



Netherlands Enterprise Agency

SDE+ Tender Offshore Wind Energy

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Zwolle

- Unofficial translation -

>> *Sustainable. Agricultural.*
Innovative. International.



What will we do this afternoon?

- Explanation SDE+
- Break
- Explanation about tender offshore wind
- Informal drink



What we do not do this afternoon

- Direct answer to questions
- Questions will be registered
- Answers will be published coming weeks on offshorewind.rvo.nl



Explanation SDE+

- Stimulation of Sustainable Energy Production Decision
- General Implementing Regulations for Stimulating Sustainable Energy Production
- Ministerial Order for Offshore Wind Energy 2015



For the winner of a tender (Winnaar van een tender)
Bill or draft (Concept wet- of regelgeving)
Not yet available (Nog niet beschikbaar)
Final, into force (Finaal)

Winner of a tender
(Winnaar van een tender)

Under public law (Publiekrechtelijk)
Government <-> Winner of a tender (Overheid <-> Winnaar van een tender)

Under private law (Privaatrechtelijk)
TSO TenneT <-> Winner of a tender (TenneT <-> Winnaar van een tender)



Decision
(Besluit)



Ministerial Order
(Ministeriële Regeling (MR))



Governmental Decree
(Algemene Maatregel van Bestuur (AMvB))



Act
(Wet)





Modification dates SDE+ in 2015

February 6th 2015 the following documents have been published:

- Amendments Decision SDE+
- Amendments General Implementing Regulations SDE+
- (New Ministerial order SDE+ categories 2015)

July 3rd 2015 this document was published:

- Ministerial Order for Offshore Wind Energy 2015 including some amendments of General Implementing Regulations SDE+

Disclaimer

This presentation only emphasizes the amendments in the SDE+ and it's not a complete picture of all applicable law



Important changes in the SDE+

1. Starting date subsidy

- First day of the month (didn't change)
- Maximum of 3 changes (didn't change)
- Maximum of 5 different starting dates per subproject, at least 2 months difference
- Starting date subsidy also possible to change afterwards, however **not** after official take over date of the entire wind farm



Important changes in the SDE+

2. Repeal of the so called 'windfactor'
3. Introduction P50
4. Introduction forward & backward banking
5. Introduction 16th year, **if** total eligible production is not used



What is banking?

- Year maximum production: calculating nett P50 (MWh) production
- Forward banking: production shortage in a year is a credit for coming years.
If production is more than the granted P50 total production can be subsidised if enough production credits available
- Backward banking: production surplus carries forward to next years
If production is less than the granted P50 the production is filled up with available production in backward reserve
- No limit to total amount banking



Banking example

Backward: overproduction carries forward to next year
Forward: not used eligible production

SDE+	Example subsidy term 5 years					
	1	2	3	4	5	6
Expected P50 (SDE+ grant)	1.000	1.000	1.000	1.000	1.000	
Realised year production	1.200	850	650	1.400	800	1.200
Pay out year production grant	1.000	850	650	1.000	800	0
Pay out of banking reserve	0	150	50	300	100	100
Total pay out in a year	1.000	1.000	700	1.300	900	100
Pay out cumulative	1.000	2.000	2.700	4.000	4.900	5.000

End op year balance banking reserve:

Backward banking, starting value 0.	200	50	0	100	0	0
Forward banking, starting value 0.	0	0	300	0	100	0



Other changes in SDE+

Approval European Guidelines on state aid for environmental protection and energy

- No individual approval by EU is necessary.
- “For grants starting from 1 January 2016 measures are put in place to ensure that generators have no incentive to generate electricity under negative prices”



Questions: Negative prices

- How will be determined how much is produced during hours with negative prices?
- Is this based on APX day ahead spot prices (and not based on unbalanced prices, futures / forwards)?
- Is this per wind turbine, per wind farm or is this generic for several wind farms?
- Is this based on realised production supplied by the specific measurement authority?
- Will this be a yearly correction afterwards?
- Will this influence grants from the past?
- Will this influence the SDE+ tender grants?
 - > If so, how?



