



Meeting tender Borssele December 2015

15 December 2014

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Ministry of Economic Affairs



Welcome

Content 5th meeting 15th December:

- Progress made so far (quick overview)
- SDE+ subsidy scheme
- Technical Project Description

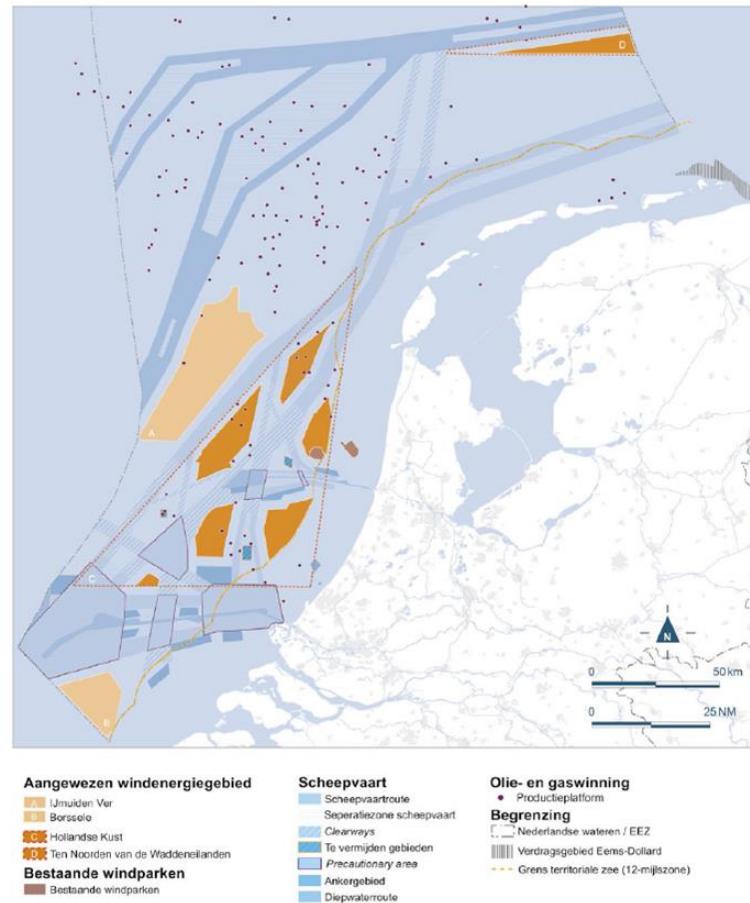
Logistics today

- 12.30 plenary presentations
- 13.45 parallel workshops
- 15.30 report workshops
- 16.30 informal reception



Progress roadmap Offshore wind energy (1)

- September windenergy areas for the Holland Coast area and the area north of the Wadden Islands were officially designated wind farm zones
- December consultation draft National Waterplan 2, e.g. policies for shippinglanes, ecology, mining and probably acces to windfarms for small ships all with respect to offshore wind farms





Progress roadmap Offshore wind energy (2)

