NESOI
EU ISLANDS FACILITY

Preparations for establishing Bornholms Havvind 100 MW coastal wind park at Bornholm

WIND@COAST2BORNHOLM

"A group of citizens have formed the initiative with the aim to establish a local and citizen-owned coastal wind farm."

This project is supported by the EU Islands Facility NESOI.
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The European Islands Facility NESOI aims to unlock the potential of EU islands to become the locomotives of European Energy Transition. To do so, NESOI aims to mobilize more than €100 Million of investment in sustainable energy projects to give EU islands the opportunity to implement energy technologies and innovative approaches, in a cost-competitive way. NESOI has selected 56 such projects across the European Union and provide them with financial resources and technical support.

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ABOUT
THE PROJECT

Project Promoter Initiativgruppen for Bornholms Havvindmøllepark (IBH)

Stakeholders Bornholm Municipality, Bornholm's Energy- and Environmental Association, Bornholm's Agriculture and Food Council, Bornholm Energy and Supply Company, Bornholm's Local Action Groups and others

Country Denmark **Sector** Wind **PROJECT VALUE** 220,588,000€

DESCRIPTION

A group of citizens have formed the IBH with the aim to establish a locally owned coastal wind farm. This project has conducted an economic pre-feasibility study for establishing Bornholms Havvind (BH) as a 100 MW community-based offshore wind park.

AIM OF THE PROJECT

IBH aims to receive full environmental impact assessment (EIA) approval for the site, attain funding and forming a financial structured and an ownership organization for investing in the BH wind farm and future coastal wind parks alike.

FUTURE STEPS

Establishing a 100 MW coastal wind farm owned by island citizens, companies and other island stakeholders will be the first of its kind – at this scale in terms of MW and investment. The concept of local ownership can be replicated in all parts of EU, depending on the national regulations on establishing coastal-offshore wind farms and economic conditions for wind power in general.

HOW THE EU ISLANDS FACILITY NESOI
SUPPORTS THE PROJECT

1. **Screening of different areas for the establishment of wind park including sea bottom characteristics, wind availability and environmental and fauna impact**
2. **Carrying out of public hearing process**
3. **Plan PPA including different partners and options**
4. **Establishment of IBH organisational structure**

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***Preparations for establishing Bornholms Havvind 100 MW coastal wind park at Bornholm* - Interview**

INTERVIEW WITH

Helle Munk Ravnborg, Senior researcher at the Danish Institute for International Studies

Q: How was the project initially designed? Why choosing this specific sector?

A group of citizens across various economic and energy sectors got together to establish - based on local ownership - an offshore "window" (i.e., a specific time period or condition during which certain offshore activities, such as the installation, can take place safely and efficiently.). The offshore farm can provide energy for 25-30 years, thus minimizing climate impact. Local ownership makes energy prices more predictable and more acceptable to eliminate fossil fuels.

Q: What is the project's impact on citizens and on the local environment?

Nearly 1000 local citizens have subscribed to a newsletter for updates on the initiative, and around 25 newsletters have already been distributed. Local public media has extensively covered the project, and 3 public workshops involving local citizens were conducted in 2022 and 2023 where more than 100 citizens voted on wind farm location preferences, enabling a decision-making democratisation.

Q: Has the project an impact on the local economy?

Being that wind farms are a mature technology, the primary means to generate a lasting impact on the local economy is to develop a model by which it can be profitable for Denmark to enable locally-owned and operated offshore wind farm permission. The main challenge of this desired model, however, relates more to political aspects than it does to technical support. Therefore, we are actively encouraging politicians to greenlight community-based offshore wind farms, as they currently do not. When a group of local citizens and business people try to put up an offshore wind farm at their own financial expense, facilitation by the government would improve the local economy.

THE IMPACT

ON LOCAL COMMUNITY

1. **Local Economy**
   The project contributes with value of power production, estimating a value of 4 cEUR/kWh and net power production of 449 GWh/year corresponding to 18.1 mEUR/year.

2. **Social Acceptance**
   Both local authorities (Bornholm Municipality, Bornholm Regional Authority) and other local organizations (Bornholm's Energy- and Environmental Association etc.) have expressed their support in the offshore windfarm project. Also, the coastal community closest to the planned wind farm has expressed acceptance of the plans.

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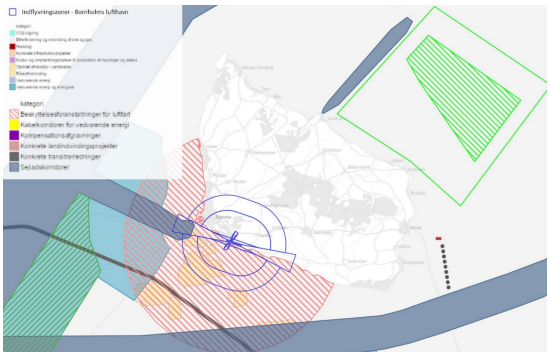
***Preparations for establishing Bornholms Havvind 100 MW coastal wind park at Bornholm* – Technical data**

FOCUS ON
OFFSHORE WIND ENERGY

Most of the current offshore wind projects being investigated in Europe are within 500–1000 MW of nominal power, therefore due to the economic of scale, the cost per MW is reduced. The Bornholm project is 100 MW and therefore the relative installation cost are higher per piece due to fixed cost during the installation campaign. Investment estimated to be around 220 MEUR, corresponding to 5,500 € per Bornholm citizen.



The location and layout of the chosen site site outside of Nexø
(Source: documents sent to NESOI)

Visualisation of the offshore windwarm for the NEXØ location
(Source: documents sent to NESOI)

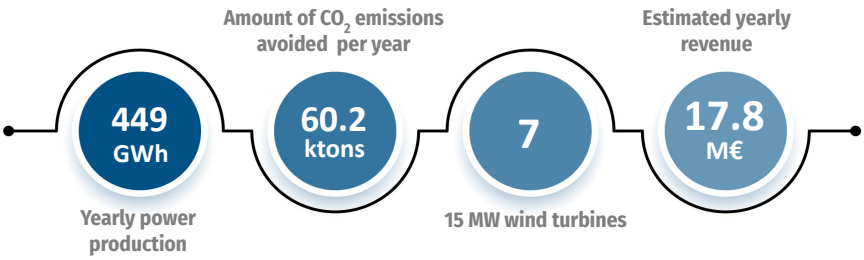
In terms of potentially harmful effect of underwater noise, the Nexø location will have the least effect as gravitational foundations will be established here instead of framing monopiles.

Especially during the construction phase the underwater noise can affect negatively the marine mammals living near Bornholm. On the other hand, the establishment of 'artificial stone reefs' can have a beneficial effect in that these will become breeding grounds for fish fry and thus provide improved foraging areas for the animals.

EXPECTED
ENERGY SAVINGS

The vision will be aligned to the energy planning baseline scenario will be based on the national target of 32.5% reduction of the energy consumption by 2030 compared to 2005 emissions set in the 2019 National Energy and Climate Plan. This vision corresponds to a minimum of 34 GWh annual savings.

KEY NUMBERS
OF THE PROJECT



REPLICABILITY
IN OTHER ISLANDS

The concept of local ownership can be replicated in all parts of EU, depending on the national regulations on establishing coastal-offshore wind farms and economic conditions for wind power in general.

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RINA

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