The North Sea Summit
18th May – Esbjerg

THE NORTH SEA SUMMIT
A Green Power Plant of Europe

Europe is facing an energy crisis as well as the most serious security crisis since the Cold War. In response, Belgium, Denmark, Germany, the Netherlands and the European Commission gather at the North Sea Summit in the Danish city of Esbjerg on 18 May 2022.

The North Sea Summit highlights offshore wind as one of the keys to phase out fossil fuels in the EU. At the summit, the Heads of Government adopt a common vision for the North Sea as a Green Power Plant of Europe. Concretely, the Heads of Government sign a declaration that sets out the ambition to accelerate and increase the deployment of offshore wind and related infrastructure. The aim is to increase the aggregate capacity fourfold by 2030 and 10-fold by 2050, delivering at least half of the offshore wind needed to reach EU climate neutrality. Specifically, Denmark, Belgium, Germany and the Netherlands have set ambitious combined targets of at least 65 GW offshore wind by 2030 and at least 150 GW by 2050. In order to put these increased ambitions into action, energy ministers sign a declaration that specifies how to intensify the ongoing regional cooperation with a view towards establishing new energy islands and hubs in the North Sea.

The accelerated and increased buildout of offshore wind can contribute to ramp up electrification of transport, industry and heating and enable large-scale production of green hydrogen as well as green fuel for shipping and aviation. In this way, the summit delivers on the European Commission's REPowerEU plan to make Europe independent from Russian fossil fuels.

The North Sea Summit recognises the key role of private stakeholders. As developers of massive offshore projects and as leaders in the transformation of the demand-side, e.g. from gas to new sustainable fuels in heavy industry, shipping and aviation, the industry are crucial to phase out fossil fuel. Therefore, industry executives from across the value chain participate in a business conference that inaugurates the North Sea Summit.

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BUILD-OUT OF RENEWABLE ENERGY IN THE NORTH SEA

During the last 30 years, offshore wind energy has developed significantly. We are now regarding a large-scale technology providing energy for millions of people across Europe. Several EU Member States are bordering the North Sea, which has vast wind resources and huge potential for building out renewable energy.

The build-out of renewable energy in the North Sea is a key part of reaching climate neutrality in 2050 in the EU. Offshore wind produces renewable electricity, which will help reach climate neutrality and helps Europe become independent of Russian fossil energy and ensure security of supply.

In the EU, the currently installed offshore wind capacity amounts to 16 GW. The European Commission estimates that an objective of at least 60 GW installed offshore wind capacity by 2030 and 300 GW by 2050 is within reach. According to the European Commission, these objectives would help deliver on the green electrification of society, would enable decarbonisation of hard-to-abate sectors with green hydrogen and would contribute to create jobs and growth. To this end, there is a need for ambitious national targets and measures.

In Denmark, 2.3 GW offshore wind capacity has been installed. This corresponds to the electricity consumption of 2.3 million households. Furthermore, 0.35 GW before the end of 2023, and the 1 GW by 2027 at the latest is being realised. In addition, political decisions have been made to add another 15 GW offshore wind, including the installation of 2 GW in the Baltic Sea and 3 GW added capacity by 2030. After 2030, installation of an energy island in the North Sea with a capacity of 3 GW offshore wind by 2033 and 10 GW offshore wind as quickly as possible, aiming for 2040, is planned. The Danish Government has also proposed further 1-4 GW offshore wind capacity before the end of 2030. In addition, Denmark has set a national target of 4-6 GW electrolysis capacity by 2030.

In Germany, 7.7 GW offshore wind capacity has been installed. Furthermore, the national target for offshore wind in 2030 has been increased from 20 to 30 GW, with additional goals of 40 GW by 2035 and 70 GW by 2045. Moreover, Germany has a goal of achieving an electrolysis capacity of 10 GW by 2030 for green hydrogen production.

In the Netherlands, approximately 2.5 GW offshore wind capacity has been installed. The Netherlands has increased its target from 11.5 GW to 21 GW offshore wind capacity around 2030 and expect a minimum need of 38 GW in 2050. Furthermore, the Dutch government has set a national target of 4 GW electrolysis capacity by 2030 to generate green hydrogen.

In Belgium, the ambition is to double the capacity of offshore wind energy within the next 10 years. Furthermore, Belgium is working to reach a target of 8 GW offshore wind capacity by 2040. Belgium is working to establish an energy hub, which is also expected to include the production of hydrogen.

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THE PORT OF ESBJERG

Since 1874, the Port of Esbjerg has been a major hub for maritime transport and trade between Denmark and the rest of the World. Since the turn of the century, the Port of Esbjerg has created 4,200 jobs within the offshore wind industry.

