

Update on offshore Wind in the Netherlands

- ☐ Geophysical conditions
- ☐ Regulatory framework

Optional

- ☐ Rollout status
- ☐ Auction design

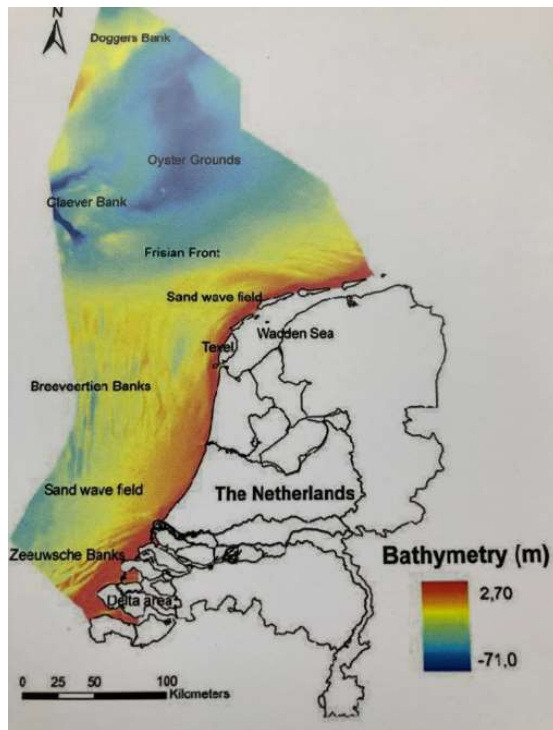
Menno Hofstra
Netherlands Enterprise Agency (RVO)
Ministry of Economic Affairs and Climate Policy