Questions: Negative prices

- Will there be a provision in the tender document?
 - > If not, how can the market anticipate on this?
- Will the correction be done via the SDE+ route or via the certification of GvO route?
- What will be the minimum threshold for corrections?
- Will the realised hours not be compensated, or will a different correction price be calculated?
- The hours not compensated, can these still be banked?
- When will this be in force in the Netherlands?



Answers on questions about negative prices

- Ministry of EA will write a letter to parliament in Autumn about SDE+
- Clarity about this before opening tender

To lift a corner of the veil:

- Interfere if negative prices will remain longer than 6 hours



Tender amount, correction amount and basic energy price

- Maximum subsidy per kWh is the difference between tender amount and basic energy price
- Yearly paid subsidy is the difference between tender amount and correction amount
- However, correction amount can't be lower than basic energy price



Calculation basic energy price

- Basic energy price = $\frac{2}{3} * (\text{long term expected energy price} - \text{P\&U})$
- Long term expected electricity price (baseload) : 5,4 ct/kWh.
- Profile- and unbalance costs (P&U) : 1,0 ct/kWh.
- $2,9 \text{ ct/kWh} = \frac{2}{3} \times (5,4 - 1,0) \text{ ct/kWh}$



Questions: basic energy price

- Will the basic energy price be determined again every year?
 - Answer: No, the basic energy price will be 2,9 cent / kWh for the whole subsidy period.



Correction amount

- Provisional correction amount
 - Published before the first of November in the year before (SDE Decision article 14:5)
 - Is used for determination of the advanced payments
- Final correction amount
 - Published before the first of April the year after (SDE Decision article 14:4)
 - Is used for determination of the final yearly settlement



Provisional correction amount

- (Average day ahead market price APX Oct 2013 until Sept 2014) x (profile- and unbalance factor)
- Year 2015:
 - $3,9 \text{ ct/kWh} = 4,31 \text{ ct / kWh} \times 0,91$



Final correction amount (for example 2014)

- (Average day ahead market price APX Jan 2014 until Dec. 2014) x (profile and unbalance factor)
- Profile and unbalance factor so far 0,91
- Value Guarantees of Origin certificates 0 euro.



Questions: final correction amount

- Is the electric reference price the yearly average of the spot-market price? And will this be calculated per calendar year or production year?
(a windfarm will probably not start exactly on the first of January)
- Answer
 - Average day ahead market price APX full 12 months. The first broken year also on the full 12 months (Jan-Dec)



Questions: final correction amount

- “The value of the Guarantees of Origin have a value of 0 when advanced payment is determined, what about the final settlement?”
- Answer
 - Every year again for the determination of the final correction amount, the value of the guarantees of origin is taken into account. So far each year the value has been 0 euro.



Calculation profile and unbalance factor

- The profile and unbalance factor will be determined once a year by ECN for the calculation of the final correction amount for the final settlement. To calculate this, ECN will receive market information from several companies about unbalance volume and wind production per hour.
- Assumption: 100% of the expected wind production will be sold via the day ahead market (APX) and the total unbalance volume (difference between real production and day ahead expectation) will be sold via the unbalance market of TenneT.



Questions: profile and unbalance

- How will this factor be determined? So far, the outcome can't be converted to source data and the method used is only clear on main lines and not clear for specific windfarms. In this way there will always be a difference between windfarms.
- Will each tender get it's own profile and unbalance factor (2015, 2016 etc.)?
 - For each tender every year a separate final correction amount will be published. If the profile and unbalance factor will be different between separate tenders can't be predicted yet.



Questions: profile and unbalance

- What production data is used for calculating the profile effect?
 - Until now it is based on data of some companies, but in the future this might change
- How will unbalance volumes be determined for example in relation to a forecast and will this be per turbine or wind farm or more windfarms?
- How will unbalance volumes be translated to unbalance costs?
- What will happen if substantial difference will occur between the published profile and unbalance factor by ECN and a windfarm. Can this be challenged?
- What procedure can be followed if a dispute occurs about the published profile and unbalance factor?



