Update
Offshore Grid

Saskia Jaarsma

TENNET

TSO TenneT - Wind Farm Zones update
(27 October 2020)

Hollandse Kust (zuid)
2x 700MW, AC

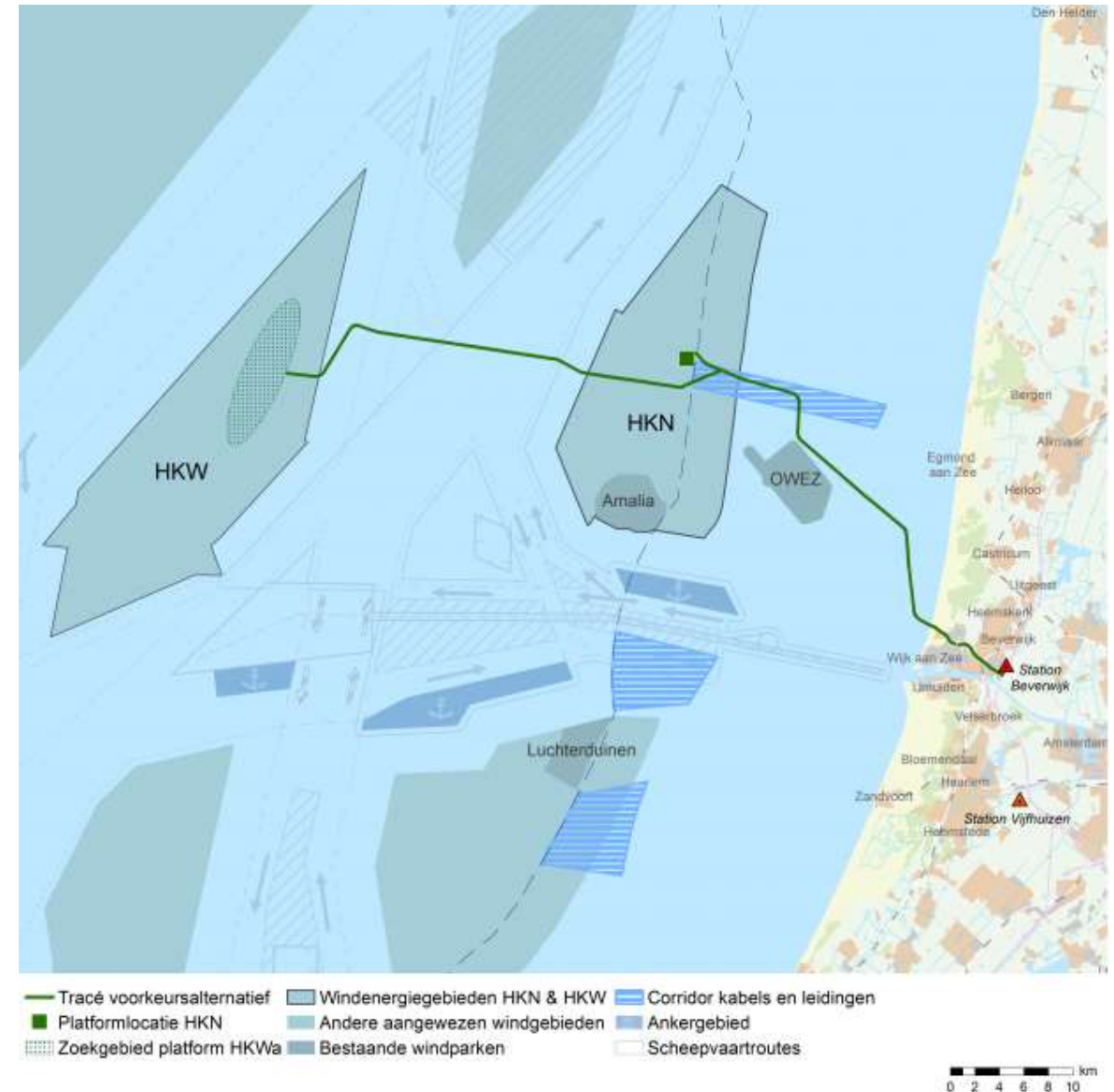# Hollandse Kust (noord)
700MW, AC

- Irrevocable permits for HKN and HKW Alpha obtained 13 May 2020

- Local stakeholders remain concerned

- Information centre open end of 2020

- Contracts awarded:
    - Platform HKN/HKWa/HKWb: Engie-Fabricom Iemants
    - Seacable HKN/HKWa: Jan de Nul LS
    - Landcable HKN/HKWa: NRG and TAIHAN
    - Landstation engineering: Movares
    - Landstation prepatory works: KWS

