

# Join the green transition at Port of Hirtshals





OUR TRANSFORMATION AND EXPANSION

# Port of Hirtshals is going greener and bigger

Port of Hirtshals is currently undergoing the biggest transformation in its 100-year history. Part of this transformation is the installation of up to nine new wind turbines, with the requirement that the electricity from these new wind turbines should be used for green business in the port.



# “Our aim is to support the onshore infrastructure and synergies between the port-related industries in Hirtshals. We have big ambitions and want to be the greenest port in Europe.”

**PER HOLM NØRGAARD**  
CEO, PORT OF HIRTSHALS

An extensive expansion of Port of Hirtshals will make the port fit for the future by improving both cargo handling facilities and the maritime conditions by enlarging the port entrance and manoeuvrability within the port and furthermore expanding the port with new berth facilities and commercial land.

A key part of the transformation is the green development of the port. With an increasing number of port activities in Hirtshals and the urgent need to decarbonise the global transport and maritime sectors, the need for more green energy solutions is growing.

## **The greenest port in Europe**

Port of Hirtshals is an important part of the green transition and we want to support the change from fossil fuels to carbon neutral energy production and consumption by developing the production and use of green energy in and around Hirtshals. Our aim is to support the onshore infrastructure and synergies between the port-related industries in Hirtshals. We have big ambitions and want to be the greenest port in Europe.

Hirtshals is located in the northwest of Denmark. An area known for its strong winds. This makes

Hirtshals an exceptional location for wind turbines and there are currently four onshore wind turbines in the port area.

Part of the port expansion is dedicated to the installation of even more wind turbines. It is our ambition that a future partner for the development, construction, and operation of new wind turbines will also be deeply involved in the green development of Port of Hirtshals and support the industrial need for renewable energy.

## **Market dialogue regarding wind turbines**

We invite interested partners—companies or consortia—to participate in a market dialogue regarding these brand-new wind turbines at the port. We hope to identify relevant market players as well as the commercial, legal, professional, and regulatory conditions required for the right to build, own, and operate the wind turbines.

We look forward to initiating a constructive and enlightening market dialogue to create a greener future together.

**Per Holm Nørgaard**  
CEO, Port of Hirtshals



3D visualization of the port expansion



## OUR TRANSFORMATION AND EXPANSION

# Expansion prepares Port of Hirtshals for the future

**In the coming years, Port of Hirtshals will be expanded with a new entrance and an outer port basin as well as a 400,000 square metre logistics area for trailers and lorries to support the port's continued development.**

The expansion will make it easier to call Port of Hirtshals with larger ships and in harsher weather conditions, making the port more attractive to both existing and new customers. At the same time, loading and unloading facilities for ships will be improved with ro-ro berths and additional quay metres for commercial land.

The new business area is among other things aimed at companies that want to collaborate with others to promote the green transition and industrial symbioses. For example, companies involved in the production of climate-friendly

fuels for shipping, power-to-x, circular industries, or other technologies based on future solutions supporting the use and production of green electricity.

The development of Port of Hirtshals can also pave the way for the transport sector to create more sustainable transport solutions. Port of Hirtshals is already part of the EU's Trans-European Transport Network (TEN-T) and the expansion of the port will contribute to better use of the overall capacity of the Northern European sea, road, and rail network.



# Becoming the greenest port in Europe

An important part of the development of Port of Hirtshals is a future wind turbine project, which will contribute to the port's strategic goal of becoming the greenest port in Europe. We have already taken several initiatives that will enable us to realise our plans, including:

**GREENPORT SCANDINAVIA:** The Port of Hirtshals is working with INEOS Energy, Wintershall DEA, Biocarb Solution, Evida, Greenport North, and Aalborg Portland to transport and store CO<sub>2</sub> from Danish and foreign CO<sub>2</sub> emitters. The port is ideally located in relation to the storage field in the North Sea.

**THE EFFORT PROJECT:** The aim of the project is to increase energy efficiency at Port of Hirtshals through data-driven analysis of the production and consumption of renewable energy. The project is led by Aalborg University and the output will consist of guidelines and management tools for the future development of the port with energy flexibility, sector coupling and digitization as keywords.