Sweden, Stockholm, 28 May 2024

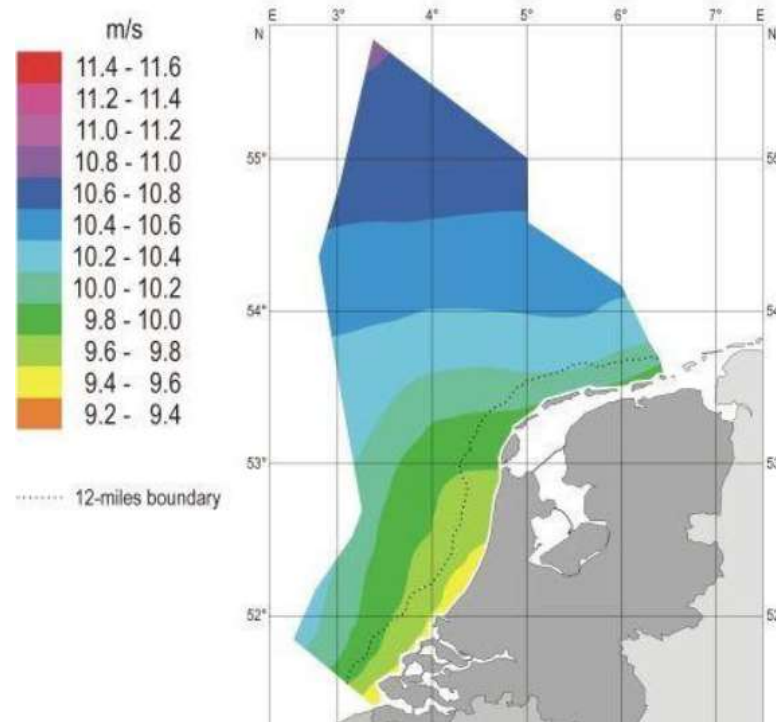


1. Geophysical conditions for offshore wind

Shallow (20 – 40 m.)
waters, sandy seabeds



8+ m./sec. wind speeds on average at
90 meters



Among busiest seas
worldwide



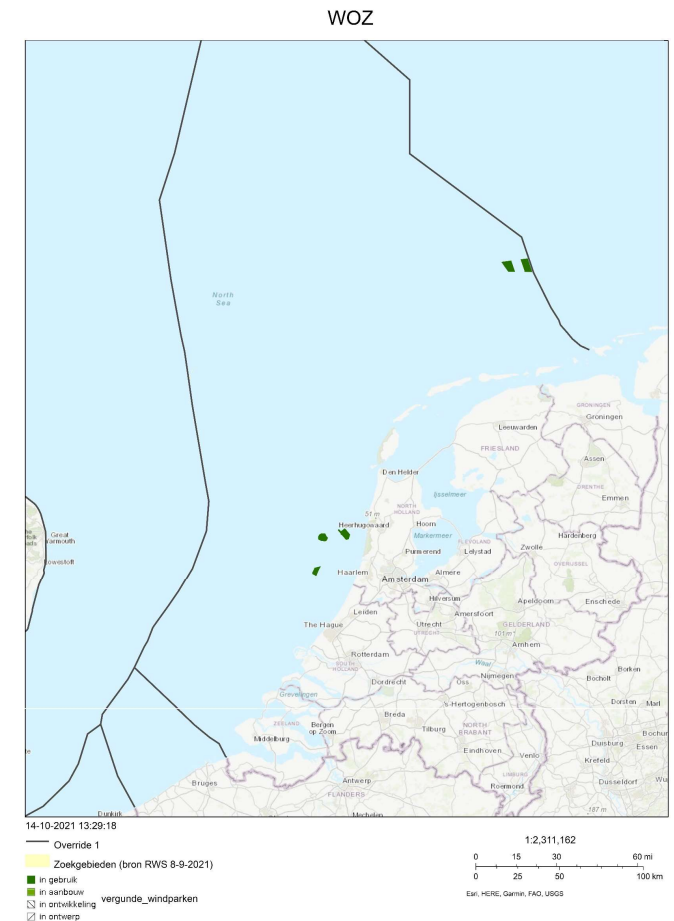
Development of regulatory framework

Reactive policy approach until 2013

- No spatial plan, no legal strategy → developer to:
 - pick the sites, apply for permit and subsidy
 - do site research, EIA, grid connection
- Disappointing: developer interest, but no confidence
 - 80 applications → 12 permits → 4 offshore windfarms (1 GW)

Turning point 2013: Energy Agreement

- Crafted by Social and Economic Council of the Netherlands (SER)
 - multi-stakeholder advisory platform for NL government, parliament
 - political, business, labor unions, environmental groups etc
- Comprehensive agreement: RE, savings, grid invest, job creation, etc
- Offshore wind: more **proactive, supportive** policy approach
 - Next slide



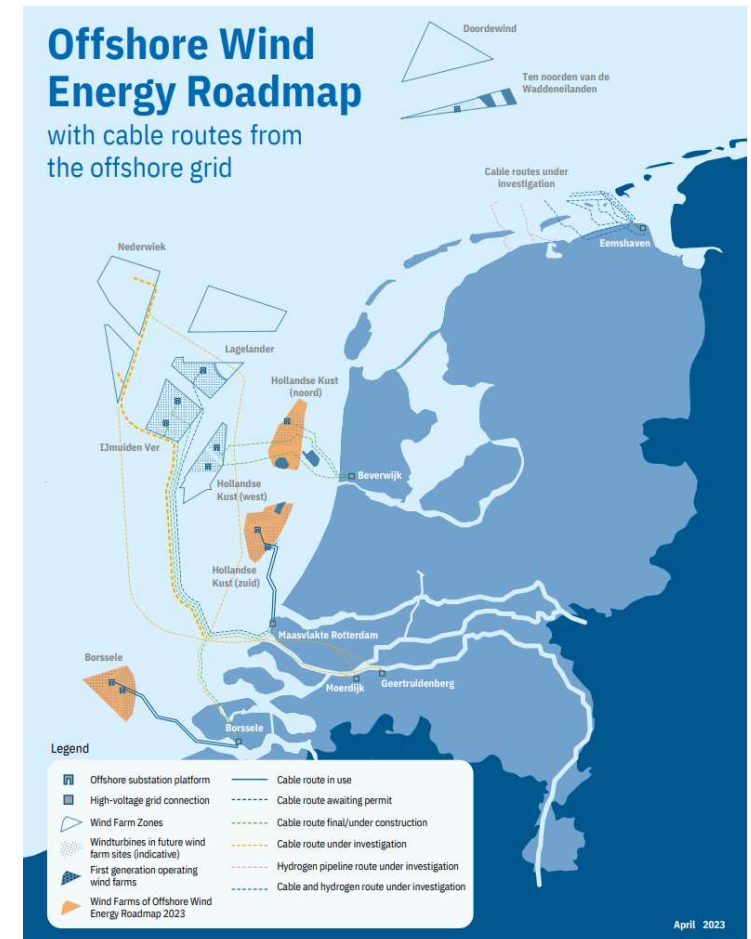
Current regulatory framework

1. Proactive: government-defined projects (see figure)

- a. predesignated zones, preselected sites
- b. multi-annual tender schemes ('roadmaps')