- COVID19: until now minimal impact

- Delivery date: 31 March 2023

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Hollandse Kust (west)
Alpha: 700MW, AC

- Project HKN and HKWa are organised in one team – minimises impact on stakeholders

- Permits irrevocable, contracts in place

- Platform HKW Alpha will be called off Q4 2020 according to schedule with the delivery date of 31 March 2024

Legend:
— Tracé voorkeursalternatief
■ Platformlocatie HKN
▦ Zoekgebied platform HKWa
Windenergiegebieden HKN & HKW
Andere aangewezen windgebieden
Bestaande windparken
Corridor kabels en leidingen
Ankergebied
Scheepvaartroutes

km
0 2 4 6 8 10

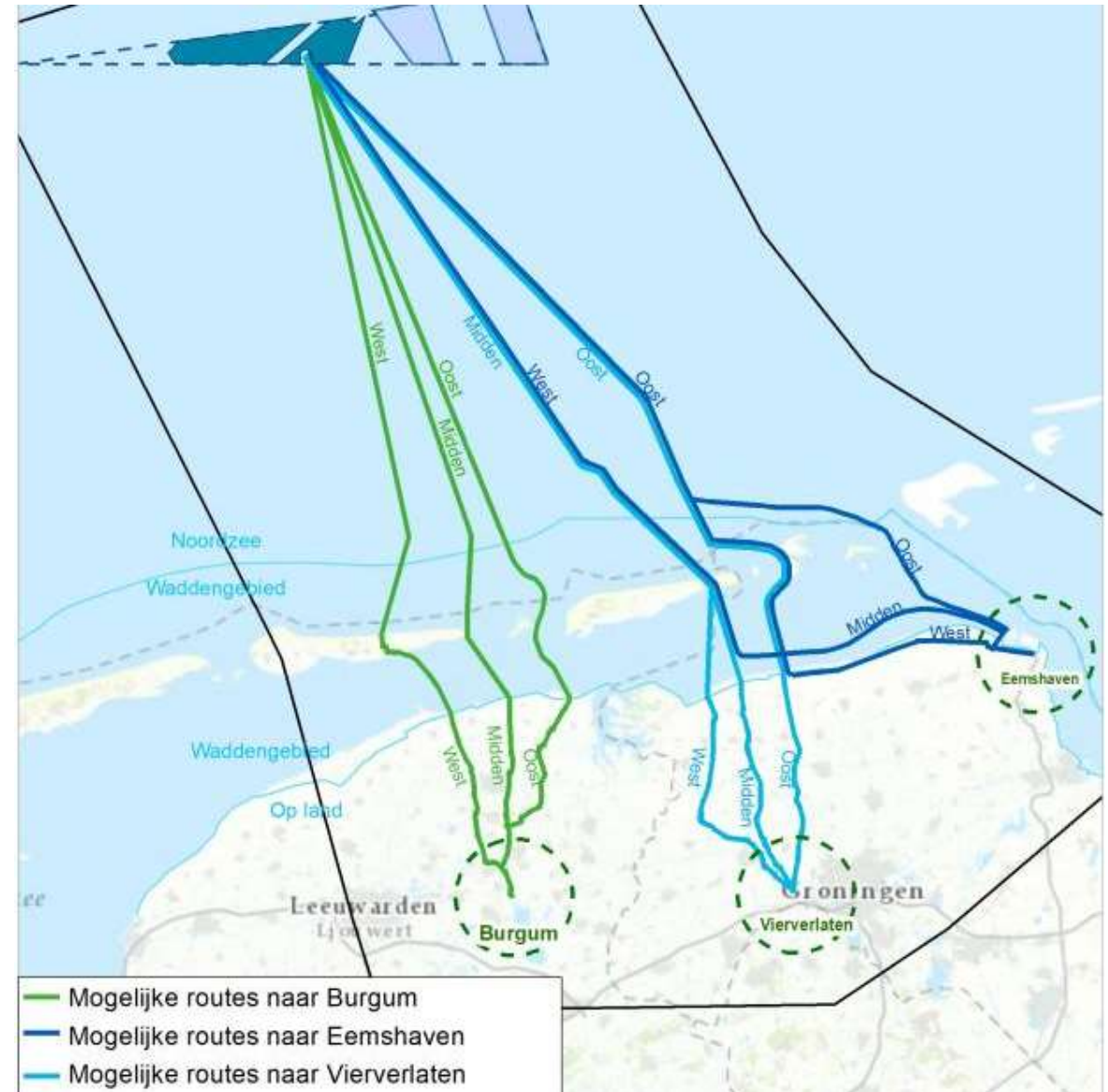TenneT

Hollandse Kust (west)
Beta: 700MW, AC

- Project HKWb and Ten Noorden van de Waddeneilanden are organised in one TenneT project team

- Preferred alternative chosen by MinEAC

- Delivery date Q1 2026

- Stay informed:
 https://www.netopzee.eu/hollandsekustwestbeta/
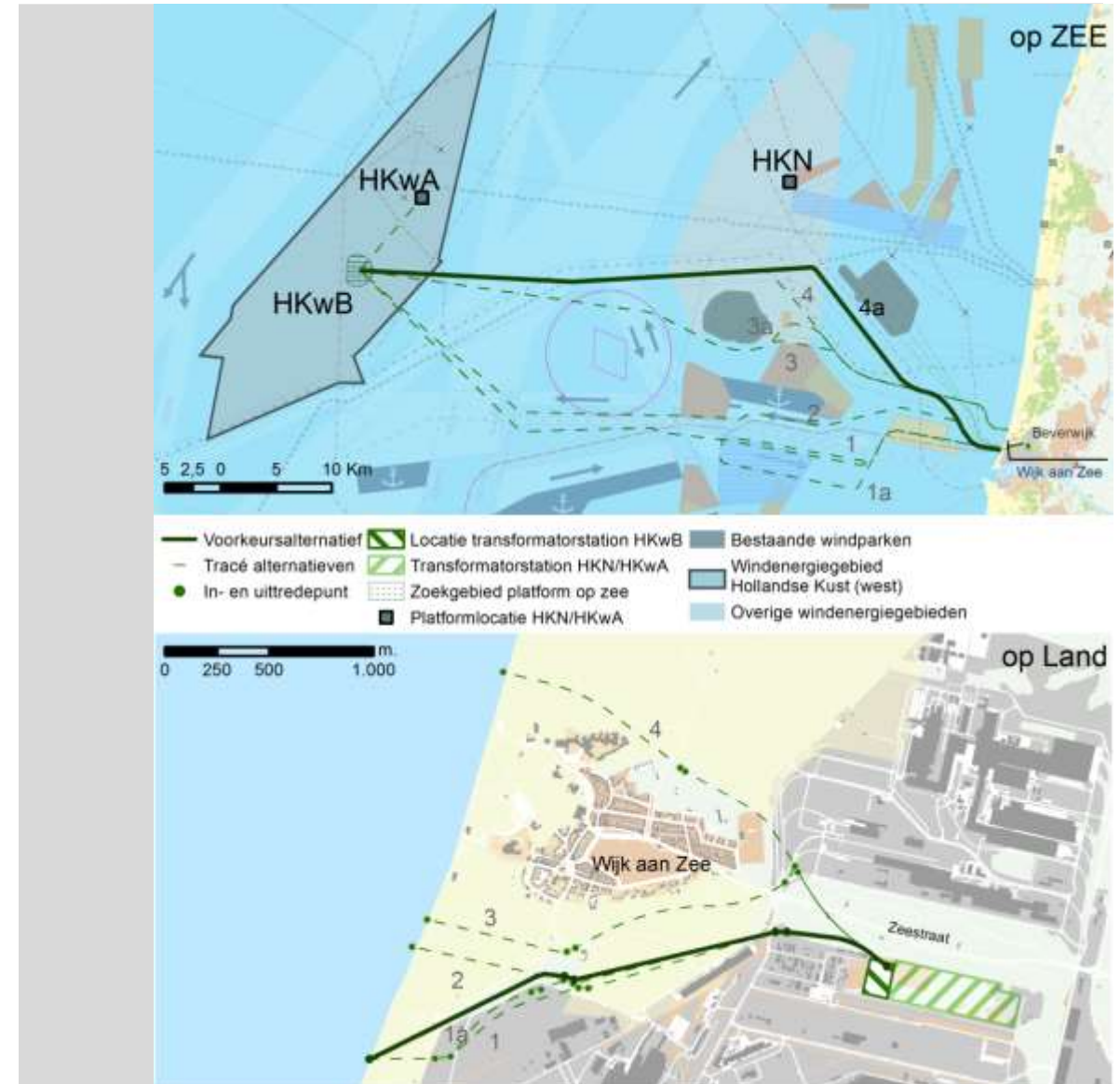
Ten Noorden van de Waddeneilanden

