

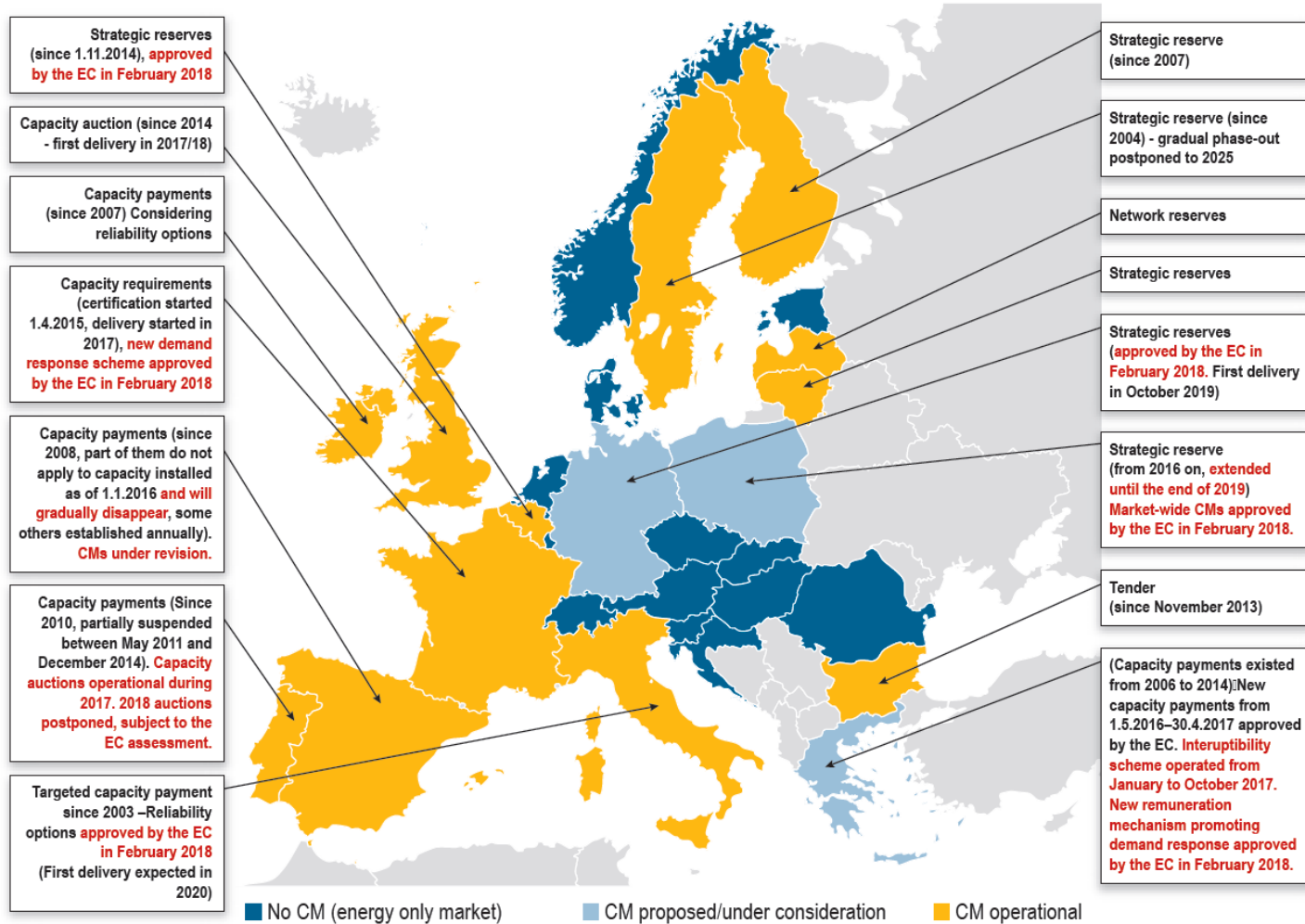


# *Capacity Mechanisms*

International Workshop on Electricity  
Sector Modernization

4 & 5 September 2019

# Capacity Mechanisms in Europe



Source: NRAs (2018).

