



Viking Energy

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The Project

The Viking Wind Farm is a joint venture between the Shetland community and the utility company SSE. It is hoped the wind farm will be operational in 2024.

The project got planning consent from Scottish energy minister Fergus Ewing in April 2012 but the decision was challenged through the courts unsuccessfully by anti-wind farm campaigners.

In November 2018 an application was made to the Scottish Government seeking to increase the maximum permitted tip height from 145m to 155m. This was approved in May 2019, allowing Viking to choose from the latest wind turbine models on the market to increase the renewable energy generation potential of the wind farm and make it more cost-competitive.

The wind farm will consist of 103 wind turbines set around the central Mainland of Shetland. The project was modelled using a 4.3MW turbine, providing enough electricity to meet the needs of up to 475,098 homes^[1] while saving 0.5 million tonnes of carbon dioxide (CO₂) emissions each year.^[2]

It is hoped that Viking will become one of the most productive onshore wind farms in the world.

Around 140 people will be needed to work on the project during construction and around 35 permanent jobs could be created.^[3] As a result of the community investment to date, millions of pounds could be injected into the Shetland economy annually. In addition, the islands would receive around £2.2 million in community benefit every year^[4] if a 4.3MW turbine is installed.

The original partnership deal between the Shetland community and SSE was signed in 2007. In May 2009 an application was submitted to the Scottish Government for the construction of 150 turbines. This was followed in September 2010 by a revised application, known as an addendum, reducing the number of turbines to 127. Of these, permission was granted for 103 and denied for 24 adjacent to Scatsta Airport.

At the same time that the wind farm is under construction, a high-voltage cable will be laid to link Shetland to the UK electricity grid.

Notes

1. Energy yield per annum is calculated by multiplying installed capacity by hours in the year by the estimated average wind farm capacity factor expressed as a fraction of 1 (estimated capacity factor used = 46.3% as per Scottish Government/SEPA Carbon Calculator tool). This is $442.9 \times 8760 \times 0.463 = 1,796,349.2\text{MWh}$. Statistics from Renewable UK (2018) assume annual UK average domestic household consumption as 3.781MWh. Homes powered equivalent is calculated by dividing the total energy produced by the average household electricity consumption = 475,098 homes.