- 700 MW, AC

- Preferred alternative expected Q4 2020
  - Regional advice: Eemshaven-West

- Delivery date Q1 2027

- Stay informed:
  https://www.netopzee.eu/tennoordenvandewaddeneilanden/

— Mogelijke routes naar Burgum
— Mogelijke routes naar Eemshaven
— Mogelijke routes naar Vierverlaten
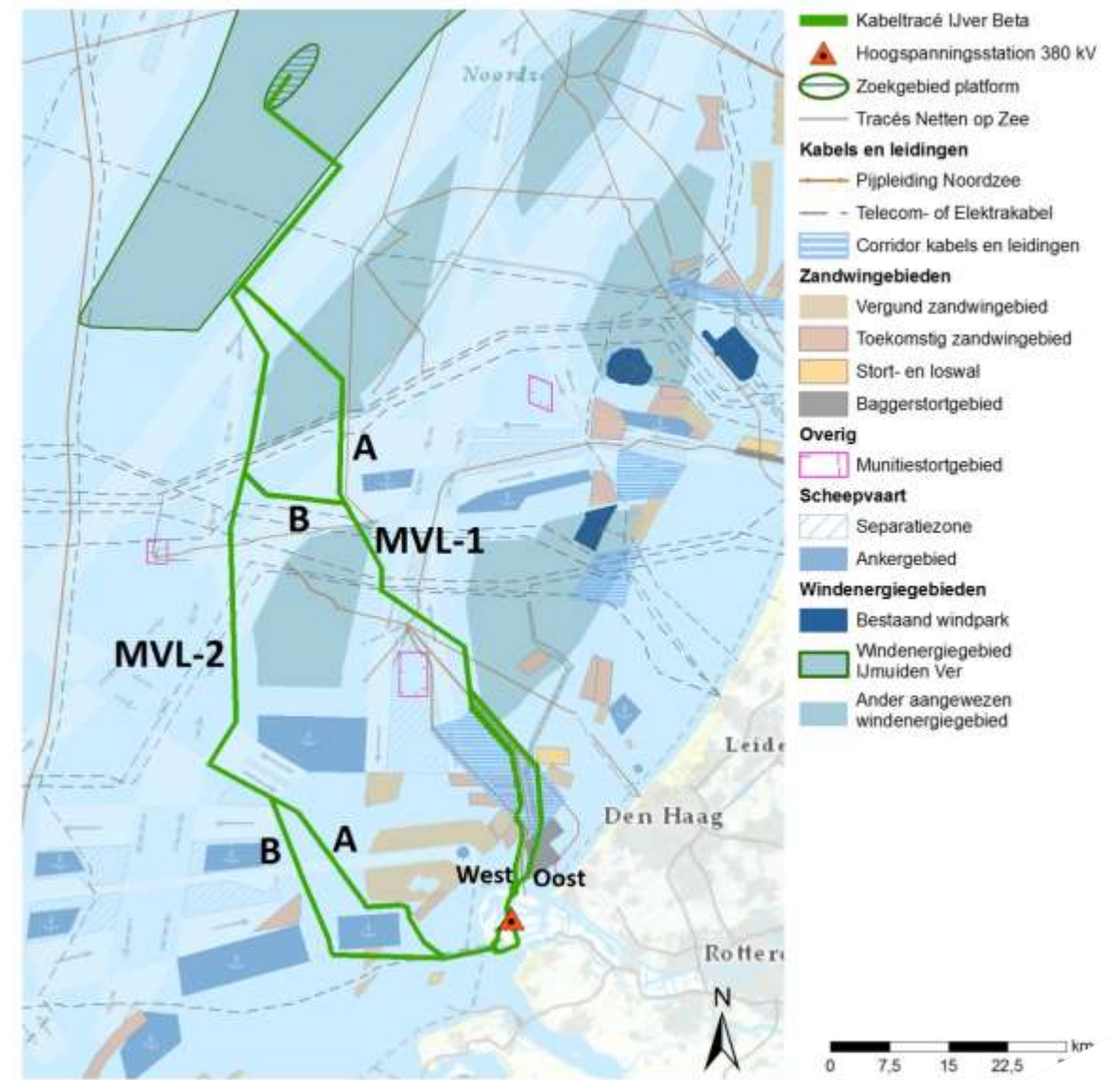
C1 - Public Information