Questions: profile and unbalance

- The number of realised windfarms in the North sea with SDE+ subsidy has recent increased to 1 windfarm
- It is not clear how the profile and unbalance factor will be calculated exactly in the period 2019 t/m 2034
- The government is considering more consultation by the market



Procedure advance payments - 1

- Applicant will report himself at CertiQ
- Applicant will ask ... MW per first day of for example July at NEA
- NEA checks at CertiQ
- NEA will regulate 6 monthly advance payments (at the beginning of the month)
- Monthly advance payment:
 - $80\% \times 1/12 \times \dots \text{MW} \times P50 \times (\text{tender amount} - \text{provisional correction amount})$



Procedure advance payments - 2

- Advance payments can be diminished if applicant reports to NEA he will expect a lower production.
- If production in the first broken year will be higher than $1/12$ of the P50 x number of months, this extra production is booked as backward banking.



Question: advance payments

Is SDE subsidy applicable to electricity produced before the commercial operation date of the windfarm?

- If so, does this mean that SDE subsidy is available for 15 + 1 year from the first SDE subsidised kWh production? (wind turbines will become operational in batches and start producing directly after this)

Answer:

Yes, SDE subsidy will start at the 1st of the month and as soon as the applicant has reported himself at CertiQ, the request for starting the SDE subsidy can be done.



Questions: advance payments

How will the SDE+ payments take place, when will be paid? In advance? Monthly? Yearly?

Answer

- Advance payment: monthly $80\% \times 1/12$ of the maximum eligible production
- After (the year after) the final correction amount is determined, the rest of the subsidy for that specific year will be paid.



Remaining questions about SDE - 1

Is the basic electricity price final and is it set at EUR 0,029 per kWh, or will this number be adjusted during the tender?

Answer:

Final set at 2,9 cent / kWh



BREAK



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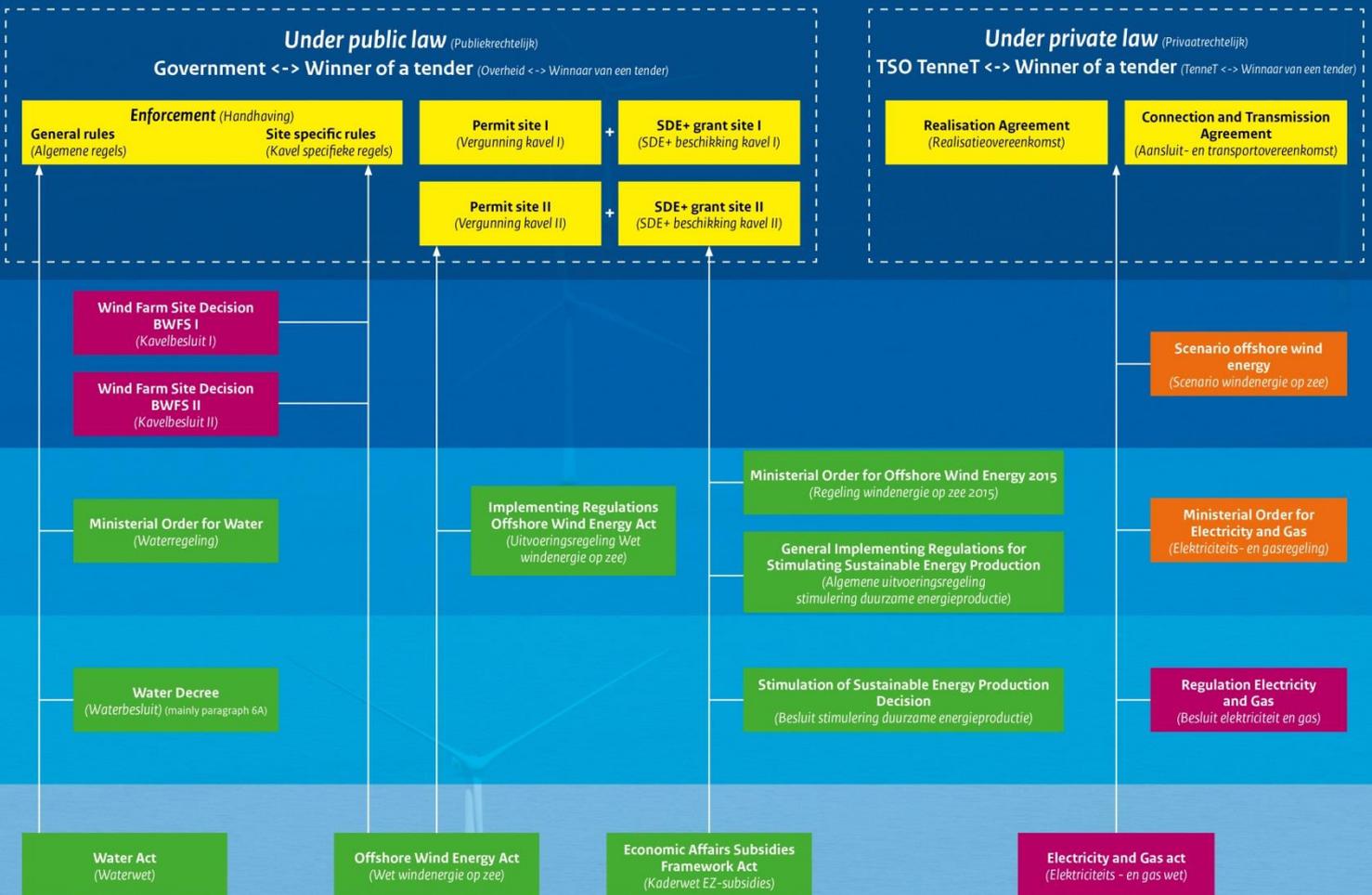
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Ministerial Order for Offshore Wind Energy 2015

