



This is an extract from the final report. To see the entire document, please see the 'Full documents' section on the website.

### Aim of an Energy Island

The fight against climate change requires new sustainable energy solutions, as individual sources such as onshore wind, solar, wave etc. will not be sufficient. The aim of an energy island in the proposed locations would be to facilitate sustainable development goals 7, 9 and 11. By expanding Scotland's current and future production of renewable energy, an energy island would help achieve net zero emissions of all greenhouse gases by 2045; a goal defined by the Scottish government (Scottish Government, 2024b). Additionally, this design would increase energy security in Scotland, making the country more economically resilient against energy blackmail by reducing dependence on imported fossil fuels. The North Sea also has sustainability goals in place – “The North Sea Transition deal”, which strives for decarbonisation of the oil and gas industry to aid net zero goals. This hopes to transform the North Sea to net zero carbon status by 2050 (Maritime Spatial Planning, 2024). An energy island would be a significant step towards harnessing the large-scale green energy production capabilities of the North Sea. “New and emerging technologies” are recognised by the North Sea Transition Authority as being crucial for decarbonisation (North Sea Transition Authority, 2023a). The Scottish Government has also set a specific goal of increasing the countries offshore wind capacity to 11 Gigawatts by 2030 (Scottish Government, 2020). Currently Scotland has only 1GW of operational offshore wind, with an increase to 5.6GW when consented farms are completed. These goals are summarised in the graphic below.



Figure 1- United nations SDGs targeted by an energy island (United Nations, 2023)

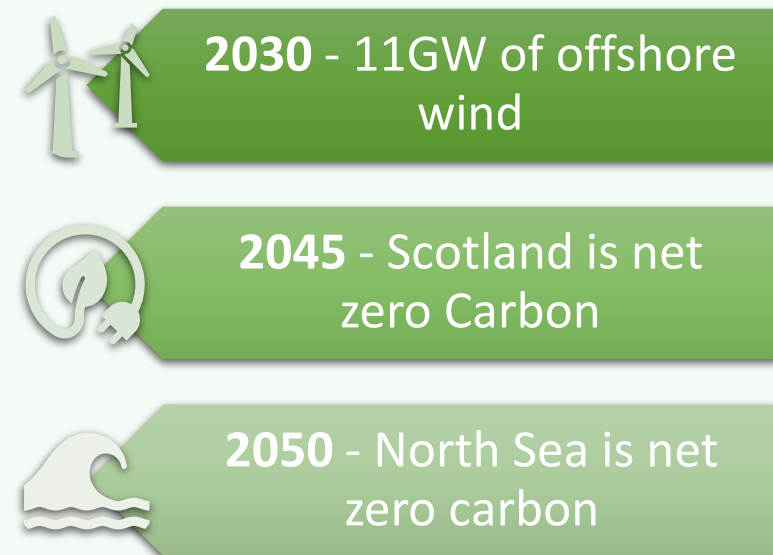


Figure 10- Sustainability Goals