IJmuiden Ver Alpha, 2GW HVDC

- Integrated Effect Analysis (IEA) including Environmental Impact Assessment (EIA) has been published before summer
  - 34 reactions including an advice by Rijkswaterstaat (BSL-2)

- 3 regional advices:
  - Zeeland: Borssele Veerse Meer (BSL-2)
  - Zuid-Holland: Borssele Veerse Meer (BSL-2)
  - Noord-Brabant: Geertruidenberg (GT-1)

- Choice of preferred alternative by MinEAC expected end of November 2020

- Planning: Draft permits and draft spatial plan for consultation end 2021

C1 - Public Information
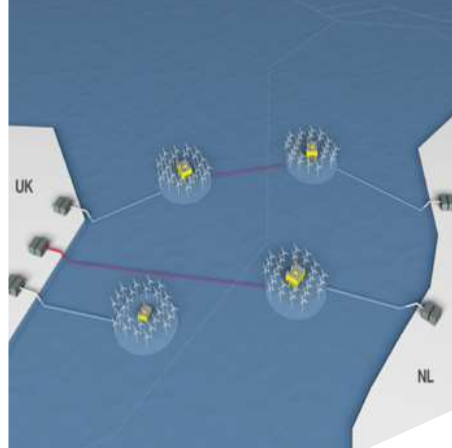
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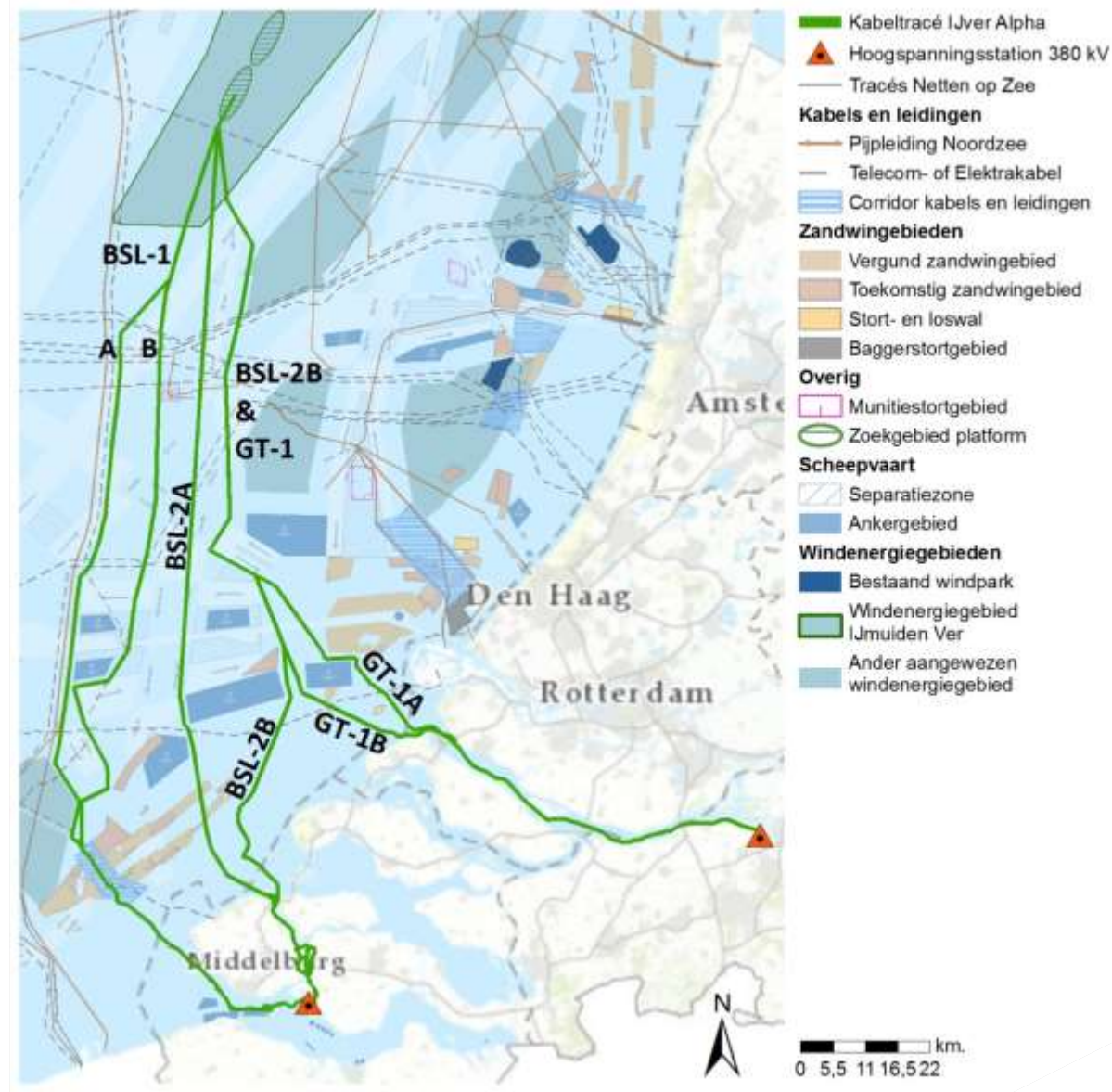
IJmuiden Ver Beta, 2GW HVDC

