

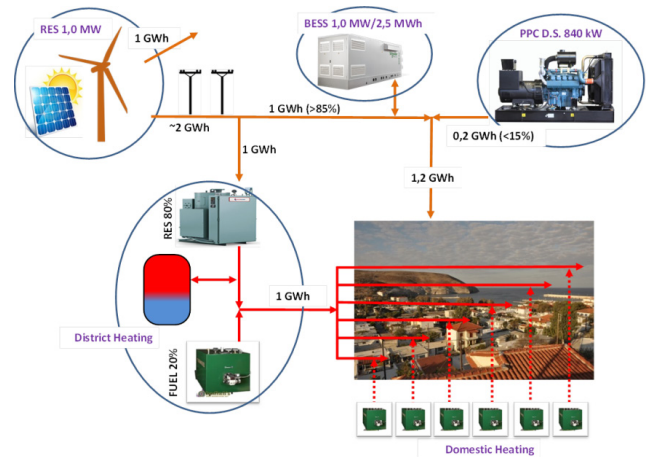


# European Energy Network

The voluntary network of European Energy Agencies - at the heart of the clean energy transition

## Name and Country of E<sup>n</sup>R Member

CRES - Greece



## Name of Project/Programme & Link to website

Green Island

[www.aistratis-greenisland.gr](http://www.aistratis-greenisland.gr)

## Description of Project

The project's scope is to make Agios Efstratios, an isolated and non-interconnected island (NII) as green as possible, concerning its energy consumption, deploying various mature Renewable Energy Sources (RES) technologies, along with electrical and thermal storage, and initiating simplified energy management and control schemes.

<b>Beneficiary</b>	Municipality of Agios Efstratios
<b>Implementation</b>	Centre for Renewable Energy Sources (CRES)
<b>Programme</b>	Operational Programme
<b>COMPETITIVENESS, ENTREPRENEURSHIP and INNOVATION</b>	
<b>Frame Programme</b>	National Strategic Reference Framework 2014-2020 (NSRF-ESPA)
<b>Funding</b>	European Regional Development Fund (ERDF)
<b>Main target</b>	>85% RES penetration in electricity/heating
<b>Total budget</b>	8,5 M€ incl. VAT
<b>Duration</b>	March 2017 to June 2022

### Project set-up

The project consists of an integrated system containing:

- a RES hybrid power station (wind and solar) 1,0 MW/3,0 GWh annual potential output and 1,0 MW/2,5 MWh Battery Energy Storage (BESS);
- A district heating system from the curtailed RES energy, consisting of 800 kWth power-to-heat plant, 500 m<sup>3</sup> thermal storage tank (=25 MWhth at ΔT=550 C) and a distribution network for the entire settlement;
- RES and BESS are interconnected via a 3,0 km, 15 kV direct overhead line. The new hybrid system should have the capability to feed the island's grid, in both islanded and parallel operation with the existed diesel power station, which will remain on standby.

## Aim/Expected Impact of Project

### Targets

- Very high RES penetration (>85%) in the electrical and heating system of the island.
- Upgrade the energy efficiency of municipal buildings
- Demonstration the use of RES charged electrical vehicles

### Additional targets

- Reduction the share of curtailed RES energy
- Reduction of oil based heating by >75%
- Reduction of heating cost by 50% for residents

The project results will benefit the effort of numerous isolated European islands to achieve very high RES penetration and eliminate energy dependency in the future.



## Involvement of the Agency and Link to the EU Green Deal

### Smart Integration

CRES is the implementation body of the project, which includes project development and outsourcing of special expertise, preparatory works, EPC contracts assignment, as well as monitoring, evaluation and project management.