Today, the Port of Esbjerg is an international, multimodal transport centre and an important Scandinavian gateway to the whole world. It is Europe's leading port in terms of handling and shipping out wind power, and the port will play a key role in the development of offshore industry and fulfilment of the ambitious targets on offshore energy presented by both EU Member States such as Denmark, Germany, the Netherlands and Belgium, but also by the European Commission.

The development of offshore industry on the Port of Esbjerg took off with the establishment of Horns Rev I, which was one of the first large offshore wind farms in the world, and in 2000 when the Port of Esbjerg went from being state-owned to a municipal self-governing port. Since then the Port of Esbjerg has invested in several expansions, and has further planned in the coming years to meet the demands from the offshore industry and lead the way for future growth. Today, the Port of Esbjerg has special-build facilities and flexible areas for transport, preassembly, shipment and service of offshore wind turbines.

80 percent of the total offshore wind capacity installed in Europe today was shipped from the Port of Esbjerg. Besides the Danish offshore wind farms Horns Rev I and Horns Rev II, the Port of Esbjerg has been the primary base for a number of foreign offshore wind farms. Among these are Butendiek, Northwind, Sandbank, Dantysk, Humber Gateway and Westermost Rough. In 2020, a total capacity of 1,100 MW offshore wind was shipped from the port. In 2021, the Port of Esbjerg was involved in the shipment of components for more than 4,000 offshore wind turbines. The port has been involved in the development of more than 22.5 GW offshore-based renewable energy since 2001.

By the end of 2020, the Port of Esbjerg became a member of the 'Getting to Zero Coalition', a global coalition established in 2019 by a number of prominent players from the shipping business. The goal of the coalition is to launch the first commercially viable zero emission vessels by 2030. Until then, the port of Esbjerg is a leader in onshore facilities for ships and has also developed the world's first Carbon Management System for ports.

Historically, the port has been base for oil and gas activities in the Danish part of the North Sea, since Denmark began extracting oil and gas in the North Sea more than 50 years ago. Companies representing the entire value chain in the oil and gas industry are still present at the port. Activities vary among a number of different areas, from supplying and servicing existing installations to building completely new platforms, and from maintenance with hundreds of employees rotating on the platforms to rig repair, safety training and decommissioning.

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BILATERAL ENERGY ISLAND COOPERATION IN THE NORTH SEA

With the establishment of energy hubs and islands in the North Sea, Europe is taking its first step towards realising the vision of a connected energy system in the North Sea. The purpose of the cooperation between Denmark, Belgium, Germany and the Netherlands is to establish interconnections between the energy island in the Danish EEZ in the North Sea and the respective countries via bilateral agreements. This enables export of green electricity to neighbouring countries, thus supporting the green transition in Europe while enhancing energy security. Furthermore, the bilateral agreements will contribute to the European Commission's ambition of at least 300 GW offshore wind by 2050 to achieve climate neutrality.

Bilateral cooperation on ministerial level creates the foundation for cooperation between transmission system operators (TSOs) – i.e. the Danish TSO Energinet and a relevant partner-TSO – who investigate the technical and economic aspects of the project and draw up formal agreements on the realisation of an interconnection. Concurrently, the authorities ensure full support for the establishment of interconnections via agreements and political engagement.

Multilateral cooperation

The four countries will sign a joint declaration, the *Esbjerg Declaration*, at the North Sea Summit, which will set out the overall vision of a green European leadership, independence of Russian energy and regional cooperation for the build-out of offshore renewable energy. This will be realised through cooperation between the four countries, among other things by planning to establish another energy hub or island in the North Sea besides the islands already planned. An important part of the multilateral cooperation of the four countries is the bilateral agreements.

Cooperation between Denmark, Belgium, Germany and the Netherlands was initiated on the basis of political declarations of intent signed in December 2020 and January 2021.

Bilateral agreements

Danish cooperation with Belgium, Germany and the Netherlands is currently in different phases. This is reflected in the political agreements that will be signed at the North Sea Summit.

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Denmark and Belgium

Denmark and Belgium will sign an agreement at the North Sea Summit on 18 May 2022. The agreement involves selling shares of Danish renewable energy to Belgium [in the period of 2021-2025]. The agreement confirms the principle saying that renewable energy produced by the energy island belongs to Denmark, and correspondingly for the Belgium energy hub. The funds from the sale of renewable energy shares to Belgium will be used to co-finance the costs related to the energy island, production of renewable energy and green gasses. Denmark and Belgium previously signed a Memorandum of Agreement at the "Wind Europe" conference in Copenhagen on 23 November 2021. The Danish Minister of Climate, Energy and Supply and the Belgian Minister of Energy signed the agreement, while the national transmission system operators (TSOs), the Danish Energinet and the Belgian Elia simultaneously signed a "Cooperation Agreement". These political agreements set in place the principles for working together on a "hybrid interconnector" in the North Sea from the energy island to Belgium with expected commissioning in 2033. Flanders is working on a parallel agreement.

