

# **Faroe Islands energy smart**





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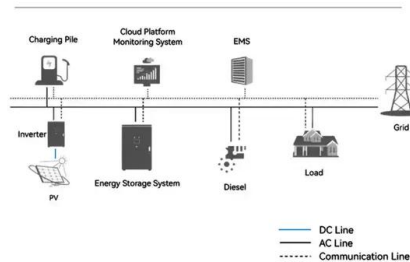
### Shining a light on a smart island

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.

### Energy

There is no shortage of renewable power in the Faroe Islands, due to the ocean currents and tides of the Northeast Atlantic and an abundance of strong wind. With an existing network of hydropower from mountain streams and lakes, ...

#### System Topology



### How the Faroe Islands Points to the Future of Energy

The ambitious energy goals in the islands' comprehensive strategy include becoming 100% reliant on renewable energy by 2030 and carbon neutral by 2050, setting a global benchmark for intelligent grid optimisation and renewable energy leadership. This will include significant development of renewable energy production, such as expanding wind

### Green Energy Faroe Islands - 100by2030

As a community of 18 islands, main natural supplies for green energy projects are just



abundant everywhere in the Faroe Islands -- strong winds blow most of the time (and create horizontally falling rains at times) - so wind parks are an obvious choice. The ocean offers ideal conditions for innovative tidal energy and other technologies.



## The impact of offshore energy hub and hydrogen integration on the Faroe

This study explores the integration of offshore wind energy and hydrogen production into the Faroe Islands' energy system to support decarbonisation efforts, particularly focusing on the maritime sector. The EnergyPLAN model is used to simulate the impact of incorporating green hydrogen, produced via electrolysis, within a closed energy system.

## Energy scenarios for the Faroe Islands: A MCDA methodology ...

The work in this paper assesses the environmental, social, technical and economic concerns of different energy scenarios on the Faroe Islands and provides a ranking of solutions through the use of Multi-Criteria Decision Analysis (MCDA) and ...



## Faroe Islands: Towards 100% R.E.S. penetration

The achievement of the 100% energy independence in the remote insular systems of the Faroe Islands is proved to be a real challenge. The tops of Faroe Island is truly blessed with abundant wind and hydrodynamic



potential and excellent sites for PHS installations, integrated in a breath-taking, majestic landscape.

### Faroe Islands aim for 100% renewables by 2030 using BESS

The Faroe Islands have made a significant leap in their renewable energy journey, thanks to the integration of a battery energy storage system (BESS) from Hitachi Energy. During 2022 and 2023, the BESS has increased the share of renewable energy, primarily wind and hydro, in the islands' energy mix to 50% in 2023.



### Smart grid solution for Faroe Islands

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 ...

### Energy

There is no shortage of renewable power in the Faroe Islands, due to the ocean currents and tides of the Northeast Atlantic and an abundance of strong wind. With an existing network of hydropower from mountain streams and lakes, converting other sources of natural power into affordable green energy is a top priority.





## Pathways towards 100% renewable energy on the Faroe Islands

Balancing a 100% renewable electricity system -  
Least cost path for the Faroe Islands  
Copenhagen. Available at: [report-100-percent-re-in-the-faroe-islands-hydro-](#)



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