

#REDIIPorts

# REDII Ports

Renewable Energy Development and Intelligent Implementation in PORTS

Pilots on shore-side electricity systems

Port of Brussels | Port of Korsør  
Port of Moss | Port of Skagen



REDII Ports partner aiming to exploit resources for a technically feasible and economically affordable generation, storage and consumption of cleaner energy and fuels in port communities.

Lead Partner

Port of Skagen  
Jesper K. Rulffs | jkr@skagenhavn.dk



#MadeWithInterreg and funded by Interreg North Sea Region Programme



Bretagne Développement Innovation



Municipality of Eigersund



Port of Korsør

Laumé Climate Consulting



Maritime Equity Partners



Multimodal Container Services



Port of Moss



Northern Innovation-lab Circular Economy



Niedersachsen Ports



Port.brussels



Port of Hamburg Marketing



Port of Trelleborg



Port of Zwolle



Brittany Region



VIVES University of applied Sciences

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Co-funded by the European Union



**Port of Korsør & Port of Moss** search for solutions to integrate battery power into their grid to support port operations.

- System features**
- Analysis on the feasibility and optimal utilisation of battery capacity in ports
  - Battery capacity will be used during energy peak times
  - Charging will take place at times of green power surplus
  - Supporting grid stability by the harmonisation of energy demand, surplus and availability in energy grids of energy providers and ports.

**Your contact**  
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 Moss Havn | Oeystein H Sundby | [oystein@moss-havn.no](mailto:oystein@moss-havn.no)

**Port of Skagen** develops a mobile shore power system, that may be moved along the quay by truck.

- System features**
- 5 shore power connection points, each placed 100 m apart
  - Flexible mobile shore power unit
  - Mobile unit can be connected to the grid from two connection points, doubling the power capabilities.
  - Power output can vary between 400 – 690 Volts, with a variable frequency of 50 to 60 Hz
  - Low operational- & construction costs

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 Port of Skagen | Jesper K. Ruffts | [jkr@portofskagen.com](mailto:jkr@portofskagen.com)

**Port of Brussels** identifies best locations for shoreside electricity and considers the installation of hydropower turbines.

- System features**
- Analysis on feasibility and optimal location for shore side electricity
  - Heembeekkaai, Cruise terminal and Anderlecht lock identified as potential locations for shore side electricity supply
  - 3 x 400 V connection recommended for Bievestbroek dock
  - Hydropower turbines in locks to produce energy are studied / analysed

**Your contact**  
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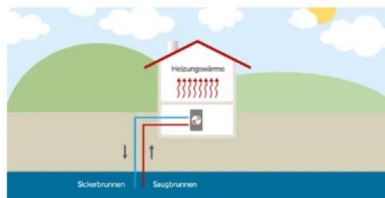
# REDII Ports

Renewable Energy Development and Intelligent Implementation in PORTS

Pilots on renewable energy production

Port of Brussels | Port of Egersund |

Niedersachsen Ports



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**Niedersachsen Ports** evaluates and tests small-scale solutions for renewable energy production in ports.

**#4 test fields** will provide detailed

analyses on economically and technically feasibility of **small wind turbines, solar film applications, port water heat pumps and a floating energy atarky working pontoon**.  
Assessment results will be public as of 1/2024 on REDII Ports website!

Technologie	Wirtschaftlichkeit	Risikoprüfung	Prüfung	Standort	Spezifische Standortvoraussetzungen	Umweltverträglichkeit	Zusätzliche Informationen	Projektwert	1/24
Lüftungspumpe	Gut	Sehr Gut	Gut	Sehr Gut	Sehr Gut	Gut		4,1	4,1
Batteriespeicher	Wirtschaftlich	Sehr Gut	Gut	Sehr Gut	Sehr Gut	Sehr Gut		4,1	4,1
Auslast. PV	Gut	Sehr Gut	Gut	Sehr Gut	Sehr Gut	Gut		4,1	4,1
Wassermotoren	Wirtschaftlich	Sehr Gut	Gut	Sehr Gut	Sehr Gut	Sehr Gut		4,0	4,0
Schiffbrücke	Gut	Sehr Gut	Gut	Sehr Gut	Sehr Gut	Gut		3,9	3,9
BHKW	Schlecht	Sehr Gut	Gut	Sehr Gut	Sehr Gut	Sehr Gut		3,9	3,9
Biomasseerzeugung	Gut	Sehr Gut	Gut	Sehr Gut	Sehr Gut	Gut		3,8	3,8
Schwungradspeicher	Wirtschaftlich	Sehr Gut	Gut	Sehr Gut	Sehr Gut	Sehr Gut		3,7	3,7
Redox	Sehr Gut	Sehr Gut	Gut	Sehr Gut	Sehr Gut	Sehr Gut		3,7	3,7
Regelung	Wirtschaftlich	Sehr Gut	Gut	Sehr Gut	Sehr Gut	Sehr Gut		3,6	3,6
Flussenergie	Gut	Sehr Gut	Gut	Sehr Gut	Sehr Gut	Sehr Gut		3,6	3,6
Corporate PV	Wirtschaftlich	Sehr Gut	Gut	Sehr Gut	Sehr Gut	Sehr Gut		3,6	3,6
Hilfsmittel	Wirtschaftlich	Sehr Gut	Gut	Sehr Gut	Sehr Gut	Sehr Gut		3,5	3,5
Hydrothermale Erzeugung	Wirtschaftlich	Sehr Gut	Gut	Sehr Gut	Sehr Gut	Sehr Gut		3,5	3,5

**Your contact**

Niedersachsen Ports | Dr. Matthäus Wuczkowski | mwuczkowski@nports.de

**Port of Egersund** undertakes a feasibility study on the uptake of green methanol.

**Scope of the study**

- Mapping of CO2 resources
- Evaluation of the means of transportation of CO2
- Identification of potential storage site
- Identification of the potential production site
- Assessment of the expenses for the mapping, transportation, and storage

**Your contact**

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**Your contact**

Port of Brussels | Désirée Simonetti | dsimonetti@port.brussels

**System features**

The energy might be used to support the operation of the locks. It could also be injected into the distribution network of the energy community.



**Port of Brussels** analyses weather hydropower turbines in locks could be used to generate green energy in ports.

