Renewable energy potential in **Romania** and the **CESEC** region

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EUFORRES Workshop: Perspectives for renewables in Romania and the CESEC region
Established in 2011.
Headquartered in Abu Dhabi, UAE.
160 Members and 23 States in accession.

Promote the widespread adoption and sustainable use of all forms of renewable energy worldwide.
Global Levelised Cost of Electricity

LCOE reduction in the period 2010 - 2017

73% Solar PV

23% Onshore Wind
Today 127 GW of RE could be implemented in a cost-competitive way.

By 2030 620 GW Wind and Solar PV cost-competitive potential
Romania: Up to 18 GW of cost-competitive solar PV potential available today
Romania: Up to 50 GW of cost-competitive wind potential available today
REmap for CESEC countries

Objectives

➢ Support to Contracting Parties of Energy Community in setting **2030 targets and measures**

➢ To identify opportunities for further **regional integration** of energy systems

➢ To identify **cost-effective technical options** to accelerate renewables deployment by 2030

REmap for the European Union: February 2019

EU can double the RE share in its energy mix from some **17% in 2015 to 34% in 2030**
Innovation trends – drivers of flexibility

- **Electrification**: When renewable energy generation is in abundance or surplus, electrification of end-use sectors is an emerging solution to maintain its value, avoid curtailment, and most importantly help decarbonise heating and transport.

- **Decentralisation**: The increasing deployment of distributed energy resources turns the consumer into an active participant in the power market, enabling greater demand-side management.

- **Digitalisation**: Digital technologies can support integration of VRE through faster response, better management of assets, connecting devices, collecting and sharing data.
IRENA’s report details 30 innovations from 4 dimensions

**Enabling technologies**
1. Utility-scale batteries
2. BtM batteries
3. EV smart charging
4. Power-to-heat
5. Power-to-hydrogen
6. IoT
7. AI and big data
8. Blockchain
9. Renewable mini-grid
10. Supergrids
11. Increased flexibility of conventional power plants

**System operation**
25. Expanded role of DSOs in managing DERs
26. Enhanced co-operation between TSOs and DSOs
27. Advanced renewable generation forecasting
28. Innovative operation of pumped hydro storage
29. Storage as virtual transmission lines
30. Dynamic line rating for transmission system operation

**Business models**
12. Aggregators
13. P2P trading
14. Energy-as-a-service
15. Community ownership model
16. Pay-as-you-go model

**Market design**
17. Increase time granularity
18. Increase space granularity
19. New products on ancillary service markets
20. New capacity markets
21. Regional markets
22. Time-of-use tariffs
23. DER participation in wholesale markets
24. Net billing schemes
A holistic view of the energy system is needed