Getting the European Energy Market ready for 2030

What is the role for network codes and guidelines?

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Chair of the Board, ENTSO-E

European Energy Forum
23 October 2018, Strasbourg

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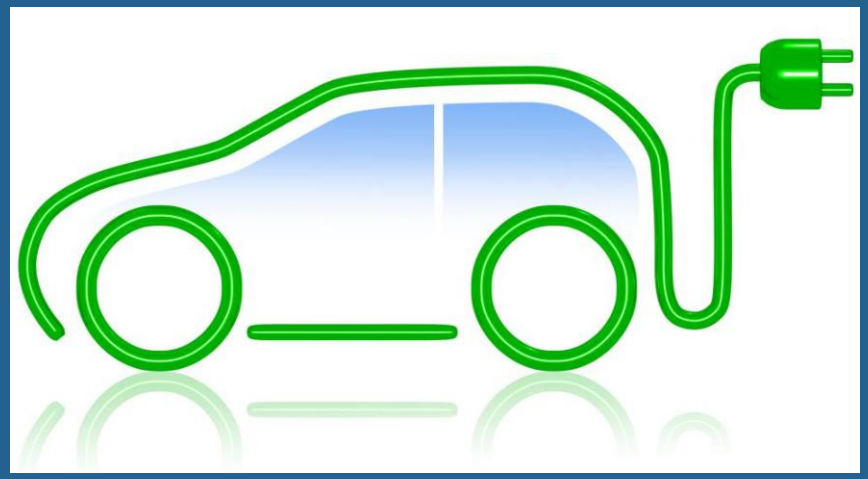
Can they manage 4 degrees?

Transformative changes…

Paris agreement

Clean Energy Package

Energy Union and Market coupling



Electric vehicles

Distributed energy sources

Digitisation

Picture by Nil Castellvi

The future is electric

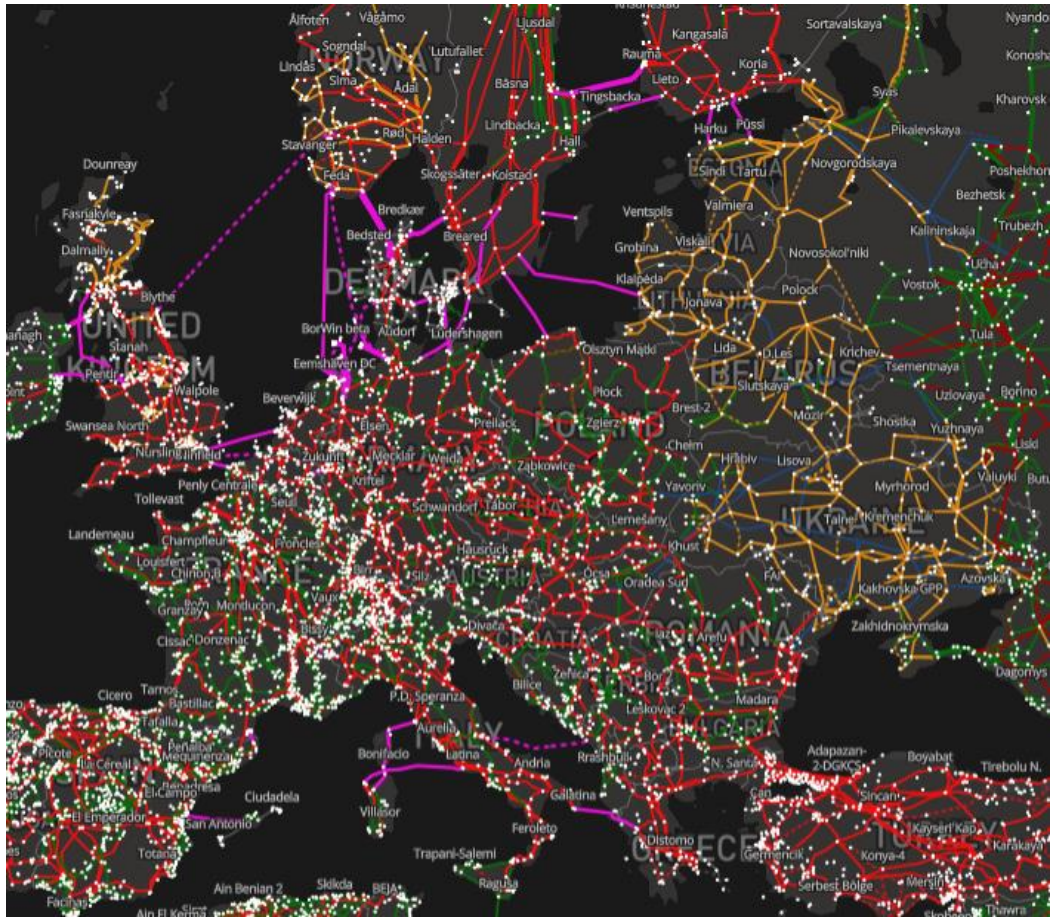
50% generating capacity from RES in 2030

