

# Clean energy for EU islands

## Workshop series: Future-proofing electricity systems

## Introduction

The Clean Energy for EU Islands Secretariat (the secretariat) is conducting a study on connection policies and management of energy systems under conditions of non-synchronised generation in non-interconnected EU islands. The goal of this study is to further the understanding of the existing grid regulatory and operating constraints and help prepare the grid regulation and operating procedures for increase uptake of renewable energy sources (RES) and technologies, and sustainable decarbonisation. The study identifies 10 use-case non-interconnected islands or group of island systems. These use cases are chosen to represent the geographical, governance and technological variety of non-interconnected islands. Within the framework of this study, the Secretariat is organising 11 workshops:

### **6 online thematic and technical workshops: Future-proofing electricity systems (September - end of December 2023)**

This online workshop series is titled “Future-proofing electricity systems”. The goal of these workshops is to create a platform for open discussion between DSOs, TSOs, regulators, and governments. RES producers and EU-wide associations are included where needed. The topics of the workshops are defined based on the challenges identified in the ten use-cases. The goal is to help define guidelines for overcoming the identified grid constraints.

### **5 in-person workshops (November 2023 - March 2024)**

In-person workshops will be organized in Greece, Italy, Spain, Portugal and French Polynesia and will be focused on the topic relevant for non-interconnected electricity grids of the use cases. The current indicative dates and topics are provided here<sup>1</sup>:

- Greece, February 2024 on the topic of hybrid power plants and interconnections
- Italy, November 2023 on the topic of DSO concessions
- Spain, November 2023 on the topic of stand-alone batteries
- Portugal, January 2024 on the topic of security of supply and demand side management
- French Polynesia, March 2024 on the topic of higher uptake of RES and security of supply

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<sup>1</sup> These workshops are still in planning and stakeholders are still contacted to align on time, location and topics. This is indicative.

## Online workshop series: Future-proofing electricity systems

The aim is to create a space for exchange and learning between EU islands DSOs, TSOs, regulators and governments. RES producers and EU wide associations are included where needed.

The first workshop is big-picture and sets the stage for the rest of the workshops introducing the main aspects needed for safely operating the non-interconnected grid with integrated RES. Topics include: requirements for RES asynchronous producers, use of Battery Energy Storage Systems (BESS), demand side management and flexibility of the system, and what is needed for the last mile to go to 100% RES integration. The workshop series closes with the workshop focused on de-risking investment in RES from planning, government, and DSO/TSO, and RES generator point of view.

The language of the series will be in English. Depending on the attendance and request of participants, the Secretariat has resources for one-way translation (in French or Italian) for two workshops. However, most workshops are meant to be an interactive session between the participants, and hence synchronous translation for few participants is difficult.

The workshops will be prepared by sending template slides and Miro boards to be shared with the participants prior to the workshops. Practical solutions will be filtered from the input and the feasibility of the measures and who can implement them will be assessed.

The focus of the workshops is on technical challenges to integrate RES from an EU policy and regulatory perspective. Non-technical issues can be addressed but will not be the emphasis of the workshops.

Workshop series rules:

- Attendance is invitation-only for the organisations invite. Organisations can choose which and how many people participate in each of the workshops within workshop series.
- Stakeholders involved: DSOs, TSOs, regulatory agencies, government organisations relevant for RES integration policy and operation of non-interconnected islands' electricity systems.
- You can register for all workshops or for each one separately (see registration link below). Please register for each workshop. Registration for each workshop will be open until the actual workshop.
- Workshops are interactive and made to exchange experiences and lessons learned.
- Preparatory materials for each workshop will be provided at the latest 1 week before the workshop.
- If asked to provide 1 slide ppt please send your slides at least 1 day ahead of the workshop.
- Working language: English.

**Registration link:** [https://ec.europa.eu/eusurvey/runner/workshop\\_electricity\\_systems](https://ec.europa.eu/eusurvey/runner/workshop_electricity_systems)

## Workshop 5: The 100% decarbonised systems

### What is needed to achieve 100% decarbonised secure electricity system operation?

**Date:** 24 November 2023 10:00-12:00 CET

**Duration:** 2 hours

**Stakeholders invited:** DSOs, TSOs, Regulators, Governments (local, regional, national depending on the island), EU Technology associations

**Focus:** Network codes and regulation, concrete examples

#### Agenda:

<b>5'</b>	Welcome and workshop overview	Secretariat
<b>15'</b>	Main services for DSOs traditionally offered by TPPs <ul style="list-style-type: none"> <li>Sustainable alternatives and their benefits to the grid</li> </ul>	Konstantinos Kyparissis, Eurelectric
<b>5'</b>	Questions	Secretariat
<b>40'</b>	DSO/TSO round: 1-2 examples of the use of various technologies for grid services on non-interconnected islands <ul style="list-style-type: none"> <li>Pumped hydro, hydrogen, synchronous condensers, grid forming use of batteries, forecasting tools</li> <li>Challenges</li> </ul>	DSOs TSOs
<b>10'</b>	Break	
<b>15'</b>	Techno-economic overview of various technologies and examples	Christina Kopitopoulou, DNV
<b>15'</b>	How future interconnection between islands or mainland affects the planning including optimal choices	ENTSO-E
<b>15'</b>	Open discussion	All
<b>5'</b>	Concluding remarks and next steps	Secretariat