

PRESS RELEASE | 28 May 2024

## Rentel wind farm cable back online

- The repair work was very technically complex and challenging due to the location of the fault and the weather conditions
- The alternative transmission route via Elia Transmission Belgium's MOG (offshore power hub) worked perfectly and ensured that all wind farms continued to generate electricity, despite the fault
- The windy weather conditions in recent months hampered the repair work but did allow very high levels of wind energy to be produced
- The cause of the fault is still being investigated

**Belgian part of the North Sea |** Approximately four months on from the failure of the cable which connects the Rentel wind farm to the mainland, the repair work has now been completed. The fault was located just below the Rentel transformer platform. A new section of cable, approximately 400 metres long, was attached to the platform and connected to the existing cable under the seabed. The four connected wind farms were still able to generate electricity throughout the repair work, because they are part of the meshed offshore high-voltage grid (via Elia's MOG or offshore power hub). Their electricity output was capped slightly during periods of very high winds to prevent the operational export cables from being overloaded. Despite this, another offshore and onshore wind energy production record was broken in the first few months of this year.

### Complex repair operation

On 9 January, the MOG cable connecting the Rentel platform to the mainland suddenly failed. The fault was located at the spot where the cable enters the high-voltage platform. Carrying out repair work at this location was very challenging and complex. The high-voltage platform is 34 kilometres off the coast and the past few months have been particularly windy. 400 metres of damaged cable were replaced. Special lifting techniques involving ships were used to lift the cable from the seabed. However, such methods could not be adopted just below the platform, so divers had to disconnect the cable.

For further information, please contact:

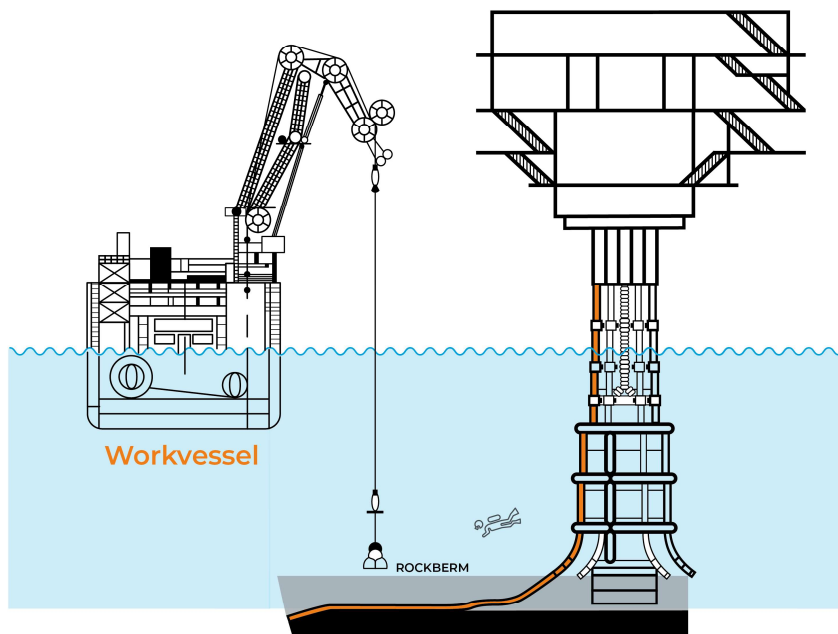
#### Corporate Communication

Marleen Vanhecke (EN) | M +32 486 49 01 09 | [marleen.vanhecke@elia.be](mailto:marleen.vanhecke@elia.be)

#### Elia Transmission Belgium SA/NV

Boulevard de l'Empereur 20 | Keizerslaan 20 | 1000 Brussels | Belgium





Connecting the new and existing cables was also challenging. To do so, an offshore rigid joint was used that was repositioned on the ground 30 metres below sea level. This operation could only be performed during an extended period of low wind, so the repair work had to be postponed for some time. A platform joint also had to be installed on the platform.