# New rules on capacity mechanisms: overview

I

- Implement reform of energy-only market first
- CMs only to address residual concerns

II

Necessity of CMs to be based on real needs

Transparency of reliability standards

CMs to be least distortive & take into account foreign contribution

Emission limit for resources committed in CMs



## STATE AID RULES

1. Guidelines
2. Case by case notifications to and assessment by the Commission (DG COMP)

### Resource adequacy assessment

No adequacy concern

No CM

Adequacy concern exists

- Reform energy-only market first
  - Eliminate regulatory distortions
  - Shortage pricing, interconnection, demand response
- CM only if residual concerns persist
  - Consult neighbours
- CM design not to distort market functioning

# Resource adequacy

## EU adequacy assessment by ENTSO-E

### Updated methodology

Contribution of interconnection  
Intermittent RES  
Probabilistic approach

### Appropriate time horizon

Up to 10 year ahead  
Granularity: yearly

### Coverage and granularity

Scope: EU-wide  
Granularity: Member States/ bidding zones

### Scenarios

Central reference scenarios

## National adequacy assessments

Same methodology  
Same central reference scenarios  
Additional sensitivities

 ACER opinion in case of discrepancy

 **✓ Necessity of CMs to be based on real needs**

# Reliability standard

Harmonised methodology to derive standards  
LOLE, EENS

Member State without CM

Member State with CM

- No requirement to have a reliability standard
  - Market generates right level of investments

- Member States to establish reliability standards
  - Acceptable cost of involuntary disconnection

✓ **More transparency to reliability standards**

## Design principles

- Two basic types of CMs
  - Market wide mechanisms (e.g GB, France, Ireland, Italy)
  - Strategic reserves (e.g Germany, Belgium, Finland)
- Design principles
  - Market based, transparent selection and remuneration of capacity providers
  - Open for all kinds of capacities (generation, demand side, storage, etc)
  - Incentives to be available when needed
  - Appropriate penalties
- Additional features of strategic reserves
  - Resources cannot participate in markets
  - To be despatched as assets of last resort
  - During dispatch imbalances to be settled at VoLL

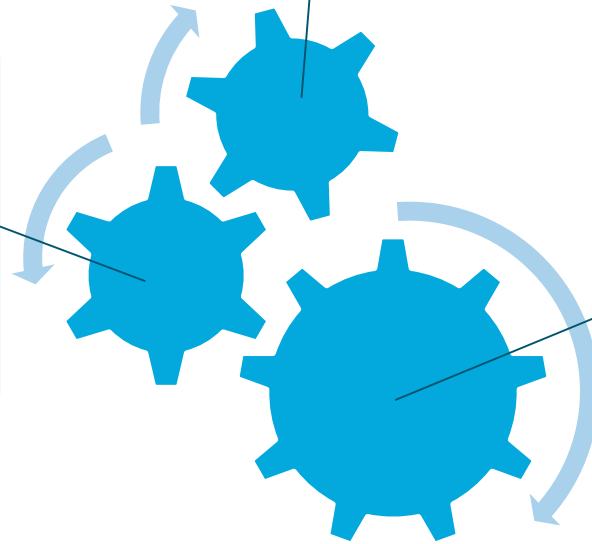
## Cross-border participation in CMs

Cross-border participation is possible

- Explicit participation of foreign capacity

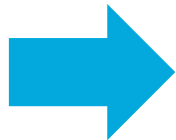
No interference with physical flows

- Primacy of 'market coupling'
- No delivery obligation across the border. Market prices to guide flows in times of system stress



TSOs play an important role

- Calculate and allocate capacity for cross-border participation
- Verify availability of resources
- Transparent protocols for simultaneous scarcity situations



- ✓ **Facilitate cross-border participation in CMs & remove distortions to investment signals**



# Emission limit (550 g CO<sub>2</sub>/ kWh) in CMs

EXISTING capacity

NEW capacity

Above 550 g  
CO<sub>2</sub>/ kWh

**Not eligible** to participate in a CM after 1 July 2025

*Exception: annual emissions below carbon budget (350 kg CO<sub>2</sub>/ kW / year)*

**Not eligible** to participate in a CM

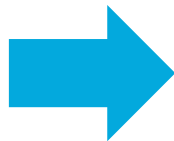


ACER to issue a **Technical Guidance** 6 months after entry into force

Below 550 g  
CO<sub>2</sub>/ kWh

**Eligible** to participate in a CM

**Grandfathering of existing capacity contracts**  
(concluded by 31 December 2019)



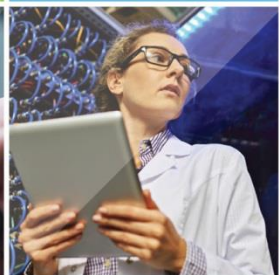
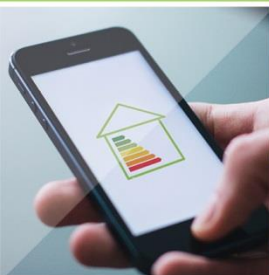
✓ In line with EU decarbonisation objectives

## Summary

- Energy-only market first
  - CMs only to address residual concerns
- Objective assessment of adequacy concerns
  - EU level adequacy assessment
- Minimizing impact on energy market functioning
  - design principles
- Recognizing wider climate objectives
  - CO2 emission standard



European  
Commission



**Thank you for your  
attention!**