September

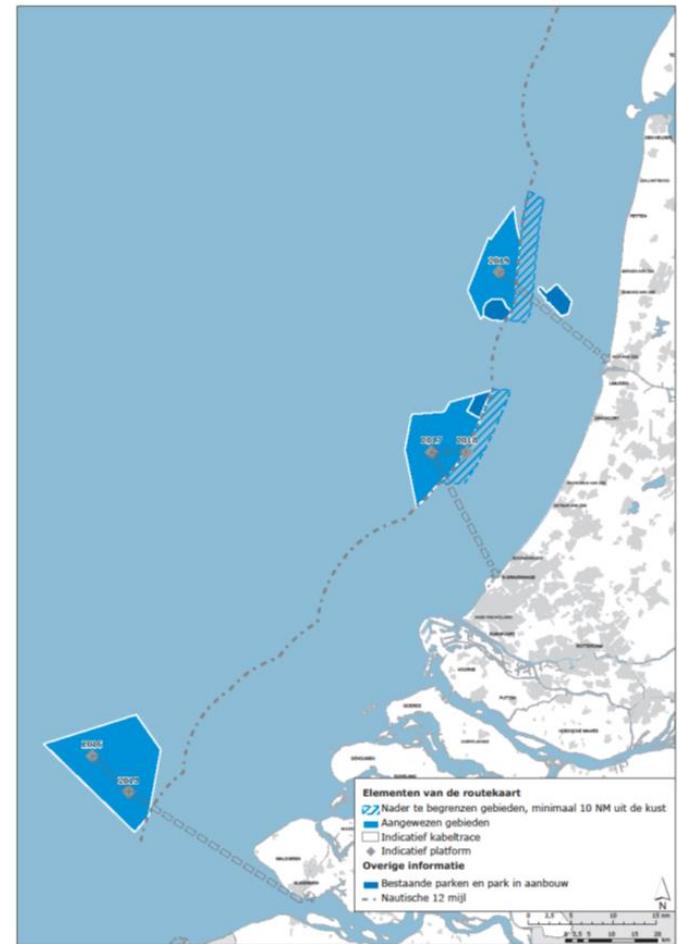
2015: $2 \times 350 = 700$ MW Borssele

2016: $2 \times 350 = 700$ MW Borssele

2017: $2 \times 350 = 700$ MW Zuid-Holland

2018: $2 \times 350 = 700$ MW Zuid-Holland

2019: $2 \times 350 = 700$ MW Noord-Holland





Progress offshore wind energy bill / general rules

1. March internet consultation offshore wind energy bill → wind farm site decision and prepare offshore grid
2. September internet consultation general rules
3. 16th of October bill to House of Representatives of the Netherlands
4. This month Ministers answer questions of representatives
5. February 2015: internet consultation (small) ministerial regulation offshore wind energy
6. All into force: 1th of July 2015

Tweede Kamer der Staten-Generaal

2

Vergaderjaar 2014–2015

34 058

Regels omtrent windenergie op zee (Wet windenergie op zee)

Nr. 1

KONINKLIJKE BOODSCHAP

Aan de Tweede Kamer der Staten-Generaal

Wij bieden U hiernevens ter overweging aan een voorstel van wet houdende regels omtrent windenergie op zee (Wet windenergie op zee). De memoria van toelichting, die het wetsvoorstel vergezelt, bevat de gronden waarop het rust.

En hiermede bevelen Wij U in Godes heilige bescherming.

Wassenaar, 16 oktober 2014

Willem-Alexander

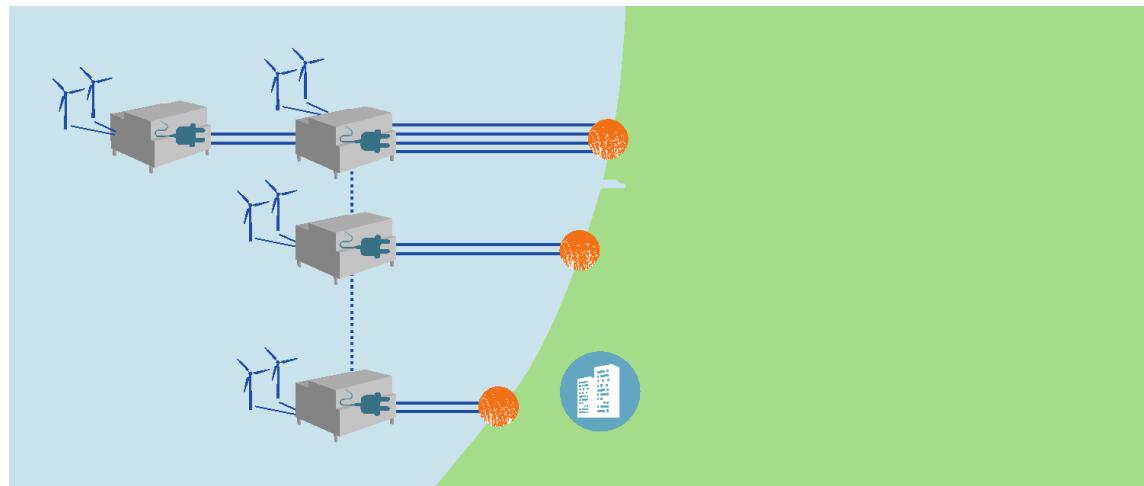
isbn 9789023340581
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s-Gravenhage 2014