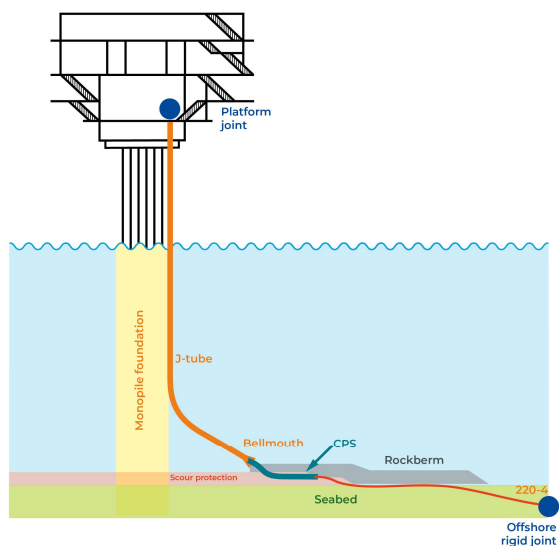
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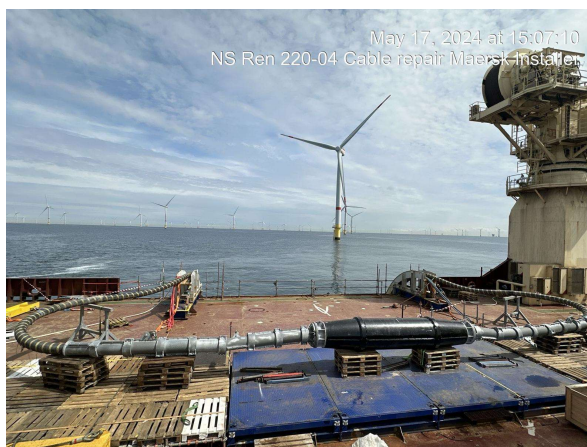
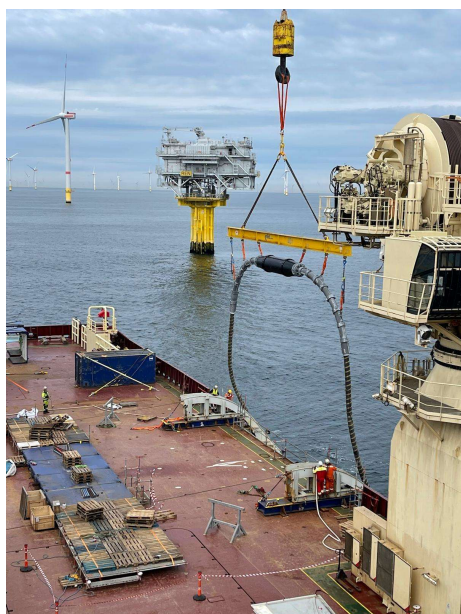
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All parties involved (Rentel; NTK, the cable manufacturer; and Elia Transmission Belgium) were able to safely and smoothly work together amidst difficult circumstances.



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*We very quickly realised that this was going to be a challenging repair operation given the timing and exact location of the fault. It is only due to the perseverance, expertise, flexibility and knowledge of all staff and our partners that we were able to complete the repair work within just a few months.*

**Geert Moerkerke, Head of Assets Offshore Elia Transmission Belgium**

*We are immensely grateful to Elia's staff for the way they handled the situation. The repair work posed an unprecedented challenge to all teams involved, requiring them to work under quite extreme conditions at critical times. Thanks to the MOG, all connected wind farms continued to generate electricity throughout the repair work - something that makes a world of difference at this (windy) time of year.*

**Mathias Verkest, CEO of Otary**

### The Rentel wind farm as part of a three-way connection

Each offshore wind farm has a transformer platform that collects the electricity generated by the wind turbines and then steps up the voltage of this electricity before it can be efficiently transmitted back to shore. Upon its commissioning in 2018, the Rentel wind farm (309 MW) only had one cable running from its platform to the mainland (known as a 'radial' connection).

When Elia developed a meshed transmission grid for the next three wind farms (Mermaid, Northwester 2 and Seastar), it integrated a Rentel export cable into this. A meshed grid saves on cables – which is more sustainable – and enhances the wind farms' security of supply in the event of an incident.

Elia took over the Rentel cable that leads to the mainland in 2019 and laid a short connection cable between the Rentel and Elia MOG platform which, along with the two export cables from the offshore power hub, formed a three-way connection (see map). The usefulness of this set-up was clearly demonstrated during the repair work which had to be undertaken.

