

# BEST PRACTICE



with the support of



## 100% renewable energy island

**Samsø Island, Denmark - 3 726 inhabitants**

**Strategy - governance - heating & cooling**

Samsø Island, in central Denmark, achieved in 10 years to become 100% self-sufficient from local renewable energy sources for electricity. They are now working on “Samsø 2.0” plan to phase out fossil fuel by 2030.



Picture: Energiakademiet

### Project in a Nutshell

In 1997 Samsø Island won a national competition for islands that plan to become 100% self-sufficient with renewable energies, which they achieved thanks to a 10-year master plan. Its long term objective is to become fossil-fuel free by 2030. In 2007, a review was published to assess the results of the 10-year masterplan. Samsø Island had achieved to become 100% self-sufficient with local renewable energy sources for electricity and 70% of heat come from renewable energy sources. Thanks to its 10 offshore windmills, which compensate for the heat produced from non-renewable sources and private transportation, the island is 100% CO2 neutral.

The island's electricity is produced by 11 land-based wind-turbines, as for heating, the island counts three straw-based district heating systems and one district heating plant combining woodchips and solar energy. In addition to that, 300 houses have invested in individual renewable energy heating systems.

### Impact & Next steps

Once Samsø island had achieved its first objective to become 100% self-sufficient with renewable energies for electricity in 2007, a second phase was launched, “Samsø 2.0”, to focus on other sectors such as transportation, and to achieve the island's long-term goal, to become fossil-fuel free by 2030. Since 2014, the ferry between the island and inland Denmark runs on biogas which is produced in a multi-functional biogas plant on the island. This plant is the heart of the island's organic waste management.

### Replicability: Challenges & Success Factors

Local involvement is the main success factor of this project: it is coordinated by a consortium of local stakeholders: the local energy agency, the local development office, the municipality of Samsø and the municipally-owned energy company are all part of it. Samsø Energy Academy, a resource center on renewable energies created in 2007 and partially funded by Samsø municipality's profits from off-shore wind power, now leads this consortium.



Citizen involvement also contributed to the project's positive outcomes, and local ownership is a keyword in Samsø's strategy: 90% of the windmills are owned by local people.

## Share & learn more!

[sh@energiakademiet.dk](mailto:sh@energiakademiet.dk)

[www.energiakademiet.dk](http://www.energiakademiet.dk)