**EXISTING WIND TURBINES:** In 2019, four 4.2 MW wind turbines were installed at the port as the first commercial wind turbines in Denmark. The wind turbines are located right next to the Skagerrak Sea, and due to the wind conditions in the area, the location is considered as one of the best in Denmark.

**CLIMATE ACCOUNTING:** A valuable overview of the port's total CO<sub>2</sub> emissions is provided by the port's annual carbon footprint accounting, which also identifies areas with the greatest potential to reduce emissions and achieve the port's strategic goal of zero emissions by 2025.

400.000

Port of Hirtshals will be expanded with a 400,000 square metre logistics area for trailers and lorries to support the port's continued development.



An aerial photograph of a wind turbine tower and nacelle, viewed from a low angle looking up. The tower is white and has some technical markings. The nacelle is also white and is positioned horizontally. The background shows a vast, flat landscape with fields and some trees under a clear sky. The image is overlaid with a semi-transparent white shape that frames the text.

# Facilitating synergies with onshore infrastructure

The global shipping industry is amid a transition from fossil fuels to green and renewable fuels, and Port of Hirtshals is already actively involved in this transition.



The production and use of renewable energy is an important part of the expansion of Port of Hirtshals. The integration of green energy from new wind turbines at the port area into existing and new companies will support the development of further power-to-x production in Hirtshals.

Port of Hirtshals is therefore looking for companies or consortia that can develop, build, and operate several new wind turbines and support the green development of the port.

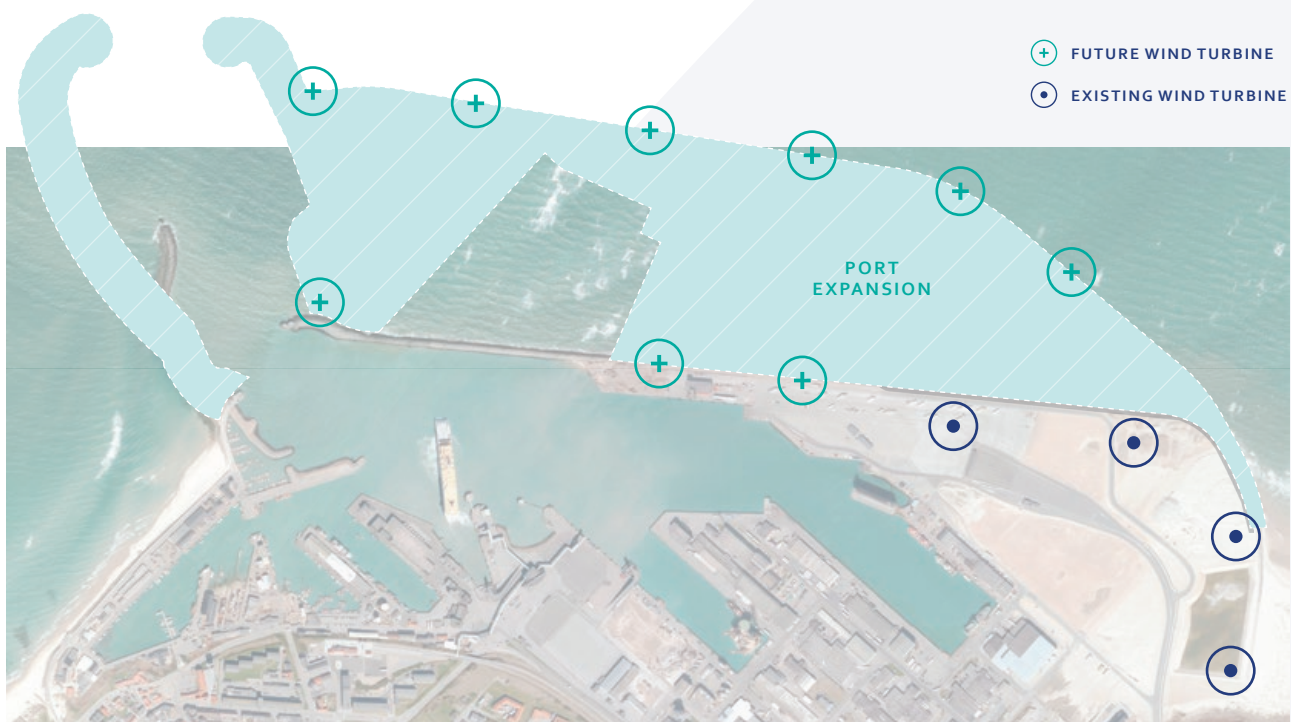
As one of the first port operators in Northern Europe, Port of Hirtshals is exploring the possible conditions for a concession on the condition that the energy produced by the new wind

