



Dear IANOS community member,

We are proud to send you the first newsletter to inform you about the developments of IANOS since the start of the project. You will be receiving this newsletter on a quarterly basis from now on.

About IANOS (Integrated Solutions for Decarbonisation and Smartification of Islands)

IANOS project targets island energy transition strategy focused on energy efficiency, decarbonisation through electrification and support from carbon-neutral fuels, and the empowerment of local energy communities starting from pilot islands, Terceira (Azores) and Ameland (Netherlands), and with fellow islands of Lampedusa (Italy), Bora Bora (French Polynesia) and Nisyros (Greece). The project favours renewable energy sources penetration (solar, wind, tidal, geothermal, hydro, green gas, and waste) within the islands energy systems by exploiting multiple storage mediums (electricity, hydrogen, thermal) to respond to different types of end-users (transport, industry, residential, and services). IANOS will test novel Demand-Side-Management (DSM) and Peer-to-Peer (P2P) transactive energy schemes within the Virtual Power Plant (iVPP) framework.

What you can find in the newsletter

- IANOS technical advancements
- IANOS pilot islands
- IANOS European Initiatives and events

Read all about it in the attachment of this mail!



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IANOS technical advancements



IANOS Energy Planning and decision-making Toolkit

The IANOS Energy Planning and decision-making Toolkit (IEPT) will be developed to assist the decarbonisation and smartification of the pilot islands...

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Virtual Power Plant (iVPP) design

After careful analysis of the different Use Cases' needs, the IANOS project consortium proposed two different designs of the iVPP platform, one per each pilot island...

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Peer-to-peer (P2P) market platform development

We implemented the self-consumption maximisation through P2P energy trading scenario through a platform, based on the Distributed Ledger Technologies (DLT)...

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IANOS Pilot Islands

Terceira (Azores, Portugal)



- Terra Chã Neighbourhood

In this social neighbourhood, IANOS will try to tackle Energy Poverty and engage with local people to show that the decarbonisation of islands is not a problem exclusively for the socially and energy literacy endowed but that all segments of population must commit to achieve carbon neutrality.

There will be a selection of 40 house on which IANOS will install an innovative 1,5kW PV panel, a home management energy system and either a thermal or electric storage solution.

- Pronicol Dairy Factory

This factory is the largest energy consumer on the island of Terceira and will be equipped with a flywheel to relieve tension in the grid, and thereby contributing to the stability of the power network. The flywheel also helps to correct the Voltage Sags that affects the ultra-high temperature processing Milk production in this industry.



- **EDA Facilities**

The deployment of two vehicle-to-grid (V2G) chargers in EDA Facilities gives the iVPP operator the opportunity to fine tune the EV charging pattern therefore minimizing RES curtailment and being able to provide services to the grid. It will also increase EV owners who can choose smart charging to maximise RES usage, paying a lower fee to the owner of the station and subsequently the owner of RES.

- **Across the island**

In seven of the already existing self-consumption units, two Smart Energy Routers and five Smart Electrical Water Heaters will be deployed.

All these technologies and the other grid assets such as a battery energy storage system (currently under deployment), geothermal power plant, wind farms, solar farm (currently under deployment), waste to energy plant and a thermal power plant will be considered and integrated in the Virtual Power Plant (VPP) to be developed in IANOS.

The island of Ameland (Netherlands)



“The municipality of Ameland, Amelander Energie Coöperatie (AEC) and Wetterskip Fryslân, will develop a new energy park, The Ballumerbocht Energy Park, on Ameland. The Park contributes to the sustainable energy supply on Ameland and connect the installation with solar panels to a battery pack. This gives Ameland the opportunity to temporarily store the green electricity and to use it by demand.

The park and the accumulator battery may be supplemented in the coming years with installations such as a fuel cell, an electrolyser and a biodigester. This creates an energy system that can produce sustainable electricity, heat, green gas and hydrogen gas.

Together with the municipality of Ameland and energy company Eneco, AEC already operates the first solar park on the island (6 MWp), which has been in action since 2016 and produces above expectations.”

Extracted from “Green light for innovative energy park on Ameland” press, 11th January 2022.

IANOS European Initiatives and events

Since its early beginning, IANOS has been involved in European actions to collaborate with sister projects and European bodies in raising the awareness on the islands energy transition and to give a concrete contribute at EU level. Hence, the project has been selected to be part of the “BRIDGE” initiative and collaborated with the “Clean Energy for EU Islands Secretariat”.

For this strong EU collaborative strategy, IANOS took part to several events and dissemination initiatives to increase the awareness on the potential impact of common and synergic collaboration among EU sister projects and to promote a united front in fighting against environmental pollution and favouring the energy independence of the islands from fossil fuels.

Islands Energy Transition: Experience in H2020 Projects – series of webinars



09.09.21 – 24.09.21 | Online

Contributing partners: RINA, CERTH, EDP NEW

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6th Annual Energy Transition Symposium - Hellenic Association for Energy Economics



28.09.21 – 01.10.21 | Athens, Greece – Hybrid Event

Contributing partners: EDP NEW and CERTH

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Clean Energy Transition of Islandsworkshop - Sustainable Places 2021



30.09.21 | Rome, Italy – Hybrid

Partners involved: RINA, CERTH

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IANOS@Lampedusa: Sfide ed Opportunità nella Transizione Energetica Workshop



11.10.2021 | Lampedusa, Italy – Hybrid

Contributing partners: RINA, CNR-IIA, Municipality of Lampedusa, CERTH, EDP NEW

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ENLIT Europe 2021



30.11.2021 - 02.12.2021 | Milan, Italy

Contributing partners: ETRA

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