



# Smart grid converter Faroe Islands

Can the Faroe Islands be a smart microgrid?

"The energy system in the Faroe Islands is an impressive example of how all available energy resources can be integrated into a smart and innovative microgrid," says Vehkakoski.

How will the Faroe Islands' virtual power plant system work?

Designed to protect against sudden power failures, or decreases in the power production, the virtual power plant system, Power Hub, developed by Dong Energy, will provide the Faroe Islands with a more secure energy supply, allowing them to integrate the five-fold increase in wind generation planned over the next two years.

What is DONG Energy doing in the Faroe Islands?

Dong Energy and its Faroese partner SEV launched a smart grid system at Tórshavn in the Faroe Islands. The Faroe Islands project uses a virtual power plant to recreate balance in an island power system by decoupling large industrial units automatically, in less than a second from the main power system and thereby avoid systemic blackouts.

Will the Faroe Islands use more green energy in 2025?

Even more conservative scenarios predict that the Faroe Islands' current electricity consumption of approximately 350,000 MWh per year will increase to approximately 450,000 MWh in 2025. "The current discussion recommends using more green energy and especially the potential for wind energy is quite high," says one of the islanders.

Are there renewables in the Faroe Islands?

"In the Faroe Islands, we are blessed with renewables: we have wind, hydro and some sun in the summer; we also have tidal and wave power where we can see great potential," says Nielsen. Since announcing its green vision in 2014, SEV has already done a lot to increase the share of renewables in its energy mix.

What is the main industry in the Faroe Islands?

Fishing, and has been for many decades, the main industry in the Faroe Islands with its products, including farmed salmon, representing more than 95% of total exports, and around 20% of Faroese GDP. "Producing fish meal and oil requires quite a lot of energy.

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Two wind/PV power plants and PHES are examined on the case of two systems, the main grid comprising 11 interconnected islands and the autonomous island of Suðuroy, which has 10% of the population. It was found that vRES penetration of over 90% can be reached with storages in technically and economically feasible way.

Dong Energy and its Faroese partner SEV have launched what they believe is a unique smart grid system at Tórshavn in the Faroe Islands. The Faroe Islands is the first place in the world where a virtual power plant is used to deliver fast frequency demand response, which can restore balance in an island power system by decoupling large ...

The Faroe Islands are aiming for complete sustainable energy supply by creating a smart and innovative micro-grid. Far from continental Europe and surrounded by a vast sea, the Faroe Islands lie in the middle of the North Atlantic between Iceland and Norway.

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Groundbreaking smart grid innovation. The Faroe Islands is the first place in the world where a virtual power plant is used to deliver fast frequency demand response, which can restore balance in an island power system by decoupling large industrial units, automatically, and in less than a second, from the main power system and thereby avoids ...

Synchronous condenser technology is helping SEV, the main electricity supplier, to restore spinning inertia vital to keep the Faroe Islands power grid in balance as the drive towards renewable energy resources increases. The third unit will be installed on the island of Borðoy, which is connected to the main grid

The expected benefits of the FFDR system are an increase in the security of power supply on the islands, a decrease in the cost and pollution of running fossil power plants to provide inertia, and a decrease in the size of the needed battery solution with the ...

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