

## LOCATION

Ruhnu lies geographically closer to the mainland of Latvia than it is to any point in the rest of Estonia.

However, Ruhnu is proudly the smallest municipality in Estonia.



## RUHNU

- Territory of Ruhnu is 11.9 km<sup>2</sup>
- About 170 official residents
- ...and about 70 people live on the island all year round.
- Until the Russian invasion of 1944, Swedish law applied in Ruhnu and the people there lived according to thousands of years of tradition and customs. They had their own unique culture and language, and unlike other regions, the people of Ruhnu were truly free people.





## HOW TO VISIT RUHNU

by BOAT
6 months
1.May - 31.October

by PLANE
7 months
1.October - 30.April







The wooden church is the oldest building in the Baltics and dates back to 1644.

### WHAY VISIT RUHNU



## **ENERGY SOLUTION**

#### 1958 – The power plant was completed.

- On October 1, the village of Ruhnu was electrified.
- The system ran on diesel generators. Electricity was available on a fixed schedule a few hours in the morning and a few hours in the evening.

#### **1997 - New generators**

• They were imported from Sweden and electricity was available 24/7.

#### 2007 - Ruhnu has 2 wind turbines

- Originally there were 2 windmills, both 75kW.
- Unfortunately, one of the windmills only worked for 3 years and the other one operated for 10 years, requiring constant repairs, until 2018.

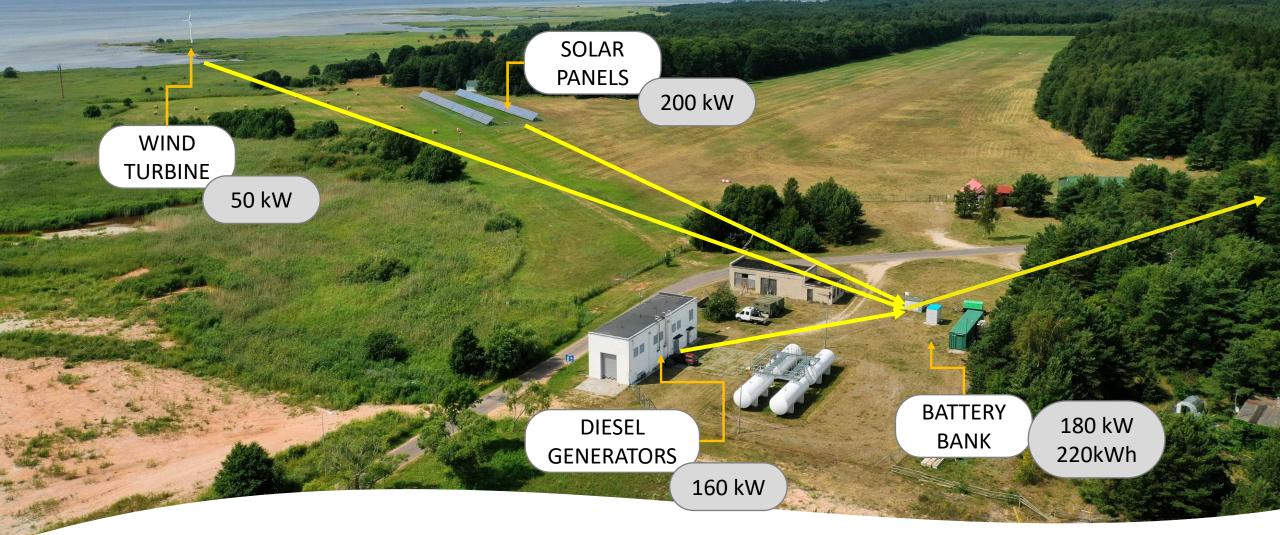
## **ENERGY SOLUTION**

2018 - The complete renewable energy solution on Ruhnu Island was completed.

- The government-owned energy company (Enefit Green) installed a unique renewable energy solution on Ruhnu Island.
- The uniqueness of the system comes from the interaction of three different renewable energy solutions with a biodiesel generator.

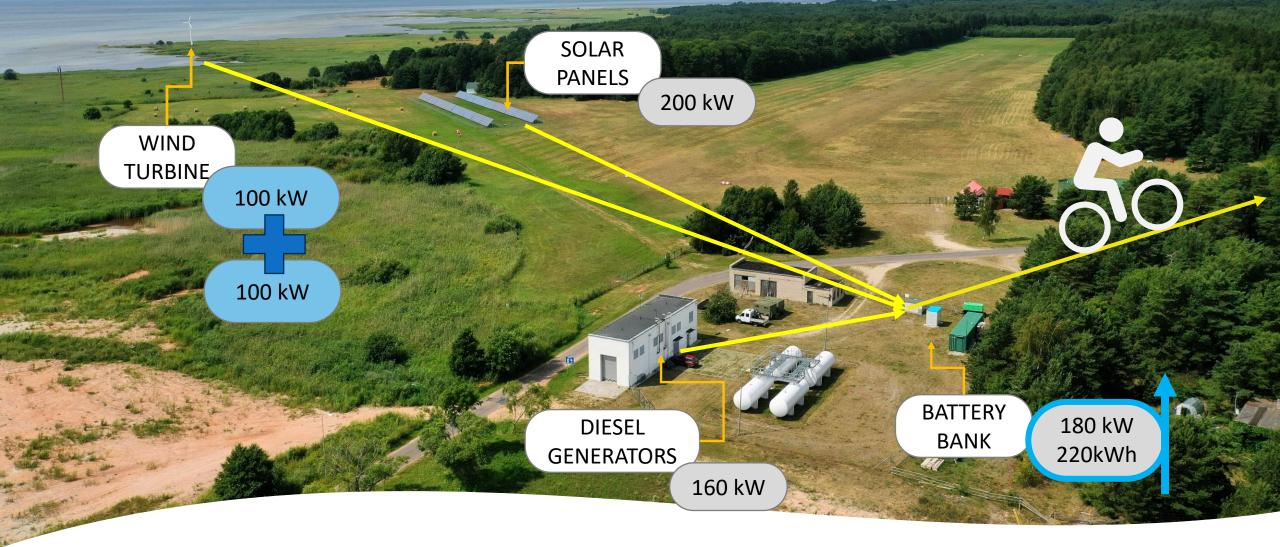
The annual electricity consumption of Ruhnu Island is approximately 600 megawatt-hours. Enefit Green is trying to maintain a level where at least half of the island's energy needs can be produced locally.





## ENERGY SOLUTION

- Wind turbine. 50kW, made by TUGE
- Solar park. 150kW + 50kW (2020) inverters 8\*25kW
- All the electricity produced flows through a battery bank. If there is no wind or sun, the electricity system can operate on battery bank for about 3 hours at full load.
- After battery bank the diesel generator automatically start and electricity is guaranteed for the entire island. 2\*160kW, made by Volvo



# IN THE FUTURE

- The connection between the power plant and the village must be solved with an underground cable. Since the line corridor exists, a bike path can be built there.
- Increase the capacity of the existing wind turbine to 100kW
- Add another wind turbine with a capacity of 100kW
- Increase the capacity of the battery bank.



# IN THE FUTURE

### Start an energy community

- for people who would like to produce their own electricity
- to reduce the cost of electricity
- to ensure security of supply

