

A photograph of an offshore wind farm with several white wind turbines on yellow foundations in a blue sea under a clear sky. The image is framed by large orange arrow shapes on the left and right sides.

wind &
water
works

Update offshore grid development

Saskia Jaarsma, TenneT

TenneT at a glance

- > Europe's first cross-border electricity grid operator
- > Top five grid operator in Europe
- > 100% state-owned
- > 22,500 km high-voltage lines
- > 41 million end-users
- > ~4000 employees
- > Asset base: EUR 20.2 bn
- > Projected >25 bn investment program for the next 10 years
- > 99,99% security of supply

Net op zee in stappen



- Energieakkoord 2013
- 5 x 700 MW = 3,5 GW
- Gestandaardiseerd concept
- AC verbindingen

| | | |
|------|--------|-----------------------------|
| 2019 | 700 MW | Borssele Alpha |
| 2020 | 700 MW | Borssele Beta |
| 2021 | 700 MW | Hollandse Kust (zuid) Alpha |
| 2022 | 700 MW | Hollandse Kust (zuid) Beta |
| 2023 | 700 MW | Hollandse Kust (noord) |



- Routekaart windenergie op zee 2030
- Additioneel 6,1 GW
- 700 MW AC (standaard)
- Nieuw: 2000 MW HVDC voor IJmuiden Ver
- Windconnector VK: studie naar mogelijkheden

| | | |
|---------|--------|--|
| 2024/25 | 1,4 GW | Hollandse Kust (west) Alpha en (west) Beta |
| 2026 | 0,7 GW | Ten noorden van de Waddeneilanden |
| 2027/29 | 4,0 GW | IJmuiden Ver Alpha en Beta |

Borssele

Recent milestones:

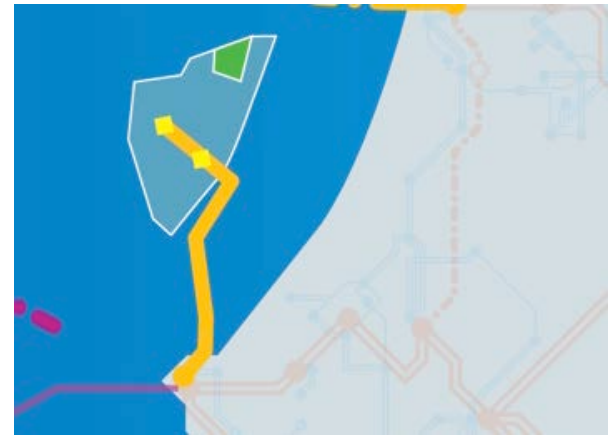
- > BSA: Grid Readiness achieved 23 August 2019, delivered within time and budget
- > BSB: Construction on schedule; cable pull-in on jacket completed
- > [Virtual Reality tour](#)



Hollandse Kust (zuid)

Recent milestones:

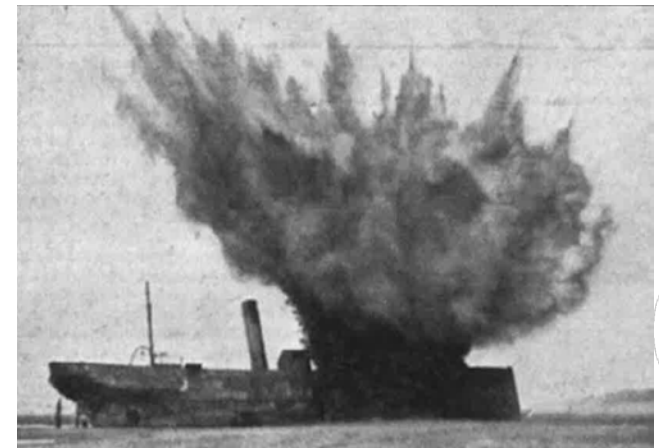
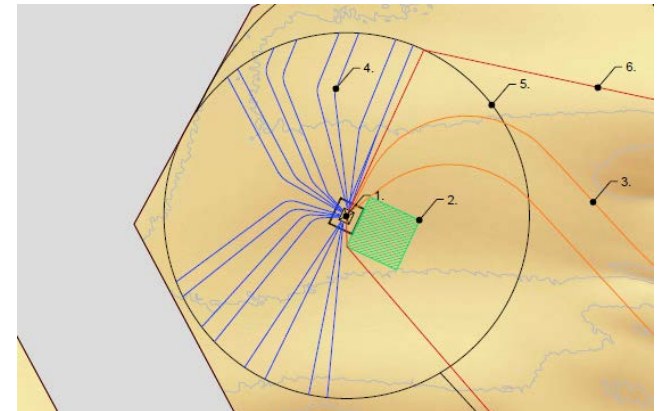
- > First steel cut jacket Alpha
- > Start HDD Yangtze for 220 kV cables
- > Platform and 220 kV cables Beta awarded



Hollandse Kust (noord) and Hollandse Kust (west)

Recent milestones:

- > HKN permits impacted by PAS
- > Beach landing 220 kV cables
- > TenneT tenders on schedule
- > Model agreements and technical requirements are being prepared prior to HKN wind tender



Questions?
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