- Article 1 Definitions
- Article 2 Subsidy for windfarm site I and II
- Article 3 Minimum and maximum size windfarm
- Article 4
 - Paragraph 1 Closing date March 31st 2016 17:00 h
 - Paragraph 2 What if site decision in force later
 - Paragraph 3 Bundled application for site I + II together
 - Paragraph 4 Each applicant max two separate bids and one bundled bid for site I and II



Ministerial Order for Offshore Wind Energy 2015

Article 5

- Equity minimum 10% of total investment
- Also application for permit
- Comply with requirements site decision
- Explanation consortium



Ministerial Order for Offshore Wind Energy 2015

Article 6

- Subsidy cap laid down
- Ranking on price only. All other criteria have to be met, but no influence on ranking position
- Bundled application will only win if cheaper on both sites in comparison with separate bids
- Lottery if bids are equal



Ministerial Order for Offshore Wind Energy 2015

Questions on articles 5 and 6:

- Is it true the application will be open from 1 December until 31st of March **Answer: yes**
- Can this period still change: open later, close later?
Answer: yes
- Does this depend on the new Electricity and Gas Act? **Answer: not dependent on the new Electricity and Gas Act.**



Ministerial Order for Offshore Wind Energy 2015

Article 7

- Highest tender amount € 0,124000 per kWh.

Article 8

- Within two weeks after receiving the grant the implementation agreement has to be signed.
- Within four weeks after receiving the grant the bank guarantee should be hand in.
- If one of these conditions will not be met, the subsidy will go to the next in line.



Ministerial order for offshore wind energy 2015

Questions about articles 7 and 8:

- If the implementation agreement is signed but no bank guarantee is hand in will there be a fine?

Answer:

The subsidy grant will go to the next in line and NEA might go to court to get this bank guarantee of 10 million



Bank guarantee for SDE+

- Within four weeks after the grant is given a 10 million euro bank guarantee must be hand in
- Within 12 months after the grant is given a 35 million bank guarantee must be hand in and the 10 million guarantee will be returned.
- The bank guarantee of 35 million will be returned after windfarm is in operation



Question: bank guarantee

- What is definition in operation?
 - Answer: The SDE+ will take the date of first power as the date for in operation
- Who can deliver a bank guarantee?
 - Answer: Any bank established within the EU
- Can a bank guarantee be delivered by a parent company?
 - Answer: No



Also a bank guarantee in the site decision

- In the concept site decision also a requirement in relation to bank guarantee.
- € 120.000 euro per MW.
- Indexation of 2% per year
- Hand in before start building
- Is concept and is consulted until 17th September



Ministerial Order for Offshore Wind Energy 2015

Article 9

- Subsidy period 15 years
- Applicant can chose 5 different dates to start subsidy
- Possibility forward banking and backward banking laid down

