

Position Paper: Offshore wind energy in the Belgian North Sea

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1st phase: 2009-2020

Investments in offshore wind energy were in this phase strongly subsidized. The costs to support this policy (offshore certificates, partly the connection cable and the investment guarantee) are largely passed through by Elia to the electricity consumer.

At the end of 2020 eight offshore windmill parks are operational in Belgium C-Power (since 2009, 325 MW), Belwind (2010, 171 MW), Northwind (2014, 216 MW), Nobelwind (2017, 165 MW), Rentel (2018, 309 MW), Norther (2019, 370 MW), Northwester 2 (2020, 219 MW) and Seamade (2020, 487 MW). Total installed capacity thus amounts up to 2261 MW.

For the electricity produced, producers receive certificates from the CREG, which are bought by Elia. The costs for offshore certificates were, until end -2021, passed through by Elia by means of a levy on the transmission tariffs, which by end of 2021 amounted up to 11,6852 €/MWh. The costs for the cable are subsidized by means of a levy (0,0840 €/MWh for 2021). Both levies were replaced as from 1/1/2022 by the special excise on electricity (see position paper "Special excises").

The subsidy system was modified several times over the years to limit the total cost for electricity consumers. The first parks with financial close before May 1, 2014 (C-Power, Belwind and Northwind) benefit from a minimum subsidy of 107 €/MWh for the first 216 MW installed capacity, and of 90 €/MWh for their remaining capacity for a period of 20 years. Moreover did they benefit from the cable subsidy for a maximum subsidy of 25 million €.

In 2014 the system was adapted for the domain concessions with a financial close from May 2, 2014 until April 30, 2016, and the electricity price and technological evolution were taken up into the subsidy; the amount of the subsidy is linked to the electricity price: the higher the price that producers get for their electricity, the lower the subsidy¹. In concrete terms, this means that the minimum level of support was calculated by means of the following formula: LCOE – electricity reference price – correction factor. The levelized costs of energy production (LCOE) were fixed at 138 €/MWh and the correction factor is equal to 10% of the electricity reference price.

The subsidy was again reformed for plants where the financial close took place as from May 1, 2016. The formula was set as follows: LCOE- [(electricity referential price x (1 – correction factor) + the value of the guarantees of origin) x (1- grid losses factor)]². The LCOE for Rentel was set to 129,80 €/MWh, the one for Norther to 124 €/MWh.

In the summer of 2018 the LCOE was revised and set at 79 €/MWh for the domain concessions where the financial close was carried out as from July 1, 2018 (more specifically Northwester 2 and Seamade)³. During this revision other elements of the subsidy mechanism were modified. Thus, the subsidy period was limited to maximum 63.000 supporting full load hours (hours at full capacity), over a period of maximum 17 years.

Some changes were also made to the cable subsidy. The plug-socket in the sea ("Modular Offshore Grid")^{4,5} is operational since autumn 2019. The switching platform is 40 km off the coast. Since the end of 2020, it combines electricity generated by several offshore wind farms for onward transmission to the mainland⁶.

¹ Loi du 8 mai 2014 portant des dispositions diverses en matière d'énergie, M.B. 4/06/2014 ; A.R. du 4 avril 2014 modifiant l'arrêté royal du 16 juillet 2002 relatif à l'établissement de mécanismes visant la promotion de l'électricité produite à partir des sources d'énergie renouvelables, B.B. 14/06/2014

² The subsidy period is of 19 years.

³ A.R. du 17 août 2018 modifiant l'arrêté royal du 16 juillet 2002 relatif à l'établissement de mécanismes visant la promotion de l'électricité produite à partir de sources d'énergie renouvelables, B.B. 27/08/2018

⁴ Art. 6/2 of the Electricity law, as introduced by the « Loi du 13 juillet 2017 modifiant la loi du 29 avril 1999 relative à l'organisation du marché de l'électricité, en vue d'établir un cadre légal pour le Modular Offshore Grid (1), » B.B. 19/7/2017.

⁵ The domain concession was granted to Elia by Royal Decree of July 8, 2018, B.B. 20/07/2018

⁶ <https://www.elia.be/en/infrastructure-and-projects/infrastructure-projects/modular-offshore-grid/201909-king-philippe-visits-first-power-hub-in-the-north-sea>

2nd phase: 2020-2030

In October 2021 the Council of Ministers agreed on a new target for the further development of offshore wind energy. By 2030 an additional capacity of 3,15 to 3,5 GW is to be built. Moreover, it is in principle decided to realize the connection of future wind energy via an energy island.

In the *Marien Ruimtelijk Plan 2020-2026* an additional area of 285 km² has been reserved in the North Sea for the construction and exploitation of installations for electricity production from renewable energy sources. This Prinsess Elisabeth zone in turn is subdivided in 3 zones: *Noordhinder North*, *Noordhinder South* and *Fairybank*. The federal government also decided to allocate the available domain concessions for the construction and exploitation of offshore installations for the future on the basis of competitive tenders. The general principles of these tenders are fixed in the law of 12 May 2019 with the objective to realize the targeted 5,4 to 5,8 GW of offshore wind energy by 2030 at the latest. The exact location, surface and number of concessions to be allocated by competitive tenders, are still to be defined by a ministerial decree. Moreover, a royal decree is needed to determine the conditions and criteria as regards receivability and allocation of the domain concessions.

For the connection of new parks, transmission system operator Elia is to realize an extension of the existing Moduar Offshore Grid (MOG 2). Additionally, the inland transmission grid needs to be reinforced in order to allow the additional offshore wind energy to flow inland. In that respect the Ventilus project (West-Flanders) and the Boucle du Hainaut project (*Hainaut*) have been set up.

Further planning:

- Pre-studies 2020-2030
- Publication executive decrees 2022-2023
- Allocation tenders 2023-2024
- Start-up new wind parks 2027-2030

Early 2022 a public consultation was set up on the criteria to be used for the process of competitive bidding for the future projects.

Objectives of Febeliec

Febeliec observes that offshore wind energy still remains a relatively expensive technology, due to which the subsidy adaptations improve the consumer's invoice in an only very limited way. Moreover, additional costs seem necessary in order to preserve security of supply since wind energy does not offer the security of supply required in the electrical system. It is therefore absolutely necessary to weigh whether one should not aim more on technological progress of offshore wind energy in combination with solutions for security of supply, instead of a rapid roll-out. Furthermore, it can be observed that further increases of production of wind energy in Belgium and Europe result in decreasing market prices for electricity, which can during an increasing number of hours even become negative. This jeopardizes the business case of future wind parks.

Febeliec supports the development of the plug-socket in the sea (MOG 2) if the financial advantage of it compared to individual cables can be demonstrated. As soon as the plug-socket is installed, Febeliec pleads for an obligatory use of it, unless the producer can object founded reasons that hinder the connection. As the construction of the plug-socket is already paid by the consumer, it is not acceptable that the latter would also have to contribute once again for the cable subsidy and the increased minimum support in favor of a producer who does not wish to connect to it.