- Integrated Effect Analysis (IEA) including Environmental Impact Assessment (EIA) has been published before summer

- Grid connection at Simonshaven is no longer an option

- Landing and grid connection will be at the Maasvlakte, in line with regional advice

- Choice of preferred alternative by MinEAC expected end of November

- Planning: Draft permits and draft spatial plan for consultation end 2021

Legend:
- Kabeltracé IJver Beta
- Hoogspanningsstation 380 kV
- Zoekgebied platform
- Tracés Netten op Zee

Kabels en leidingen
- Pijpleiding Noordzee
- Telecom- of Elektrakabel
- Corridor kabels en leidingen

Zandwingebieden
- Vergund zandwingebied
- Toekomstig zandwingebied
- Stort- en loswal
- Baggerstortgebied

Overig
- Munitiestortgebied

Scheepvaart
- Separatiezone
- Ankergebied

Windenergiegebieden
- Bestaand windpark
- Windenergiegebied IJmuiden Ver
- Ander aangewezen windenergiegebied

Offshore Wind beyond 2030

Future and innovations

Wind connectors

Platform or island

Connecting oil and gas rigs

Co-use of wind areas

North Sea Wind Power Hub

Modular hub-and-spoke concept

- Combining connection of offshore wind farms with interconnection between North Sea countries

- A strong offshore connected grid reduces onshore congestion and need for grid reinforcements

- Significant seasonal storage will be required for the North Sea countries towards 2050.

- Power-to-Gas will be needed in the future to address seasonal storage, balancing and long distance energy transport

- NSWPH has been awarded €14 million EU funding from the Connecting Europe Facility

Electricity connection point

H2 connection point

P2X conversion

Gas to power conversion

Electricity connection

H2 connection

End User

POWERED BY   ENERGINET   TenneT   gasunie

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More information?

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Webinar 27 October 2020

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