Article 10

- Applicant will have 5 years for realizing the project after receiving the grant, or if this is later, after the site decision is irrevocable



Ministerial Order for Offshore Wind Energy 2015

Article 11

- Basic electricity price € 0,029 cent per kWh
- Maximum amount full load hours in de grant will be based on nett P50-value in application

Article 12

- Assumptions for advanced payments in 2016 however this is an imaginary article, because no electricity can be produced in 2016



Ministerial Order for Offshore Wind Energy 2015

Article 13 Changes in general implementing regulations SDE+

- Information about certification process
- Equity invested by applicant + equity mentioned in declaration of intent of financing party must add up to minimum 20% of total investment costs
- Additional requirements consortium
- Additional requirements to P50
- Additional requirements equity
- Dispensation for investment order within 1 year



Ministerial Order for Offshore Wind Energy 2015

Article 14

- The Ministerial Order will be in force starting 1 December 2015
- Or if this is later, last windfarm site decision will be in force



What do you need for an application?

- Combined application form for subsidy and permit
 - Online end of November
 - Also manual to prevent mistakes
- Five obligatory annexes
- Possible two extra annexes



Which annexes are obligatory

- Project plan
- Wind report
- Exploitation calculation
- Annual report
- Financing plan



Annex 1: Project plan

Project plan

- Number of turbines, turbine heights, coordinates of all turbines, rotor diameter
- Detailed time scheme with obligatory milestones



Annex 2: Wind report - 1

“a wind energy yield calculation that has been compiled by an independent organisation with expertise in the area of wind energy yield calculations, whereby use is made of reputable calculation models, surrounding area models, wind models and wind charts and that includes at least”



Annex 2: Wind report - 2

- The location details of the wind farm
- The technical specifications of the intended wind turbines (brand, type, hub height, rotor diameter and power curve)
- The local wind data for the wind farm
- A calculation of the P50-value for the net electricity production on an annual basis for the wind farm



Annex 2: Extra requirement wind report

In the calculation of the P50-value for the production of renewable electricity by means of offshore wind energy will exclusively take into account the production installations for the production of renewable electricity by means of offshore wind energy that are put into operation before July 1st, 2015



Existing wind farms Belgium

- Belwind 1. 55 x V90 3 MW = 165 MW
- Belwind pilot 1 x Haliade 150 6 MW = 6 MW
- Northwind 72 x V112 3 MW = 216 MW
- C-Power 1. 6 x 5 MW = 30 MW
- C-Power 2. 30x 6,15 MW = 184,5 MW
- C-Power 3. 18 x 6,15 MW = 110,7 MW



Questions: wind report

Will a list be published with companies which can produce a wind report?

Answer:

No, we will not publish such a list.



Annex 3: Operation Calculation - 1

- a specification of the investment costs per component of the production installation
- a summary of all costs and revenues relating to the production installation
- calculation of the return on investment over the period of the grant



Annex 3: Operation Calculation - 2

- End of November an Excel model will be made available online
- Not yet decided if you can use your own model



Annex 4: Annual report

- Most recently approved annual report
- Mother company also qualifies
- All parties of consortium qualify



Annex 5: Financing plan

- Explanation how the project will be financed
- Explanation how much equity and how much loan capital will be used for financing the project
- Explanation how you can use your own equity for this project



Two extra annexes

- Annex with declaration of intent of financing party
- Annex with all names and addresses of the consortium and signed by all companies of the consortium



Are all questions answered

- How is the basic energy price calculated?
- How does the system work for advance payment in the SDE subsidy system?
- What is allowed for the ratio between equity and loan capital?
- How can a consortium apply for subsidy?
- What information is necessary for a subsidy application?



Next procedure

Offshorewind.rvo.nl for:

- Publication Q&A
- Publication Project & Site Description version 2
- Publication sheets of this meeting
- Publication of site research

NEA Office in Zwolle for:

- Individual talks about SDE+ and permit
- Delivering application for subsidy and permit in 2016

Subsidy and permit application:

www.rvo.nl/subsidies-regelingen/wind-op-zee-SDE+



Project & Site Description



Netherlands Enterprise Agency

Borssele Wind Farm Zone Wind Farm Sites I and II

Project and Site Description

Version 2, August 2015

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