Tweede Kamer, vergaderjaar 2014–2015, 34 058, nr. 1



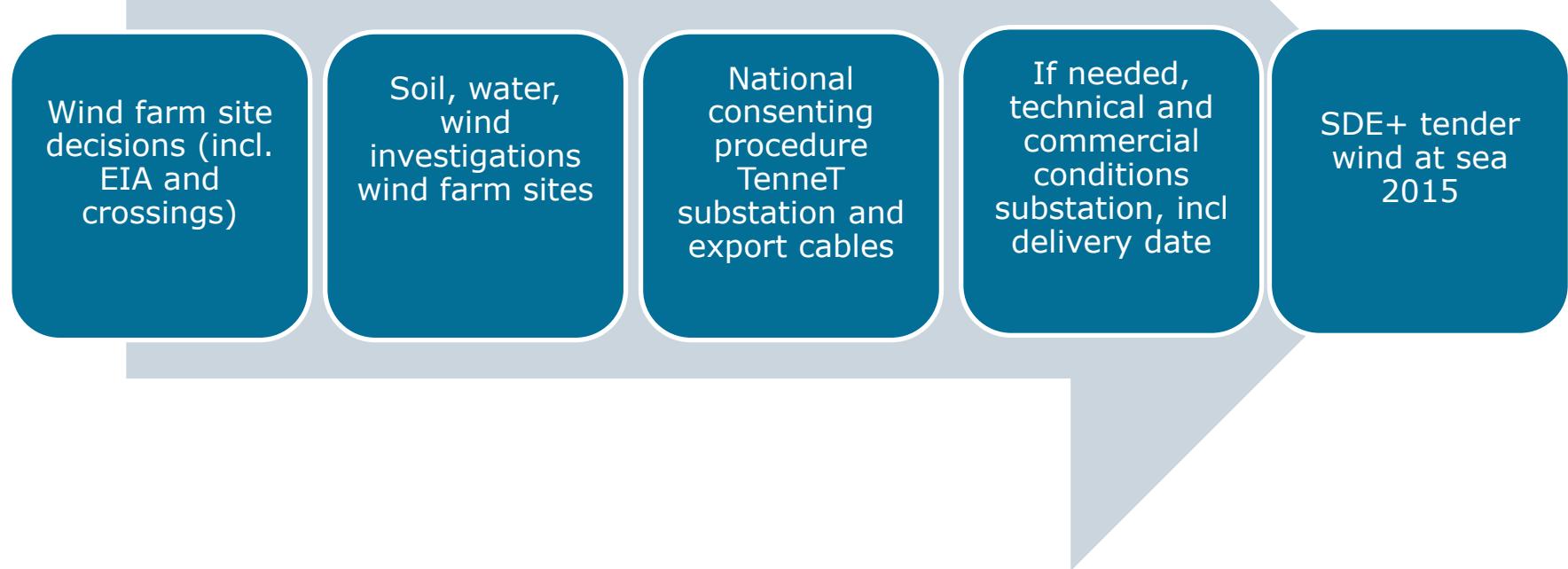
Progress Electricity and gas bill (STROOM)

1. August internet consultation Electricity and gas bill → TSO can build and operate offshore grid and responsibility / liability
2. March 2015 bill to House of Representatives of the Netherlands
3. March 2015 internetconsultation ministerial regulation (details responsibility / liability)
4. All into force: 1th of January 2016 (published earlier)





Progress first tender Borssele december 2015





Progress wind farm site decisions Borssele (1)

1. Workshop 15th July
2. October memorandum scope and level of detail EIA published
3. 9th December positive advise independent Netherlands Commission for Environmental Assessment





Progress wind farm site decisions Borssele (2)

4. April 2015 interim advise independent Netherlands Commission for Environmental Assessment about EIA site II
5. May 2015 pre-concept wind farm site decision II
6. August 2015 official concept both wind farm site decisions

Subject	Bandwidth	
Power individual wind turbines	3 – 10 MW	
Tip height individual wind turbines	125 – 250 meter	
Tip lowness individual wind turbines	25 – 30 meter	
Rotor diameter individual wind turbines	100 – 220 meter	
Spacing between wind turbines	$\geq 4D$	
Number of blades per wind turbine	2 – 3	
Type of substructures	Monopile, jacket, tripole, tripod, gravity based structure	
Type of foundations	(Mono)piles, suction buckets, gravity based structures	
Installing piles	Vibratory, hammering, boring, suction	
In the case of hammering: hammer energy related to turbine type / pile	1,000 – 3,000 kJ, depending on soil conditions and diameter foundation	
In the case of hammering: diameter pile(s) and number of piles per turbine:	Jacket	4 piles 1,5 – 3,5 meter
	Monopile	1 pile 4 -10 meter
	Tripod	3 piles 2 - 4 meter
In the case of a foundation without hammering: dimensions at seabed:	Gravity Based	$\leq 40 \times 40$ meter
	Suction Bucket	Diameter bucket: n.t.b.
Electrical infrastructure, voltage level infiel cables	33kV or 66kV	