turbines is integrated into the industrial production of marine fuels or other industrial activities at the port.

Our vision is to lay the foundation for a future extensive industrial development where waste from one company or production is transformed into a valuable resource for others. As a facilitator of port-related industries and activities, we want to support onshore infrastructure synergies between existing and future port businesses.

The construction of more wind turbines at Port of Hirtshals will help to meet the basic needs for energy and electricity.

**Port of Hirtshals is looking for companies or consortia that can develop, build, and operate several new wind turbines and support the green transition of the port.**



A CIRCULAR MINDSET

# Strong cooperation between companies at Port of Hirtshals

**In 2022, Biomega Group, a leading Norwegian bioscience company, inaugurated its new biorefinery in Hirtshals. Biomega transforms fresh salmon parts from local salmon processing companies into high-quality salmon proteins and oils for the premium food, pet food, health, and nutrition sectors.**

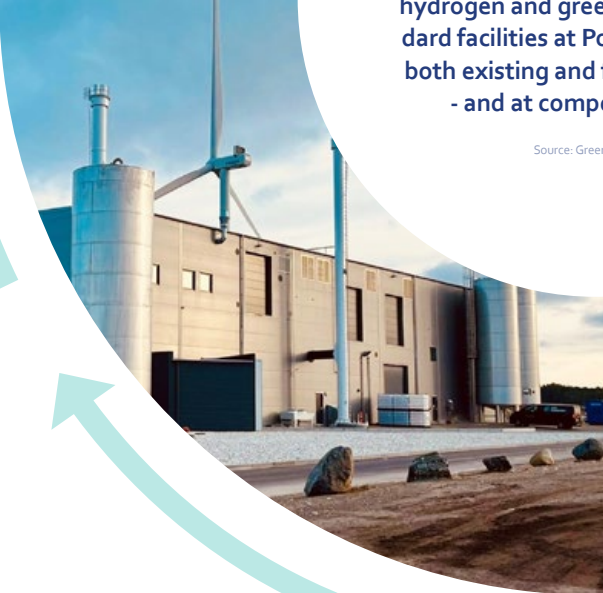
- Hirtshals is one of the most important salmon hubs in Northern Europe. Approximately 27 per cent of the salmon is cut off during the processing and this is the most important raw material in our production. Easy access to fresh salmon parts was a key factor in choosing the location for our new biorefinery. In addition, our production requires large amounts of energy and the greener the energy the better. Biomega Group is committed to climate-reducing initiatives, and

being able to cooperate with other companies in Hirtshals and use their surplus resources is a great advantage for us, says Nick Christensen, Plant Manager, Biomega Group.

The circular mindset, where one company's residual raw materials are used as valuable raw materials for another company, is at the heart of Port of Hirtshals' ambitions for industrial symbiosis.



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**MAIN PROPOSITION**

To facilitate green electricity, green heating, green cooling, green hydrogen and green oxygen as standard facilities at Port of Hirtshals for both existing and future companies - and at competitive prices.

Source: Greenport North


# Greenport North - a catalyst for green transition and growth

Greenport North, the development company of Port of Hirtshals, helps green companies to find potential partners. Greenport North assists in connecting businesses and exploring how to co-operate and provides access to port, utility, investor, and government services.

