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Around €30 billion: Europe's largest-ever contracting package for security of supply, the energy transition and climate protection launched

- **Official signing of the contract between TenneT and four cooperation partners in Berlin to develop the North Sea as a hub for sustainable and independent European energy production**
- **Long-term framework agreements will secure resources needed to build grid connections for North Sea wind farms that will generate as much electricity as 28 large-scale power plants**
- **The high-tech core of the converter components to be manufactured exclusively at European production sites**
- **With three more offshore projects in the German North Sea, TenneT complements the recent award of 11 to 14 converter systems of 2 gigawatts each**

Top representatives of the transmission system operator TenneT, the Hitachi Energy/Petrofac cooperation and the three consortium partnerships GE/Sembcorp (SMOP), GE/McDermott and Siemens Energy/Dragados today officially signed the contracts in Berlin to seal Europe's largest-ever tender award for energy transition infrastructure. The total volume of the contracts for the components of the 14 systems amounts to around €30 billion. The result will be a transmission capacity of offshore wind energy in the German and Dutch North Sea that will generate as much electricity as 28 large-scale power plants.

TenneT has thereby completed the process of awarding contracts for the sea- and land-based converter stations for a total of 14 offshore grid connection systems, which was launched in August 2022. TenneT had already awarded 11 of these systems at the end of March, eight of them in the Netherlands and three in Germany. Three more systems in Germany were added today. These 14 systems are to be realised by 2031. Their "core components", meaning the innovative two-gigawatt technology for converting alternating current into direct current and back, will be manufactured exclusively at European production sites of the consortiums' members in all projects. With a contract of this magnitude, Europe will be taking a global lead – in terms of both technology and production – in a key sector of tomorrow's energy supply.

Tim Meyerjürgens, COO of TenneT: "As the leading offshore transmission system operator in the EU, we have the know-how needed to make Europe's goal of securing an independent supply of

renewable energies a reality. To achieve this, the North Sea must be developed as Europe's green power house and quickly connected to the electricity grids on land. We are acting and investing accordingly. Our 2GW Program will help make green wind energy from the North Sea scalable and more cost-efficient – while continuing to minimise any impacts on the environment.”

Niklas Persson, Executive Vice President and Managing Director at Hitachi Energy's Grid Integration business: “TenneT's commitment to integrate a large amount of offshore wind into the grid will drive real change in the energy system, making it more sustainable, flexible and secure. We are proud to play a significant part - together with our partner Petrofac - in accelerating the energy transition. Innovative business models, based on agile collaboration, standardization and synergies between projects, are the key enablers of this change - along with HVDC technology that we have pioneered and developed over the last 70 years.”

Philippe Piron, President & CEO GE Grid Solutions: “Together with our consortium partners Sembcorp Marine and McDermott, we are honoured to play a key role in TenneT's critical infrastructure project for strengthening Europe's energy security and reducing emissions. Our partnership with TenneT confirms that GE's Voltage-Sourced Converter HVDC technology is now recognized as one of the most advanced in the world and validates our ambition to be one of the leading systems providers for electrification and decarbonization.”

Tim Holt, member of the Siemens Energy Executive Board: “In the global race against climate change, grid expansion must be able to keep pace with the accelerated expansion targets for renewable energies. Shorter contracting processes, large-scale tenders and standardisation of solutions show how grid operators and manufacturers are already pulling together to get green energy to consumers faster. However, in order for the industry to continue ramping up capacity, all available levers must now be pulled at the policy level as well – from raw material and skilled labour strategies to further streamlining permitting processes at all levels.”

Tareq Kawash, Petrofac Group Chief Executive: “We are proud to be supporting TenneT's landmark 2GW offshore wind programme alongside our partner Hitachi Energy. This critical infrastructure project will help Europe become the first climate-neutral continent by 2050. Through our multi-year Framework Agreement, we are committed to collaborating with all partners, sharing our EPCI expertise and embracing new ways of working together to accelerate the integration of renewables into power grids.”

Samuel Wong, Vice President and Head of Sembcorp Marine Offshore Platforms: “The Framework Cooperation Agreement is another extension of our renewables footprint in Europe. Together with our consortium partner GE whom we have established a strong and strategic partnership, we look forward to supporting TenneT's sustainability commitment to advance the global energy transition. This award of three units of 2GW HVDC Offshore Converter Platforms represents our largest and most advanced offshore renewables project to-date. This landmark contract is a recognition of our Group's proven track record in the turnkey construction and delivery of mega offshore platforms for all-environment operations in the North Sea.

We are committed to working with our partner to achieve high standards of sustainability, safety and execution excellence to contribute towards TenneT's decarbonisation objectives."