2. Supportive: centralized approach (one-stop-shop)

- a. Permitting executed by RWS
 - EIA done, refund winning by developer
- b. Site investigations executed by RVO
 - DNV certified, refund by winning developer
- c. Grid connection executed by TSO Tennet
 - standardized transmission assets, on-time delivery
- d. Developer contact by RVO
 - tender: concession and offtake auction in one
 - no local content, merely non-price based



Conclusion 1st OW Roadmap (2023)

4.7 GW installed capacity

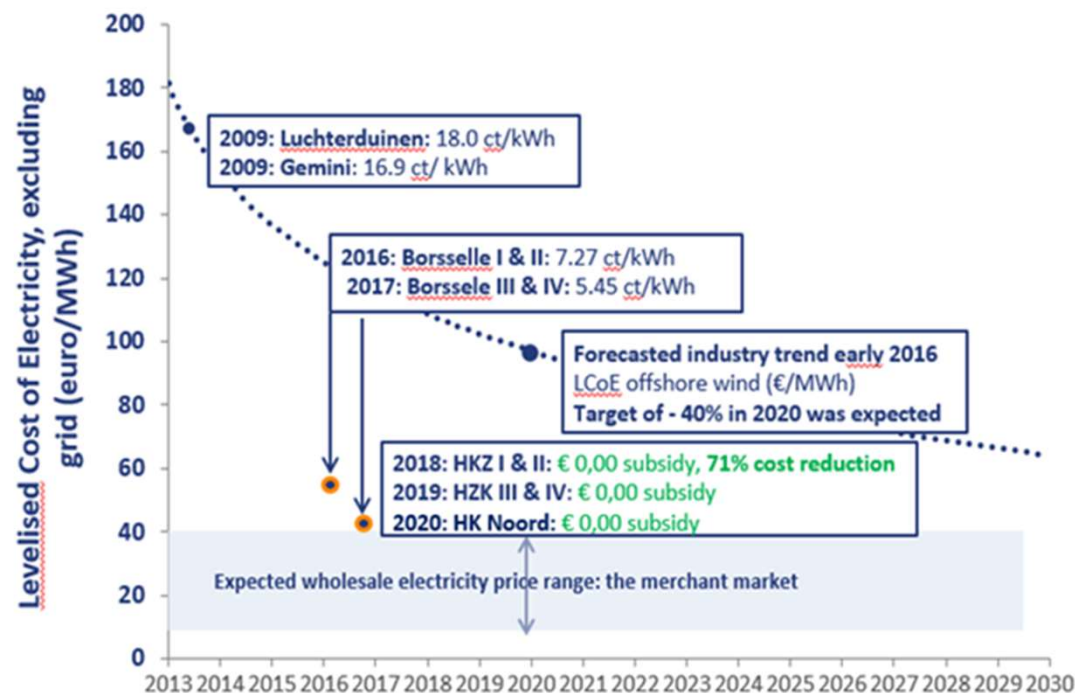
- Target: 4.5 GW in 2023
- 5 successful tenders, 3.7 GW in total
 - = approx. 16% NL electr. demand
 - from 1 GW (2013) to 4.7 GW in 2023

71% LCoE reduction 2013 - 2018

- Ruling by NL Legal Court of Audit
- Cost price 15 cents/kWh in 2013 (reference price)
- Cost price 4.4 cents/kWh in 2018 (HKZ)
- 2018 – today: no subsidies
 - from emerging to merchant market

