



European Union Agency for the Cooperation  
of Energy Regulators

# Security of power supply in the European context

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Security of Power Supply in the transition towards a net  
zero grid webinar,

European Climate Diplomacy Week, 8 November 2021



## ACER's mission statement

*Our perspective is European. Our overall purpose is to achieve a transition of the European energy system in line with political objectives set, reaping benefits of increased **energy market integration across Europe**, and **securing low-carbon supply at least possible cost for European businesses and citizens.***

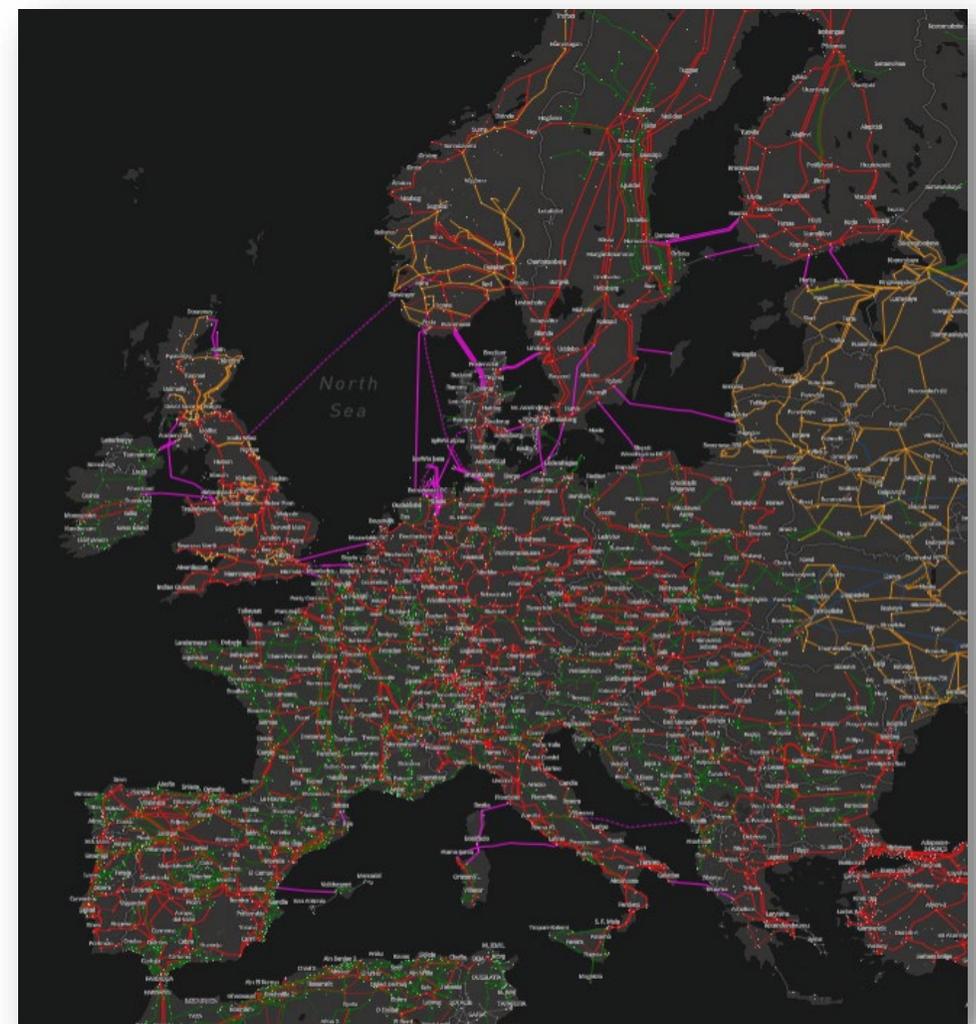
- **Contributing to efficient trans-European energy infrastructure**, ensuring alignment with EU priorities.
- Monitoring the well-functioning and transparency of energy markets, **detering market manipulation and abusive behaviour.**
- Where necessary, **coordinating cross-national regulatory action.**
- Governance: **Regulatory oversight is shared** with national regulators. **Decision-making** is collaborative and joint. **Decentralised enforcement** at national level.

