



King Philippe visits first ‘power hub’ in the North Sea

His Majesty the King of the Belgians today visited the Modular Offshore Grid (MOG), Elia's first power hub in the North Sea. The switching platform is 40 km off the coast. By the end of 2020, it will combine electricity generated by four offshore wind farms (Rentel, Seastar, Mermaid and Northwester 2) for onward transmission to the mainland. This is more efficient than transmitting the power via individual cables and improves security of supply.

The Modular Offshore Grid is a true milestone in the development of North Sea wind power off the Belgian coast. It is a switching platform only, not a transformer platform, making it unique in Europe. It is connected by 130 km of 220-kV cables to Elia's high-voltage substation in Zeebrugge (Stevin substation), from where the power is transmitted to consumers via the transmission and distribution system.

The platform 40 km off the Belgian coast enables the wind farms to maximise the transmission of the electricity they generate to the mainland. At 28 cm in diameter, these are the thickest subsea cables in the North Sea. The jacket (foundation) was installed in November 2018 and the topside in April 2019. The unmanned platform is controlled from Elia's National Control Centre.

The MOG is a critical link in transmitting the renewable energy generated by wind farms safely and efficiently to the mainland. Bringing together the cables from the four wind farms saves 40 km of cable. The MOG will also enhance security of supply in that if one of the three export cables goes down, the other two can take over.

The MOG has been successfully completed thanks to the many Belgian and international stakeholders involved. The platform was built in the Netherlands while the cable was produced in Greece. The cable-laying work was done by Belgian marine engineering group DEME.



The MOG marks a major step forward towards incorporating more renewable energy into our system. As a company, we are especially proud to make this kind of contribution to climate objectives. The project was completed in record time: the first agreements were made with the authorities in March 2016, and now the project is ready ahead of schedule - the result of excellent teamwork and flexibility by everyone working on the project.



Chris Peeters, Chief Executive Officer Elia Group



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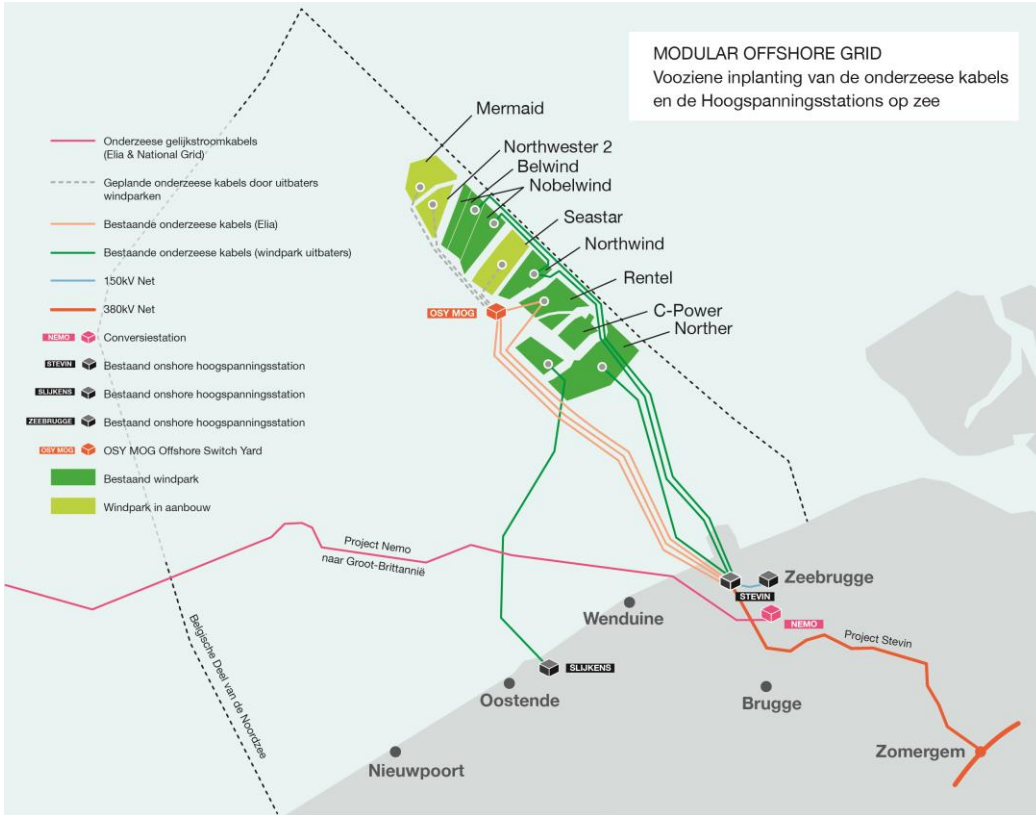
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MOG: facts and figures

- The platform is **unmanned** and is fully monitored and controlled remotely.
- The topside rises **41 m above the surface of the water** and weighs **2,000 tonnes**.
- It is anchored to the seabed by **four piles** at a depth of up to **60 m**.
- A team of **185 people** was on board the installation vessel for the installation of both the jacket in early November 2018 and the topside in April 2019.
- **220-kV** subsea cables connect the platform to the Stevin high-voltage substation in Zeebrugge.
- At **28 cm in diameter**, the cables that connect the platform to the Elia grid on the mainland are the thickest cables ever installed in the North Sea.
- In order to protect them from fishing boat anchors and trawls, all of the subsea cables are buried at a **depth of 1 to 3 metres**.
- At the height of the project, Elia's core team had **50 staff**.
- It is **very much an international project**: the cable was made in Greece and the platform in the Netherlands. The numerous technical installations on the platform come from Germany, Denmark, Poland, Spain, France, the UK and even China. Belgian marine engineering company DEME carried out the cable work.
- Total investment in the platform was foreseen at **€400 million** but the effective cost will be lower.
- More than **40 different vessels** were deployed during the MOG installation process.
- Implementing the MOG required over **1 million man-hours**.





About Elia Group

One of Europe's top five players

The Elia Group is active in electricity transmission. We ensure that generation and consumption are balanced around the clock, supplying 30 million end users with electricity. With subsidiaries in Belgium (Elia) and north-east Germany (50Hertz), we operate 18,600 km of high-voltage connections. As such, our group is one of Europe's top 5. With a reliability level of 99.999%, we give society a robust power grid, which is important for socio-economic prosperity. We also aspire to be a catalyst for a successful energy transition towards a reliable, sustainable and affordable energy system.

We make the energy transition happen

By expanding international high-voltage connections and integrating ever-increasing amounts of renewable energy generation, the Elia Group promotes both the integration of the European energy market and the decarbonisation of our society. At the same time, the Elia Group is innovating its operational systems and developing market products so that new technologies and market parties can access our grid, thus making the energy transition happen.

In the interest of society

As a key player in the energy system, the Elia Group is committed to working in the interest of society. We respond to the rapidly changing energy mix, i.e. the increase in renewable energy, and constantly adapt our transmission grid. We also ensure that investments are made on time and within budget, with a maximum focus on safety. When we carry out our projects, we manage stakeholders proactively by establishing two-way communication with all affected parties very early on in the development process. We also offer our expertise to our sector and relevant authorities to build the energy system of the future.


International focus

In addition to its activities as a transmission system operator, the Elia Group provides various consulting services to international customers through its subsidiary Elia Grid International (EGI). Elia is also part of the Nemo Link consortium that has built the first subsea electrical interconnector between Belgium and the UK.

The Group operates under the legal entity Elia System Operator, a listed company whose core shareholder is the municipal holding company Publi-T.

More information: eliagroup.eu

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