In other words, Greenport North is a one-stop shop for green investment, and the ambitions are high. By 2027, for example, Port of Hirtshals will be able to offer green energy to a large number of companies. The necessary framework for the production of new green fuels is already in place, and the Smart Energy System, where surplus energy is recycled in an industrial symbiosis, is up and running.

Among other things, an innovation platform is being set up. The platform will facilitate sustainable business development for commercial players in the energy, transport, and circular economy sectors.

The overall aim of Greenport North is to optimize the framework conditions and value propositions at Port of Hirtshals through new green energy solutions, sector coupling and circular economy. In this way, the green transition will be accelerated and the shift from fossil fuels to renewable energy is supported to achieve the 2030 goals of a 70 percent reduction in CO<sub>2</sub> emissions.



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**70%** reduction

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## Greenport Scandinavia - a hub for CO<sub>2</sub> storage and shipping

Port of Hirtshals, together with several partners, has established Greenport Scandinavia, which is one of the most visionary CO<sub>2</sub> storage projects in Northern Europe.

The aim is to create Europe's largest hub for CO<sub>2</sub> storage in empty North Sea oil fields, shipped from Port of Hirtshals.

Agreements have already been signed with Danish cement manufacturer Aalborg Portland and a number of biogas plants to transport and store CO<sub>2</sub> from Hirtshals. The Ger-

man company Wintershall DEA will establish the export of significant quantities of CO<sub>2</sub> from Germany to Denmark.

The partners in Greenport Scandinavia represent the entire value chain, from emissions to capture, transportation, and storage of CO<sub>2</sub>. The companies in Greenport Scandinavia are INEOS Energy, Wintershall DEA, Aalborg Portland, Port of Hirtshals, Biocarb Solution, Evida and Greenport North.





A HUB FOR A WIDE RANGE OF ACTIVITIES

# Why invest in Hirtshals?

A unique geographical and strategically important location at the North Sea, a rich business community and ambitious plans for development and green transition make Hirtshals an attractive place to invest.





Danish Salmon, Hirtshals

The city has become a hub for a wide range of activities within the transport sector and the maritime industry, and the ambitious plans for the future of Port of Hirtshals make the area one of the most interesting business areas in Denmark.

#### HUB FOR TRANSPORT AND LOGISTICS

Port of Hirtshals is one of the most important hubs for transport and logistics in Scandinavia and Europe with direct sailing routes to Norway, Faroe Islands, Iceland, and Scotland. The recent development in freight transport is expected to accelerate further in the coming years due to the environmental and congestion benefits of sea transport.

#### WINDY CONDITIONS

Hirtshals is one of the windiest places in Denmark, making it an ideal location for wind turbines. An important part of the port expansion is to create space for the establishment of even more wind turbines.