- Present line of action to assess security of supply risks in the EU (focus on adequacy)
- Discuss future challenges

- The European\* electricity system and market are complex
  - 4 synchronous areas
  - 42 Transmission System Operators
  - more than 2000 Distribution System Operators
  - 38 Bidding Zones
  - 6 Market Operators (PXs)
  - thousands of market participants

Notably... **The EU consist of 27 Member States that have "...the freedom to set their own desired level of security of supply"**

**So for Europe coordination and harmonisation is the real challenge**

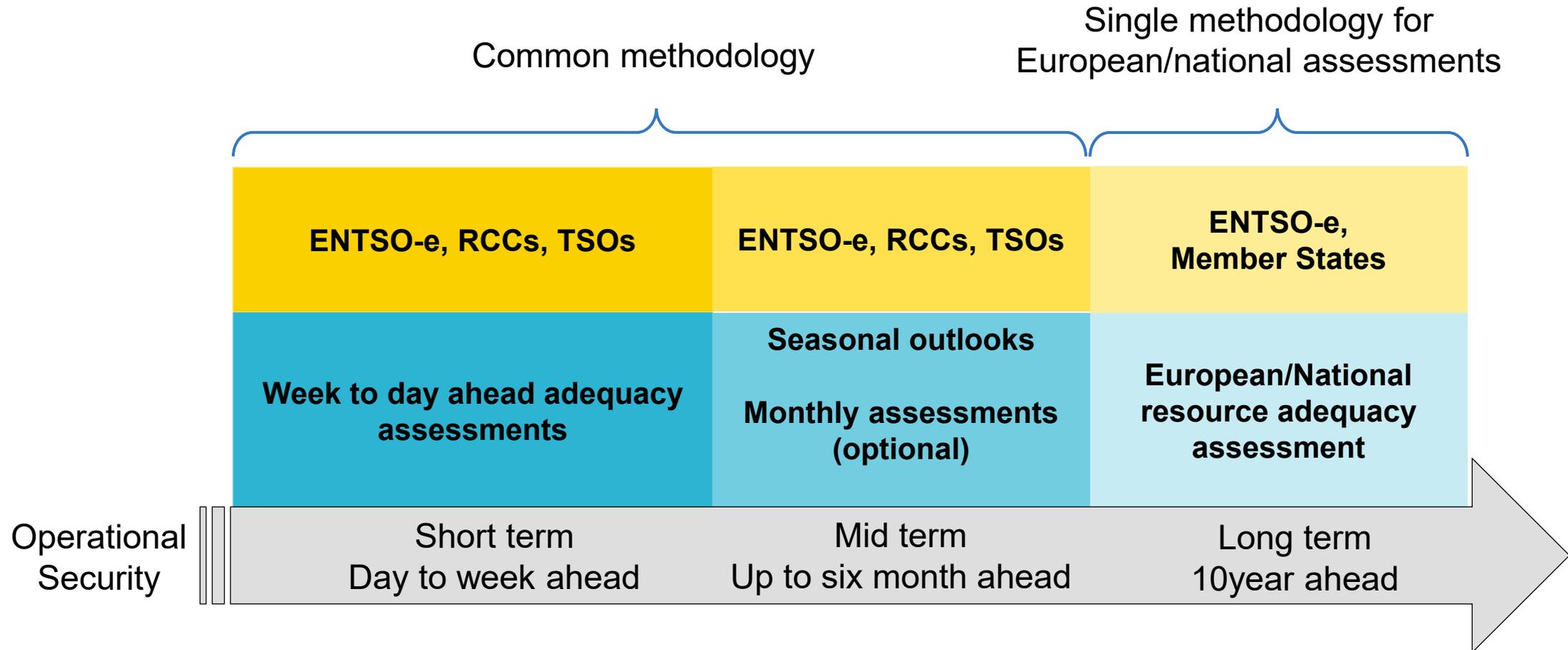


Source: ENTSO-e

\*Refers to the EU and 9 more European countries

\*\*Refers to the Single Day Ahead Market Coupling

# Assessing the adequacy risks



TSO: transmission system operator

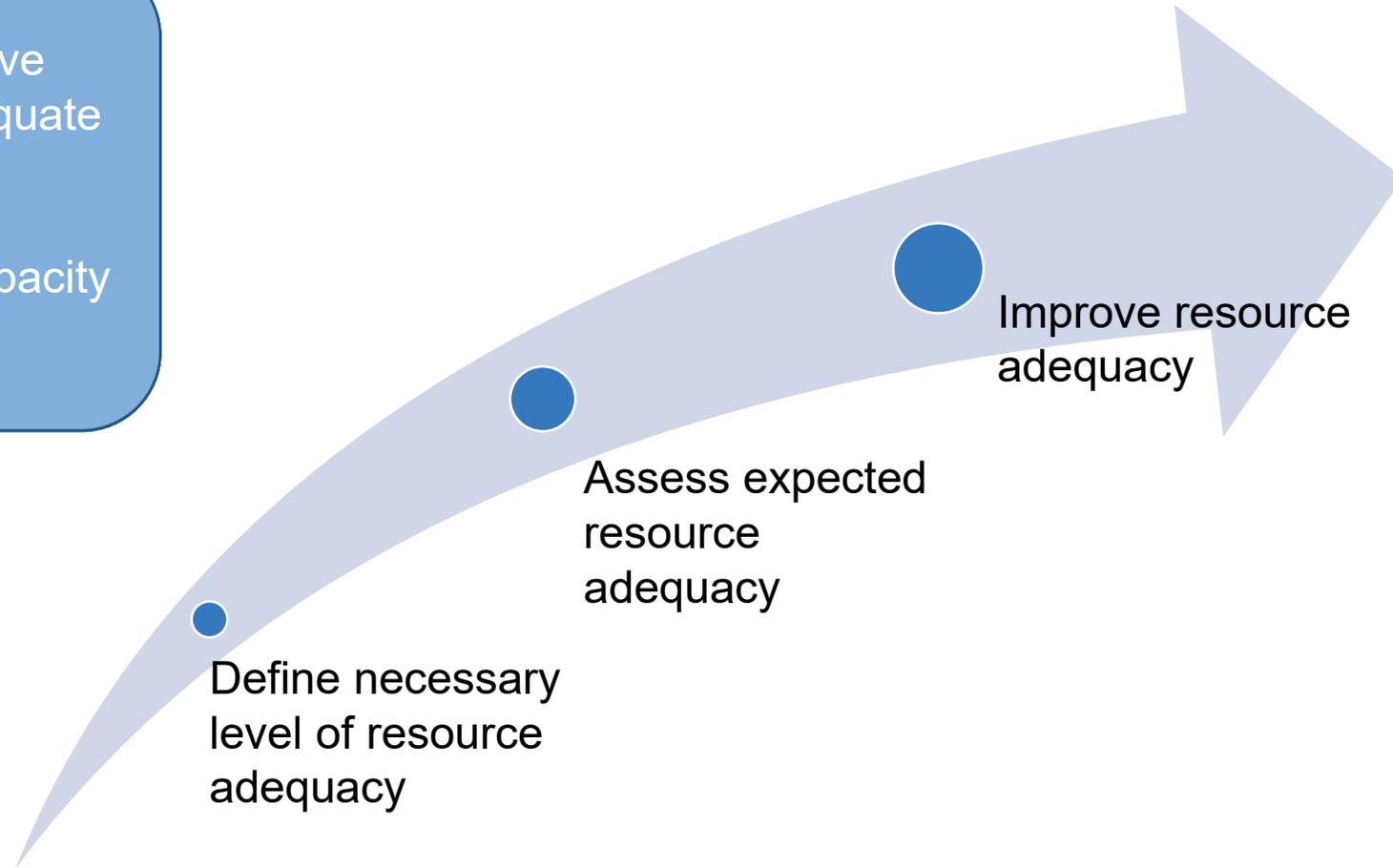
ENTSO-e: association of TSOs established under EU legislation