Denmark and the Netherlands

The cooperation between Denmark and the Netherlands is at an early stage and aims for a possible interconnection between the Danish energy island and a Dutch energy hub at a later stage of the energy island in the North Sea, likely around 2035. At the North Sea Summit, the Dutch Minister for Climate and Energy Policy and the Danish Minister of Climate, Energy and Supply will sign a Ministerial endorsement supporting a Joint Recommendation on scenarios for a possible interconnection. The scenarios will be further analysed by the national TSOs, Energinet and the Dutch TenneT and Gasunie in 2022. On basis of the analysis, Denmark and the Netherlands will start negotiations on the realisation of an interconnection between the countries and on the possibility of signing a more binding agreement.

Denmark and Germany

The cooperation between Denmark and Germany rests on a Letter of Intent signed in December 2020. Until now, the cooperation has mainly focused on the Energy Island Bornholm, while the North Sea cooperation remains at a very early stage. Currently, focus is on the possibility of carrying out TSO-analysis that might enable decisions on releasing an interconnection from the energy island in the North Sea to Germany in the future.

At the North Sea Summit, the German Minister of Economy and Climate and the Danish Minister for Climate, Energy and Utilities will sign a Letter of Intent regarding cooperation on Power-to-X and sector integration, setting a framework for future cooperation that will support the ambition to accelerate the transition from imported fossil fuel to European renewable energy.

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ENERGY ISLANDS

The build out of offshore wind in the North Sea will contribute to the future electrification of Denmark and Europe, where a much larger share of our energy consumption must come from renewable energy sources. At the same time, the electrification of society with green electricity will reduce our dependence on fossil fuels such as Russian oil, coal and gas.

The energy islands are artificial islands (such as the Danish energy island in the North Sea) or technical facilities on actual islands (such as the Danish energy island to be placed on Bornholm), which can be connected to surrounding offshore wind farms and the electricity grid of other countries. Consequently, it will collect and distribute electricity directly to consumers in several countries, supplying households and businesses with green electricity. The energy islands will create the opportunity to produce green electricity in unprecedented amounts. This will contribute to the phase-out of fossil energy production.

According to the European Commission, Europe must increase its total offshore wind capacity to 300 GW by 2050 in order to reach climate neutrality. The North Sea has the potential to deliver a large share of this capacity and become a green powerhouse for Europe.

To maintain a high security of supply in a future where energy comes from renewable energy and is more dependent on the weather, it is necessary to harvest the full potential of the North Sea and optimise how we use our wind resources by securing a cross-border energy infrastructure. The energy islands will contribute to securing this.

The energy islands will ensure that Europe can electrify large parts of society while contributing to making the electricity consumption of households and companies greener. The energy islands also have potential to become hubs for energy storage or for conversion of green electricity into green fuels for heavy transport such as aviation and shipping through Power-to-X technologies.

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DECLARATIONS AT THE NORTH SEA SUMMIT

At the North Sea Summit in Esbjerg on 18 May, Heads of Governments and Energy Ministers from Denmark, Belgium, Germany and the Netherland will sign separate declarations.

The Esbjerg Declaration

The declaration by the Heads of Government, *the Esbjerg Declaration*, will set out the overall vision of a green European leadership, independence of Russian energy and regional cooperation for the build-out of offshore renewable energy. Therefore, a joint target is set to increase the total capacity of offshore wind 10-fold to a minimum of 150 GW by 2050, which corresponds to more than half of the offshore wind capacity needed for the EU to achieve climate neutrality according to the European Commission's *Strategy on Offshore Renewable Energy*. In addition, the countries have set a target to quadruple the total capacity of offshore wind to at least 65 GW in 2030.

Declaration by energy ministers

The statement by the energy ministers indicates how the vision of the Esbjerg Declaration can be realised. The energy ministers declare that they will:

- Increase the national build out of offshore wind and green hydrogen.
- Cooperate on interconnections to the first energy island.
- Maximise the capacity of the first energy island to 10 GW by 2040 the latest.
- Plan the establishment of another energy hub or island in the North Sea.
- Screen the North Sea in order to establish more energy hubs or islands in the North Sea in the future.
- Work for faster procedures for approving new energy projects nationally and in the EU.
- Prioritise offshore wind as an important offshore activity.
- Ensure more EU-funds for offshore wind projects to reduce investor risks.