Reduced project lead times

- 3 - 4 years (was 7-10 years)
 - from tender to commissioning/ operation



More information

Dutch Offshore Wind Innovation Guide 2024



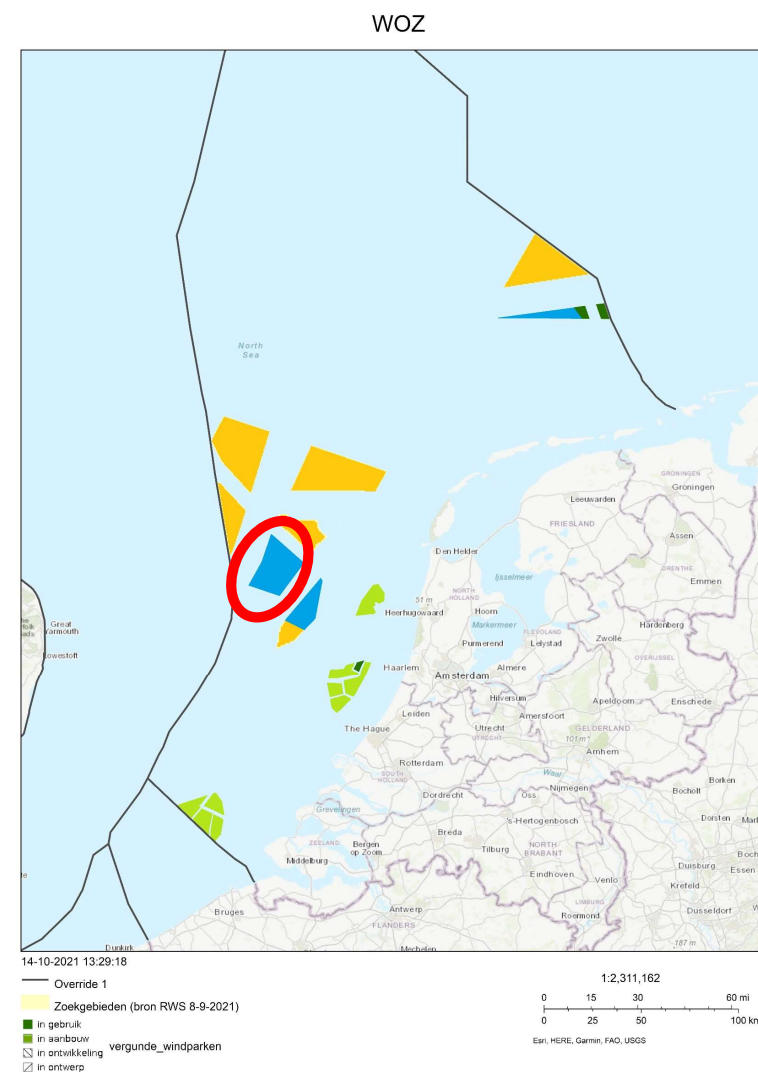
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<https://www.windandwaterworks.nl>



Challenge: how to accelerate OW rollout towards 2030 (2032)

2016 – 2024: 4.5 GW	GW	Tender	Operational
Borssele I + II (20 km)	0.75	2016	2020
Borssele III + IV (20 km)	0.75	2016	2020
Hollandse Kust (zuid) I + II (20 km)	0.76	2017	2023
Hollandse Kust (zuid) III + IV (20 km)	0.76	2019	2023
Hollandse Kust (noord) V (20 km)	0.76	2020	2023
2024 – 2029: 11 GW	GW	Tender	Operational
Hollandse Kust (west) VI + VII (50 km)	1.5	2022	2026
IJmuiden Ver Alpha (60 km)	2.0	2024	2029
IJmuiden Ver Beta (60 km)	2.0	2024	2029
IJmuiden Ver Gamma (60 km)	2.0	2025	2031
2031+ 21 GW	GW	Tender	Operational
Hollandse Kust (west) VIII (Tata Steel)	0,7	tbd	(2031)
Ten Noorden van Waddeneilanden I	0,7	2027	2033
Nederwiek (zuid) I	2.0	2025	2030
Nederwiek (noord) II + III	4.0	2026	2031 / 2032
Doordewind I	2.0	2027	2032
Total target: approx. 21 GW (in 2032)			



RVO
De informatie in deze kaart is nog in ontwikkeling en enkel intern te gebruiken voor EZ en RVO.

IJmuiden Ver area: site Alpha, site Beta (2 x 2 GW)

Comparative assessment, with financial bid

- Reward model: predefined criteria, max. score 400 points
- Limited auction: max. 60 points (15%)
- Business feasibility: 140 points (35%)
 - Construction guarantee within 4 years (10%)
 - Contribution to energy supply (10%)
 - Bidding price, annual fee (15%)
- Social benefits: 80 points (20%)
 - International Responsible Business Conduct (10%)
 - Circularity (10%)
- Innovation focus: 180 points (45%)
 - Site Alpha: (sub)marine biodiversity (45%)
 - Site Beta: onshore electrification, storage (35%), floating solar 50 MWp (5%), no harbor porpoise disturbance (5%)

