus is gericht op de ontwikkeling van een Noordwest-Europese energiemarkt en op de integratie van duurzame energie.

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www.tennet.eu

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