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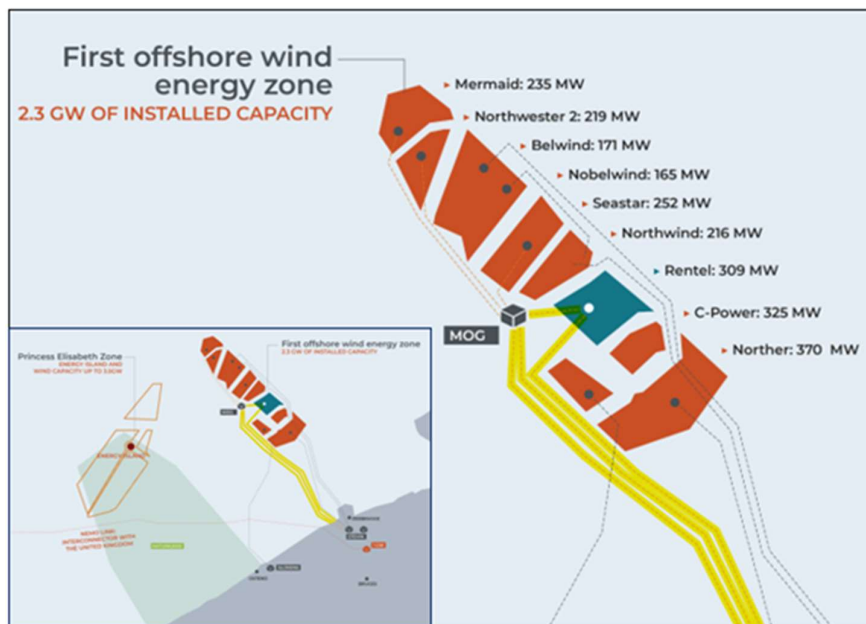
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### Very high generation despite restriction

The MOG allowed Rentel's wind power to be injected into the transmission grid, despite the repair work. It was only when it was very windy that the four wind farms connected to the MOG had to have their output reduced so that the remaining cables were not overloaded. The four wind farms (Rentel, Seastar, Mermaid and Northwester 2) could together generate a maximum of approximately 800 MW instead of 1,000 MW. Without the MOG, all 309 MW of capacity from the Rentel wind farm would have been unavailable. It looks like the first five months of this year will have produced a record amount of wind. From Jan. 1 through May 24, 3304 GWh of offshore wind recorded. With one week to go this month, it looks like the record of the first five months of last year will be broken. Onshore also recorded high production figures (2,690 GWh).

Offshore (GWh)	JAN	FEB	MAR	APR	MAY	TOT (1/1 - 24/05)
2020	628	803	702	340	419	2892
2021	736	815	609	486	461	3107
2022	657	1003	404	582	393	3039
2023	979	562	818	534	460	3353
2024	924	846	572	772	190	3304

OnShore (GWh)	JAN	FEB	MAR	APR	MAY	TOT (1/1 - 24/05)
2020	444	629	439	227	244	1983
2021	388	439	396	292	426	1941
2022	375	677	308	385	236	1981
2023	804	471	702	436	321	2734
2024	701	723	470	616	180	2690

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## About Elia Group

### One of Europe's top 5 TSOs

Elia Group is a key player in electricity transmission. We ensure that generation and consumption are balanced 24/7, supplying 30 million end users with electricity. Through our subsidiaries in Belgium (Elia) and the north and east of Germany (50Hertz), we operate 19,460.5 km of high-voltage connections, meaning that we are one of Europe's top 5 transmission system operators. With a reliability level of 99.99%, we provide society with the robust power grid that is so important to socio-economic prosperity. We also aspire to be a catalyst for a successful energy transition, helping to establish a reliable, sustainable and affordable energy system.

### We are making the energy transition happen

By expanding international high-voltage connections and incorporating ever-increasing amounts of renewable energy into our grid, we are promoting both the integration of the European energy market and the decarbonisation of society. We also continuously optimise our operational systems and develop new market products so that new technologies and market parties can access our grid, thus further facilitating the energy transition.

### In the interest of society

As a key player in the energy system, Elia Group is committed to working in the interest of society. We are responding to the rapid increase in renewable energy by constantly adapting our transmission grid. We also ensure that investments are made on time and within budget, with a maximum focus on safety. In carrying out our projects, we engage in proactive stakeholder management by establishing two-way communication channels between all relevant parties very early on in the development process. We also offer our expertise to different players across the sector in order to build the energy system of the future.

### International focus

In addition to its activities as a transmission system operator, Elia Group provides consulting services to international customers through its subsidiary Elia Grid International. In recent years, the Group has launched new non-regulated activities such as re.alto - the first European marketplace for the exchange of energy data via standardised energy APIs - and WindGrid, a subsidiary which will continue to expand the Group's overseas activities, contributing to the development of offshore electricity grids in Europe and beyond.

The legal entity Elia Group is a listed company whose core shareholder is the municipal holding company Publi-T.

[eliagroup.eu](https://eliagroup.eu)

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