Progress soil, water, wind investigations

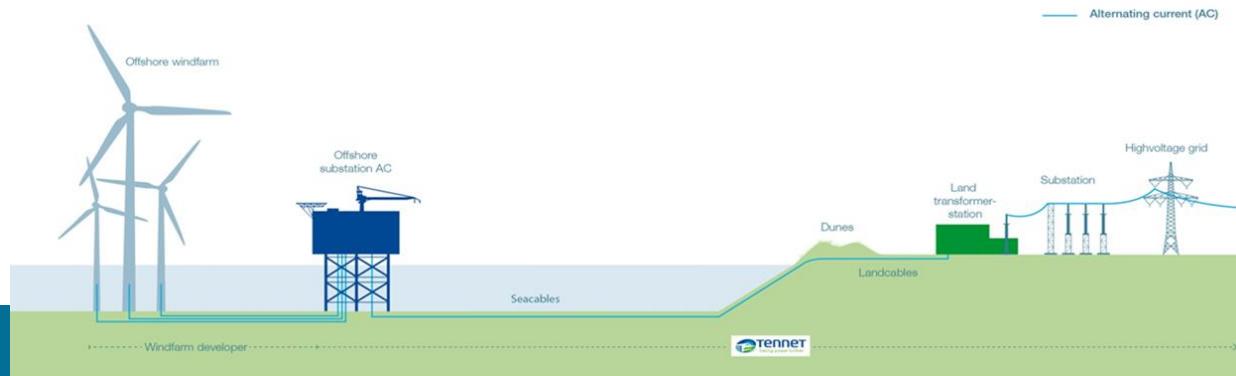
1. July 'Quick scan ECN' and 'Geological desk study'
2. September workshop
3. November presentation desk study morphodynamics
4. Today workshop (technical project description, desk studies)
5. December technical project description
6. September 2015 update technical project description

The image shows two side-by-side presentation slides. The left slide has a dark blue header with the ECN logo and the text 'Site Studies Wind Farm Zone Borssele Geological desk study'. Below this is a photograph of an offshore wind farm at sunset. The right slide has a yellow header with the ECN logo and the text 'Quick scan wind farm efficiencies of the Borssele location'. Below this is another photograph of an offshore wind farm.



National consenting procedure TenneT

1. June letter to the House of Representatives of the Netherlands to designate TenneT as system operator of the offshore grid
2. September workshop
3. November workshop, location 'Borssele Alpha'
4. December letter to the House of Representatives of the Netherlands to apply consenting procedure for the offshore grid Borssele
5. February 2015 memorandum scope and level of detail EIA
6. November 2015 EIA and official concept all permits needed