Vaseem Khan, McDermott's Senior Vice President for Onshore: "Today, we join TenneT and our partners in signing contracts to expand Germany's clean energy production to meet its 80 percent renewables by 2030 target. We bring over a century of experience in executing some of the world's most challenging onshore and offshore projects to this collaboration, utilising our own engineering and fabrication assets. We are proud and honoured to partner with GE Vernova and TenneT to deliver these projects safely and in the most sustainable manner practical."

Pedro Ascorbe, CEO von Dragados Offshore: "Based on our recent experience and current backlog of developing 900 MW and 2GW HVDC platforms, we are convinced that we can successfully deliver these challenging projects and are excited to be one of the partners of choice to participate in this long-term cooperation scheme with TenneT."

The award of the major tender in detail

At today's official contract-signing ceremony, TenneT and the four cooperation partnerships signed the orders and their acceptances for a total of 14 offshore grid connection systems in the German and Dutch North Sea.

The Siemens Energy/Dragados consortium was today awarded the contracts for the German projects BalWin3, LanWin4 (both with a connection to the onshore grid in Wilhelmshaven) and LanWin2 (with a connection near Heide).

Already on 30 March 2023

- GE/McDermott had been awarded contracts to build the relevant components for the German offshore projects BalWin4 and LanWin1, which will be connected in Unterweser.
- Hitachi Energy/Petrofac had been awarded the contracts for five Dutch projects to be connected in Borssele (IJmuiden Ver Alpha, Nederwiek 1), Eemshaven (Doordewind 1 and Doordewind 2) and Geertruidenberg or Moerdijk (Nederwiek 3). This cooperation will also realise the German connection LanWin5, which is to be connected near Rastede.
- GE/SMOP had been awarded three Dutch projects to be connected in the Maasvlakte, Rotterdam (IJmuiden Ver Beta, IJmuiden Ver Gamma and Nederwiek 2).

All agreements apply to both the offshore and onshore converter stations and the associated HVDC technology, which enables bidirectional conversion of direct and alternating current. The contracted suppliers will start the preparatory work for the projects immediately. In this way, all contracting parties will ensure that the projects under the framework agreement can be supplied on schedule by 2031. The total volume of the orders for the components of the 14 systems amounts to around €30 billion.

Marco Kuijpers, Director Large Projects Offshore of TenneT: "TenneT has also included in the contractual agreements for the contractors obligations related to safety, innovation and sustainability, which will be successively improved during the realization of the projects from today until 2031. For each topic, a roadmap is to be jointly developed. Each project is to be better than the

previous project. The contract partners and TenneT are hereby taking responsibility for making the supply chain as sustainable as possible with a view to the future.”

Background

When Belgium, Denmark, Germany and the Netherlands signed the Esbjerg Declaration at the North Sea Energy Summit in May 2022, they agreed to jointly install a capacity of at least 65 gigawatts (GW) of offshore wind energy by 2030. TenneT, which is Europe’s leading offshore transmission system operator, will provide around two-thirds of this volume, or 40 GW of grid connections. To this end, TenneT is building offshore grid connection systems with a total capacity of 20 GW each in Germany and the Netherlands.

As part of its 2GW Program, TenneT has developed the new global offshore standard for grid connection systems – together with leading global providers in the industry. This new standard combines TenneT’s extensive expertise in offshore grid development with a transnational approach. With a focus on harmonisation and standardisation of offshore grid connection systems, the program provides the necessary blueprint for the future and the necessary acceleration of the energy transition. With the increased transmission capacity of two gigawatts per system, the number of new systems can be significantly reduced compared to previous offshore grid connections. The 2GW Program thus sets new standards for the European energy transition. It will provide Europe and its residents with more green energy in a safe and cost-efficient way – with as little environmental impact as possible.

Read more about TenneT’s 2GW Program: [The 2GW Program – TenneT](#)

About TenneT

TenneT is a leading European grid operator. We are committed to providing a secure and reliable supply of electricity 24 hours a day, 365 days a year, while helping to drive the energy transition in our pursuit of a brighter energy future – more sustainable, reliable and affordable than ever before. In our role as the first cross-border Transmission System Operator (TSO) we design, build, maintain and operate 25,000 kilometres of high-voltage electricity grid in the Netherlands and large parts of Germany, and facilitate the European energy market through our 17 interconnectors to neighbouring countries. We are one of the largest investors in national and international onshore and offshore electricity grids, with a turnover of EUR 9.8 billion and a total asset value of EUR 41 billion. Every day our 7,400 employees take ownership, show courage and make and maintain connections to ensure that the supply and demand of electricity is balanced for over 43 million people.

Lighting the way ahead together