

Dutch-Belgian consortium to design and build high voltage AC substations for the world's first energy island

The HSI Joint Venture, consisting of HSM Offshore Energy, Smulders and Iv has been awarded the contract for the Modular Offshore Grid 2 (MOG2) for the world's first artificial energy island off the Belgian coast by transmission system operator Elia.

The EPCIC contract (Engineering, Procurement, Construction & Installation and Commissioning) includes the further design and construction of 4 high voltage AC substations (2 x 1050 megawatts, 2 x 700 megawatts) a facility module and a garage.

Engineering, which also includes development of the layout and 3D model of all the MOG2 Transmission Assets located on the Energy Island, will be done from the Iv office in Papendrecht. For prefabrication works Smulders will use its Belgian branches and HSM will use its Schiedam facilities. Final assembly of the modules will take place at the HSM Offshore Energy yard in Schiedam and at the Smulders yard in Vlissingen.

First energy island in the world

Princess Elisabeth Island will be the first artificial energy island in the world that combines both direct current (HVDC) and alternating current (HVAC). The high-voltage infrastructure on the island will bundle the export cables of the wind farms of the Princess Elisabeth zone and at the same time become a hub for future interconnectors with neighboring countries. The energy island will also be built nature-inclusive to promote biodiversity around the energy island. This project is pivotal in connecting Belgium's future offshore wind farms to the national grid, thereby supporting the country's commitment to increasing its renewable energy capacity.

The energy island will be located approximately 45 kilometers off the coast and will measure approximately 12 hectares above the waterline. The area provided for the installation of the electrical infrastructure is approximately 6 hectares. The artificial island will be located within the Princess Elisabeth wind zone.

Timeline

Construction of the substations starts in May 2025 and installation on the island will take place from 2027. Construction lasts until Q1 2029. Elia aims to have the installations ready to welcome the first offshore parks in 2030.

About HSM Offshore Energy

HSM Offshore Energy is an integrated solution provider in EPCIC (Engineering, Procurement, Construction, Installation and Commissioning) multi-disciplinary offshore projects. With our 60 years of offshore experience, we delivered successfully well over 150 projects such as integrated platforms, modules and jackets for the offshore upstream energy sector. Focusing on High-Voltage Substations, Green Hydrogen Platforms, Gas Production and Processing Modules, Carbon Capturing Storage infrastructures and steel jacket foundations. Driven by our commitment to a sustainable energy future, we are the contractor of choice for the offshore energy sector.

About Smulders

Smulders, subsidiary of Eiffage Métal, is a multidisciplinary and international construction company with more than 1,700 employees spread across sites in Belgium, the Netherlands, Poland and the UK. We take care of full engineering, manufacturing and systems integration projects predominantly for

the offshore wind market. Smulders is the European market leader when it comes to the engineering and construction of foundations and substations for offshore wind projects with a track record of more than 2,500 transition pieces, 160 jackets, 3 floating foundations, and 40 substations.

About Iv

Iv is a multidisciplinary engineering company based in Papendrecht, founded in 1949. With our highly specialised people, we operate in the markets Energy & offshore, Infra & water, Industry, Buildings and Maritime. We design offshore wind platforms, submarines and the world's largest lock complexes. Essentially, we design anything that requires a high level of technical expertise and multidisciplinary knowledge.