Progress SDE+ tender wind at sea

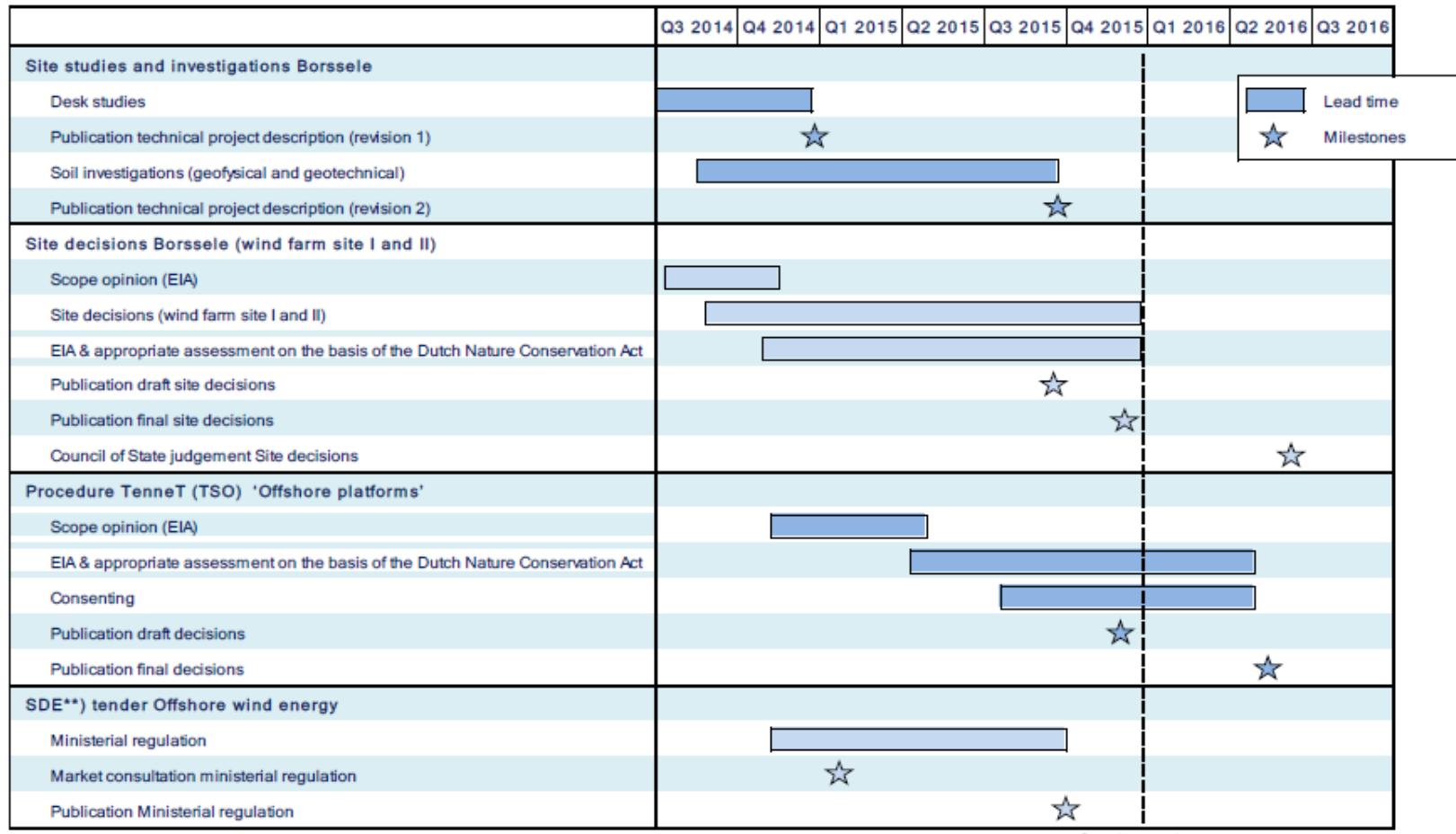
1. April internet consultation adjustment SDE (RES grant)
2. October workshop
3. November letter to House of Representatives of the Netherlands including information about subsidies
4. Today workshop (zone base amount, step 3)
5. January 2015 adjustment SDE (RES grant) into force
6. February 2015 internet consultation ministerial regulation
7. September 2015 publication ministerial regulation

Step 1 Energy Agreement <small>- based on an average wind farm site and 40% cost reduction -</small>	Step 2 Subtract the grid costs	Step 3 Zone base amount <small>- ECN calculates the base amount per zone Borssele, HK Z en HK N. -</small>	Step 4 Site base amount <small>- ECN calculates base amount per site base of 350 MW ('kavelbesluit') -</small>
2015 14,5			
2016 14			
2017 13,5			
2018 13			
2019 12,5			





Planning Winfarm zone Borssele



More detailed planning  (draft 15/12/2014)



INTERN/VERTROUWELIJK

Werkplanning windenergie op zee

INTERN/VERTROUWELIJK

- Formele inspraak**
- Afstemming marktpartijen**
- Afronding product**
- Afstemming stakeholders**
- Overige milieuzaken**



Next workshops

- 2nd March 2015?
Suggestions: progress, shipping, scoping EIA offshore grid, geotechnical survey
- April or May?



Websites

- <http://english.rvo.nl/topics/sustainability/offshore-wind-energy> (English): publications, meeting reports and presentations, technical project description
- <http://www.rvo.nl/subsidies-regelingen/wind-op-zee-kavels-borssele> (Dutch): formal procedure wind farm site decisions ('kavelbesluiten') and (later) offshore grid
- <http://www.rijksoverheid.nl/onderwerpen/duurzame-energie/windenergie/windenergie-op-zee> General public, wind offshore policy in general
- <http://www.noordzeeloket.nl/en/functions-and-use/wind-energy/> Users North Sea



Logistics today

- Parallel workshops : 13.45 – 15.15 h
- 2 groups:
 - SDE+ (subsidy scheme)
room: Lange Voorhoutsalon
 - Technical Project Description
room: Binnenhofsalon
- Plenary wrap up 15.30- 16.30 h
room: Lange Voorhoutsalon
- Informal reception 16:30 h
room: de bar