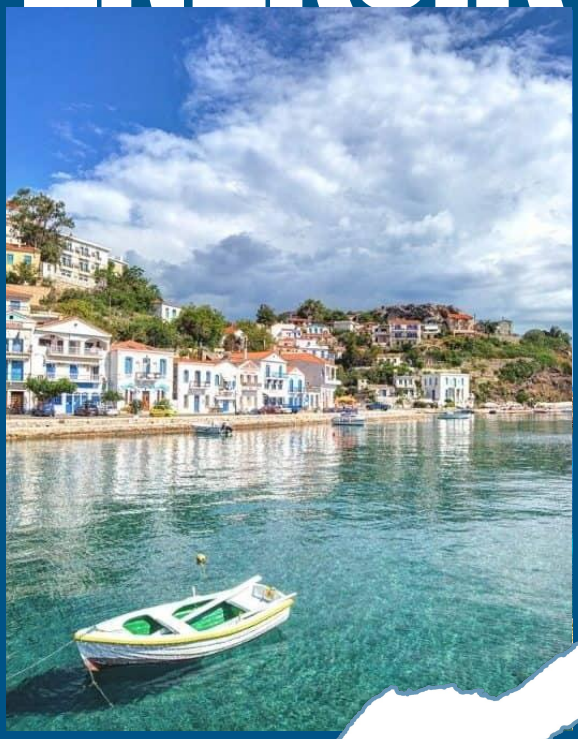
NESOI
EU ISLANDS FACILITY

Energy planning for clean energy transition for Ikaria

ENERSIK



IKARIA

“Ikaria is not only famous for the long lifespan of its residents but also for its hot springs which suggest a high potential of geothermal energy”

This project is supported by the EU Islands Facility NESOI.
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NESOI
EU ISLANDS FACILITY

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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.

Energy planning for clean energy transition for Ikaria

ABOUT
THE PROJECT

Project Promoter Municipality of Ikaria

Stakeholders Memorandum of Split | European Green Deal | National plan for Energy and Climate

Country Greece | **Sector** Plan | **PROJECT VALUE** 45,000,000 €

DESCRIPTION

- The objective is the development of a Clean Energy Transition Agenda (CETA). The CETA document is a high-level energy planning document mandated by the Clean Energy for EU Islands (CE4EUI) initiative. Potential solutions have already been identified for Ikaria.

AIM OF THE PROJECT

Exploration of the geothermal potential for electricity and heating purposes, studies on the wave energy potential, installation of a hybrid power station (HPS) comprising RES and battery storage, adoption of electro-mobility, energy retrofitting of public buildings and installation of solar PV panels with virtual metering to address the energy poverty.

FUTURE STEPS

1. Description of the island dynamics: geography, economy, population and energy system.

2. Mapping of the island transition potential paths.

HOW THE EU ISLANDS FACILITY NESOI
SUPPORTS THE PROJECT

1. **Definition of the energy balance and preparation of the Baseline Emissions Inventory**
2. **Analysis of the local RES potential and of local heating and cooling demand**
3. **Analysis and mapping of regional, national and European planning tools framework**
4. **Support in participatory processes**
5. **Support in the drafting of the CETA**
6. **Identification of measures to reach the defined objectives**
7. **Action plan and monitoring system, allocation of responsibilities for its implementation**
8. **Mapping of the main financial instruments available to finance the identified actions**
9. **Communication and dissemination of the results**

INTERVIEW WITH

Nikolaos Kalabogias, Mayor of Ikaria

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

A: The will of the local community and the municipal authority to draw up their own energy planning with the aim of the island's energy autonomy is great. CETA (Clean Energy Transition Plan) fits the character of Ikaria, participatory planning and collective initiative. The initiative started as the large-scale renewable energy projects on the island (for instance wind farms to be developed by private investors) caused a strong reaction from the local community, which is not opposed to renewables as long as they are designed and sized to cover the needs of the island. The discussion about energy on the island is a process that takes time but brings results. Renewable-energy solutions fitting the character of the island and its own economy (tourism and farming) are being sought. They also include mobility solutions as the island is quite mountainous and transportation is a challenge.

Q: How does impact citizens and businesses locally? How are they involved?

A: Citizens were informed, during the project meetings, of the energy situation on their island and what the clean energy transition plan means. Then, and based on the interest they showed, the local clean energy transition group was organized, which has a say in every part of CETA, from the formulation of the goals and actions to the control of the final texts. Citizens are going to be positively affected during the energy transition process, as the goal is for the island to be energy independent, in particular from fossil fuels. The reduction of energy costs is one of the most important benefits and measures are being considered in this direction. On the business side, several companies participate in the local clean energy transition group. They will be positively impacted, both on an energy and economic level as well as on a tourist level, with the promotion of the island as a green and sustainable destination.