#### PORT EXPANSION

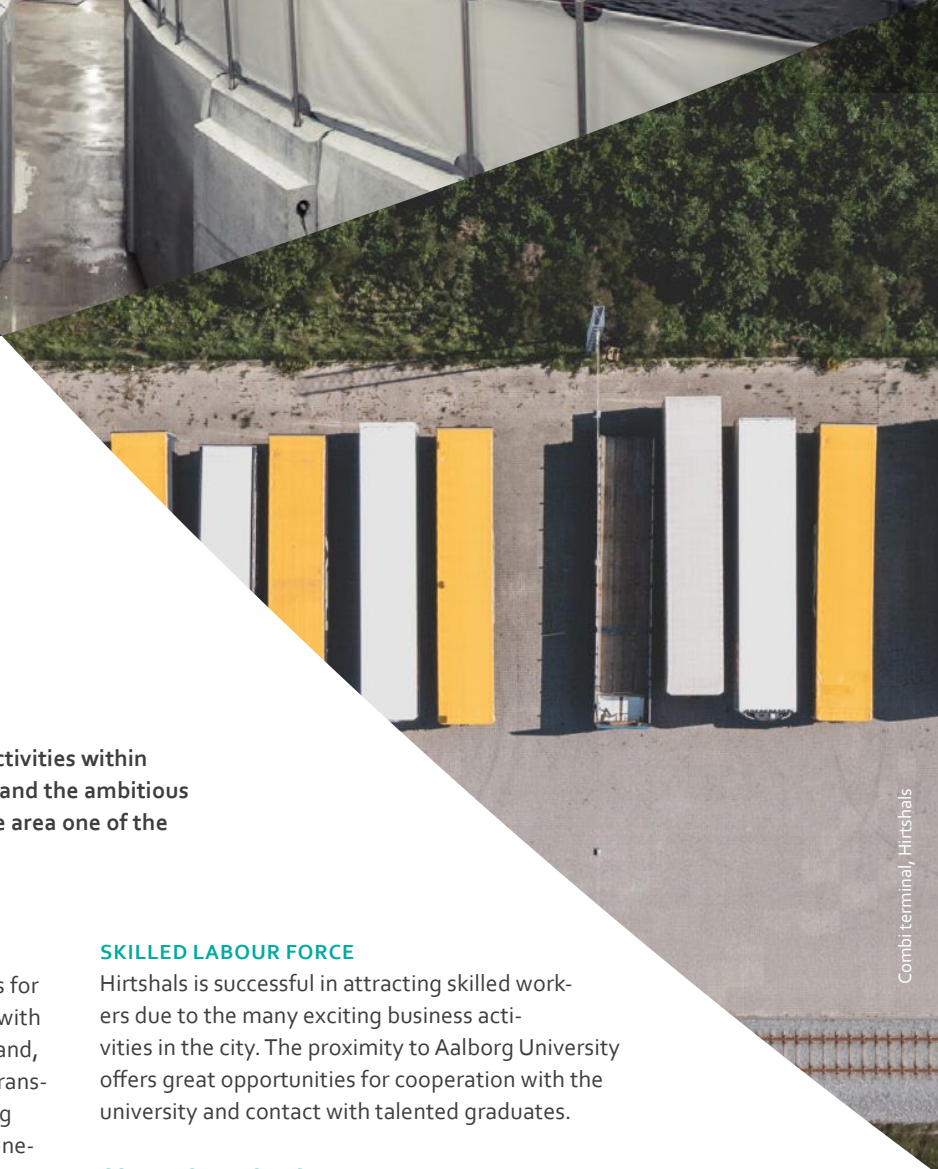
The port expansion will help to meet the needs of the maritime industry and enable Port of Hirtshals to maintain its status as an important European hub for salmon, transport, and logistics.

#### SKILLED LABOUR FORCE

Hirtshals is successful in attracting skilled workers due to the many exciting business activities in the city. The proximity to Aalborg University offers great opportunities for cooperation with the university and contact with talented graduates.

#### COLLABORATION IS A KEY DRIVER

There are strong links between the many players at Port of Hirtshals, whether they are involved in logistics, fishing, or the green solutions of the future. Activities related to the green transition are coordinated by experts from the development company Greenport North, who have many years of experience in areas such as renewable energy and the circular economy.



Combi terminal, Hirtshals

FAVOURABLE BUSINESS ENVIRONMENT

# Why invest in Denmark?

Denmark is a leader in renewable energy and offers great business opportunities for the fast-growing cleantech sector.



Avedøre CHP plant, Copenhagen



The Inner Harbour Bridge, Copenhagen





Denmark is a leader in renewable energy and offers great business opportunities for the fast-growing cleantech sector. Over several decades, Denmark has created a favourable business environment for cleantech, and an ambitious energy policy has put Denmark at the forefront of renewable energy.

For example, Denmark is a leader in wind power, bioenergy, smart grids, and green data centres. Denmark has a complete renewable energy value chain and is already home to several CCUS projects, including one in Hirtshals.

Denmark has some of the best natural wind conditions in the world, and Denmark offers good conditions for e.g. large power-to-x projects because the country is surrounded by water and is a leader in wind energy.

In addition, Denmark is the easiest place in Europe to do business. For example, it is easy to get in touch with the authorities.

