



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.