Q: What will be done next to pursue this project?

A: The first actions to be implemented are the energy-saving ones. Then, all the other actions listed in the CETA must follow. The island has a strong geothermal field (hot springs, thermal baths), which is worth exploring. Rooftop PV is another important next step.

THE IMPACT

ON LOCAL COMMUNITY

1 Local Economy

Jobs will be created for the installation, operation and maintenance of all new systems and local technicians will gain significant know how, expanding their spectrum of activities.

2 Social Acceptance

Social acceptance is be secured through: • Active citizens and other stakeholders' engagement in all stages of the process • Collective planning for the selection of the positions where RES will be installed, minimizing land use collisions and the affection of the landscape • The adoption of business models that promote local financial benefit through cooperation, co-investment and external funding • Energy poverty mitigation

New Energy Solutions Optimised for Islands
NESOI
EUROPEAN ISLANDS FACILITY

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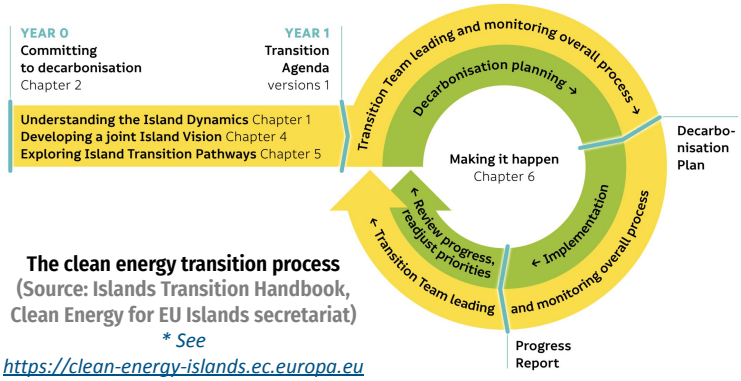
Energy planning for clean energy transition for Ikaria – Technical Data

FOCUS ON
THE DEVELOPMENT OF A CLEAN ENERGY TRANSITION AGENDA



The clean energy transition process
(Source: Islands Transition Handbook, Clean Energy for EU Islands secretariat)
** See https://clean-energy-islands.ec.europa.eu/*

In the framework of the Clean energy for EU Islands initiative*, islands are invited to develop their Clean Energy Transition Agenda (CETA). It is a strategic roadmap for the transition process towards clean energy. It is designed by the local community, for the local community.

On Ikaria, special attention is paid to the participatory aspect, as early citizens' engagement can facilitate the implementation of the CETA. Initial reluctance to RES installation was mitigated by explaining the diverse benefits of the project: energy autonomy, future support to transportation solutions, economic benefits…

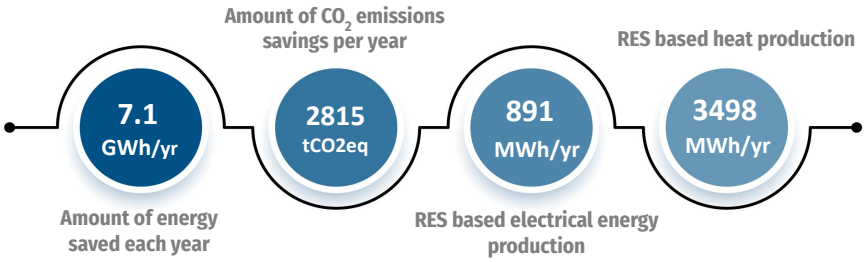
In the ENERSIK project, the following pathways to satisfy the CETA vision are explored. The selected pathways will be finalized in the end of the CETA preparation process.

- Installation of combined heat and power (CHP) geothermal capacity
- Wave energy solutions across the islands' coastline
- Exploitation of hydropower potential with small-scale interventions
- Installation of PV panels to cover the needs of modest households through a net metering scheme
- Replacement of the street lighting lamps with led technology lamps and installation of smart-cities system
- Energy retrofitting of public buildings with rooftop PV, heat pumps, EV charging stations and building energy management Installation of a hybrid power station comprised of solar PVs and a battery unit to support the island's 2050 full decarbonization target.

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 solutions proposed, first implemented by the Municipality can effectively rollout to the island as a whole. Both the CETA development procedures and the proposed solutions can be easily replicated in every Greek non interconnected island especially in islands that are not going to get interconnected to the mainland. One restriction would be the available electrical space of each island i.e. the available capacity for new RES plants.

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