RCC: Regional coordination centers established under EU legislation

# Long-term resource adequacy

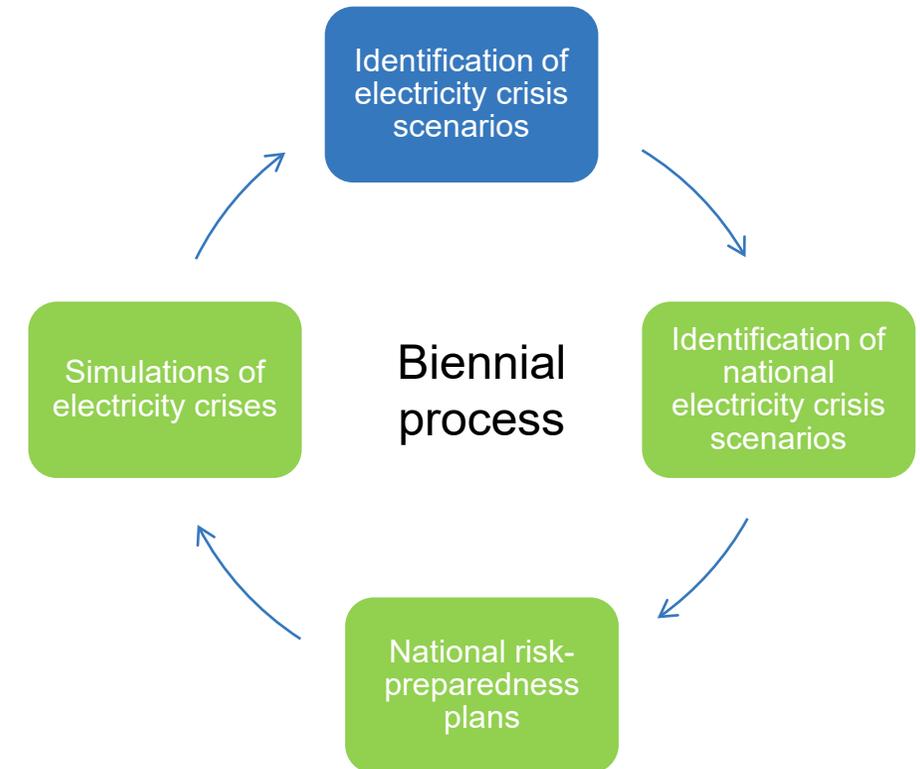
Market reforms to remove distortions preventing adequate investment signals

If necessary, temporary capacity mechanisms



VOLL: Value of lost load  
CONE: cost of new entry  
LOLE: Lost of load expectation

- In the European context electricity crisis prevention and management calls for regional cooperation
- Common approach to identify risk scenarios
- Coordinated approach to establish risk preparedness plans
  - Define roles and procedures
  - Identify market and out-of-market measures
  - Establish load shedding plans
  - Set commonly agreed regional measures
- Common process for early warnings
- Rules for cooperation and assistance based on solidarity principle



**Decarbonisation**

**Decentralisation**

**Digitalisation**



**Is current market design fit for future?**

## A European Green Deal

Striving to be the first climate-neutral continent

**Renewables in the EU energy mix**



**19.7%**  
Current renewables share (in 2019)

**32%**  
Current EU 2030 target

**40%**  
New EU 2030 target

**17.0-17.4%**

Current energy efficiency savings for primary and final energy consumption (in 2019)

**32.5%**  
Current EU 2030 non-binding target (relative to 2007 projections)

**36-39%**  
New EU 2030 binding target for final and primary energy consumption



Source: [EC](#)

# THANK YOU

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