

Clean energy for EU islands www.euislands.eu | info@euislands.eu

Future proofing electricity systems

Workshop 1: Key aspects of **safe operation of non-interconnected island grids** integrating asynchronous RES generation

Lucija Rakocevic Th!nk E **Clean energy for EU islands secretariat**

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#CleanEnergyIslands

Rules of the workshop

- This is first in the series of 6 online workshops: Future-proofing electricity systems
- Interactive
- Please raise your hand to allow fair moderation
- The workshop is recorded for the purpose of note taking it is not shared
- Material has been shared with you prior
- Conclusion of this workshop will also be shared after the workshop





10.00- 10.05	Welcome	Lucija Rakocevic, Secretariat
10.05-10.15	Energy transition and decarbonisation of island systems: Focus on electricity grids and non-interconnected islands	Tadhg O'Briain, DG ENER
10.15-10.30	Key challenges of the grids and key aspects (connection, operation, planning and market) of grid codes	Lucija Rakocevic, Secretariat
10.30-11.00	Examples of low-RES penetration including drivers and challenges	Participating DSOs
11.00-11.05	Break	
11.05-11.35	Examples of high-RES penetration including drivers and challenges	Participating DSOs
11.35-11.50	Presentation on how DSOs will finance upgrades and smart grids	Julien Dieler, DG ENER
11.50-12.15	 Breakout sessions: Requirement and rights for RES asynchronous generation, Martina Cannata, 3E Use of BESS, Romain Gitton-Riviere, 3E Demand side management and flexibility, Kostas Komninos, DAFNI Last mile - move to 100% RES, Lucija Rakocevic, Th!nk E 	All participants
12.15-12.25	Conclusions from the breakout sessions	Moderators of breakout sessions
12.25-12.30	Closure and next steps	Lucija Rakocevic, Secretariat



Your inputs

- Please choose breakout sessions you would like to follow
- If you are a DSO and would like to share a ppt, please share it with us at

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Clean energy for EU islands secretariat

76 islands engaged

Support



Technical assistance

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Regulatory analysis



Regulatory inventory

Studies of barriers and recommendations

Study on non-interconnected electricity systems

Island community







Forums

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Regional partners









10 use cases

- Rhodes and Chalki islands, Greece
- Kos-Kalymnos islands, Greece
- Aeolian islands, Italy
- Gran Canarias, Fuerteventura, and Lanzarote islands, Canary Islands, Spain, EU's Outermost regions
- Terceira, Faial, Pico, Sao Jorge and Graciosa, Azores, Portugal, EU's Outermost regions
- Madeira and Porto Santo, Portugal, EU's Outermost regions
- Aruba, Netherlands, Oversees countries and territories
- Bonaire, Netherlands, Oversees countries and territories
- La Réunion, France, EU's Outermost regions
- French Polynesia archipelago, France, Oversees countries and territories



Challenges

- Frequent power-cuts (weather, lack of stability (RES + min/max demand)/flexibility of the grid)
- High RES curtailment and no clarity on who is responsible for costs
- Lack of control over small distributed generation
- High frequency variations due to RES -> improvements in grid codes needed
- Lack of Low Voltage Ride Through requirements for RES
- Lack of clarity on how DSO concessions will be continued /DSO investments
- Incentive for use of storage and other investments to increase flexibility of the grid
- Need for seasonal storage and system inertia
- The quality of intermittent generation forecast
- Demand side management not much utilized
- High dependence on TPP for system services technologies available for decarbonisation
- Lack of systematic planning/studies and optimizing investments
- Who pays for the investments needed



Series of 6 online thematic workshops Future proofing electricity systems

- The key aspects of safely operating noninterconnected systems with high share of asynchronous RES generation
- 2. RES requirements and rights
- 3. BESS
- 4. DSM: Distributed flexibility for grid management
- 5. 100% RES islands
- 6. De-risking investments

In-person workshops

- Spain, November 2023
- Italy, January 2023
- Portugal, January 2024
- Greece, February 2024
- French Polynesia, March 2024



Goal of these workshops

Understand challenges

Propose solutions to overcome these challenges – through policy and regulation

(regional/national/EU)



Thank you!

Lucija Rakocevic, PhD

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Our newsletter



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Awards & Grants





Participant info

Participants can join at **slido.com** with **#1183962**

https://app.sli.do/event/hQeLBSE3CKFbA2KUpc2LTH/embed/polls/89bcd781-266c-4c15-9ed9-49fca819ce3a