40 %

Danish companies have a 40% offshore wind market share in the EU

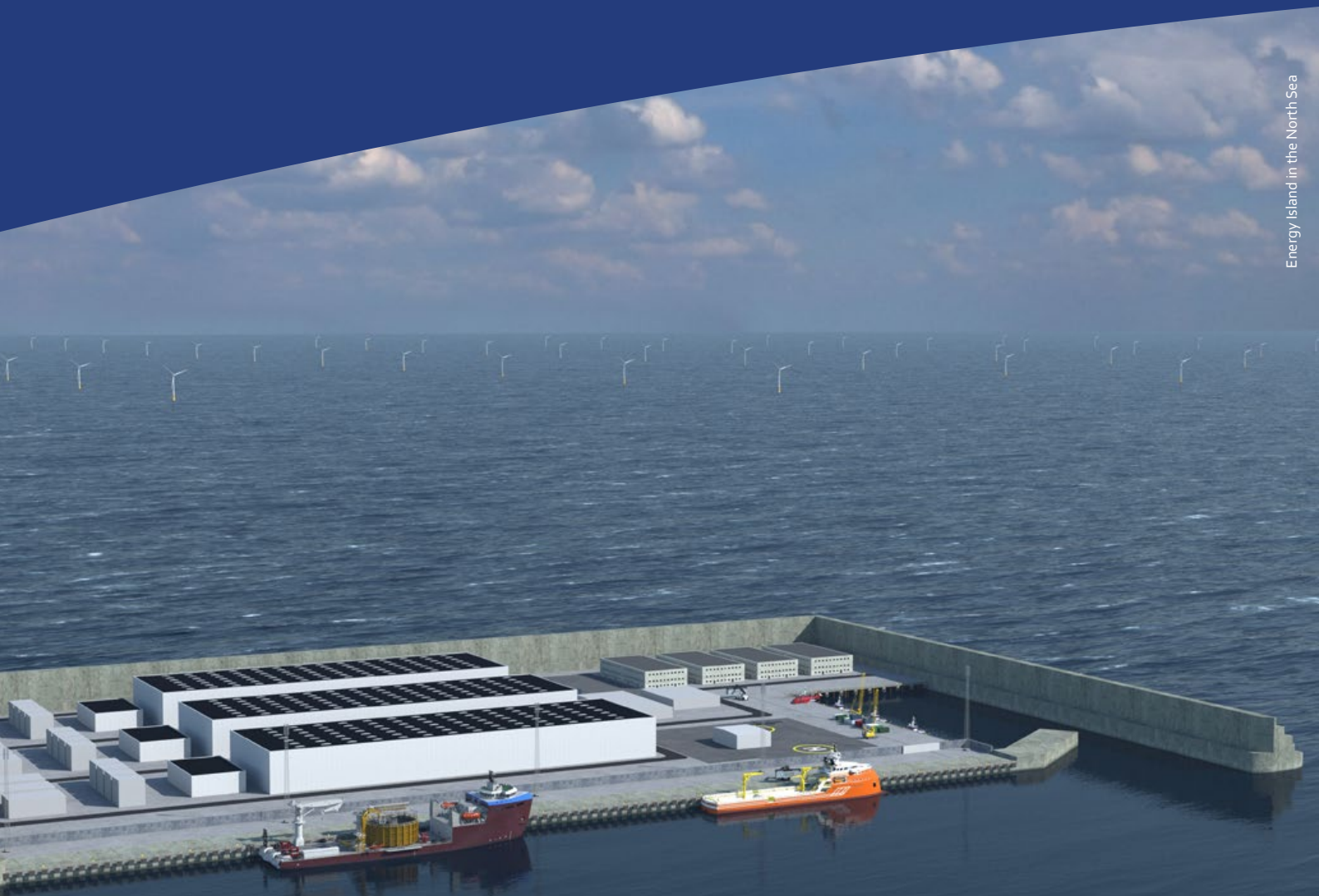
48 %

Wind power meets 48% of Denmark's current electricity needs. The goal is to meet 100% of Danish needs by 2030.

75 %

Today, more than 75% of the energy in the Danish electricity grid is from renewable sources – one of the highest levels in the world, and 100% green electricity in the grid is foreseen by 2027.

Source: Ministry of Foreign Affairs of Denmark



CONTACT

# Want to know more?

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