40% increase of hourly flexibility needed by 2025

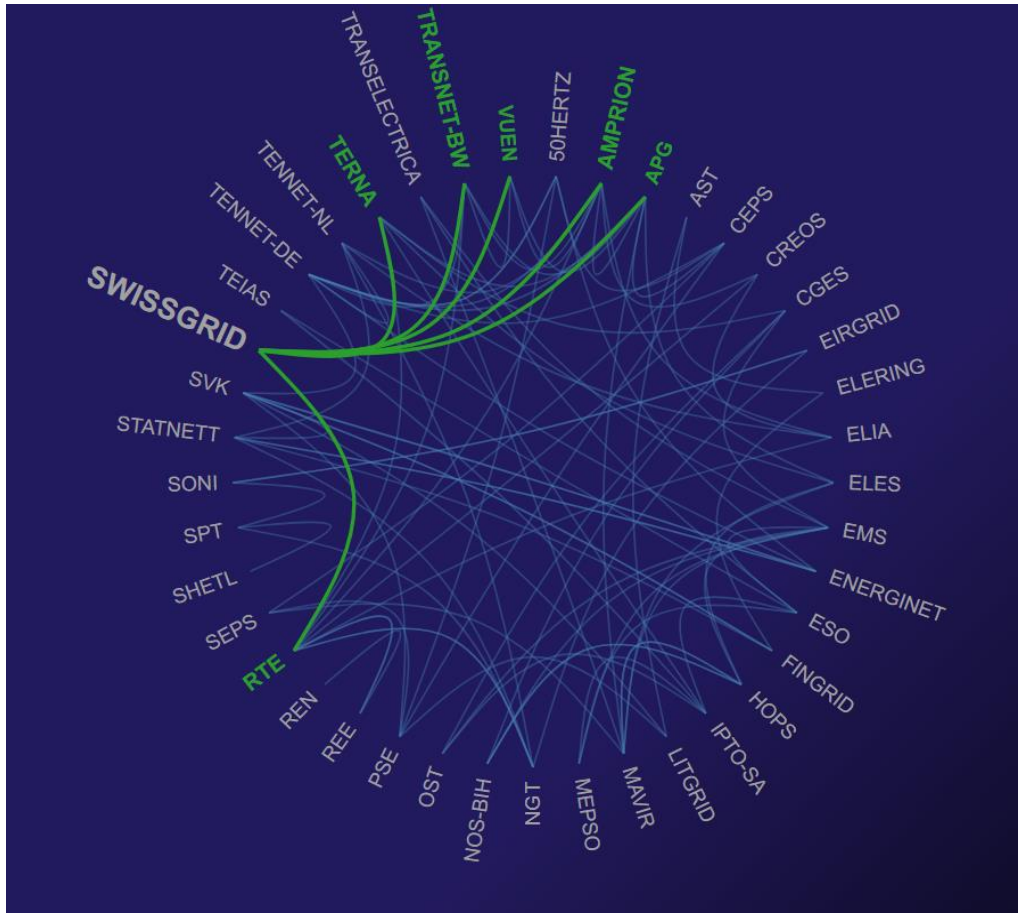
5 countries to allow only electric vehicles sold from 2025/2030

Our systems are tightly connected

Highly meshed network



Increasingly connected



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Tasks of ENTSO-E: a technical advisor for EU

- Ten-Year Network Development Plans
- Network Codes development and implementation
- We build markets
- Regional cooperation, building RCCs
- Adequacy forecasts

43 TSOs from 36 countries

530 million citizens served

1,14 TW installed generation capacity

480 000 km of interconnections

We have delivered 8 codes and guidelines

3 Market Codes

- Efficient utilization of grid and generation – incl. capacity calculation on borders
- Lower costs to industry and consumers
- Improved competition

2 Operation Codes

- Defining regional coordination
- Secure operations in spite of more RES
- More efficient exchange of reserves

3 Connection Codes

- Harmonized requirements for investments and operations
- Better industrial solutions, competition and cost reductions

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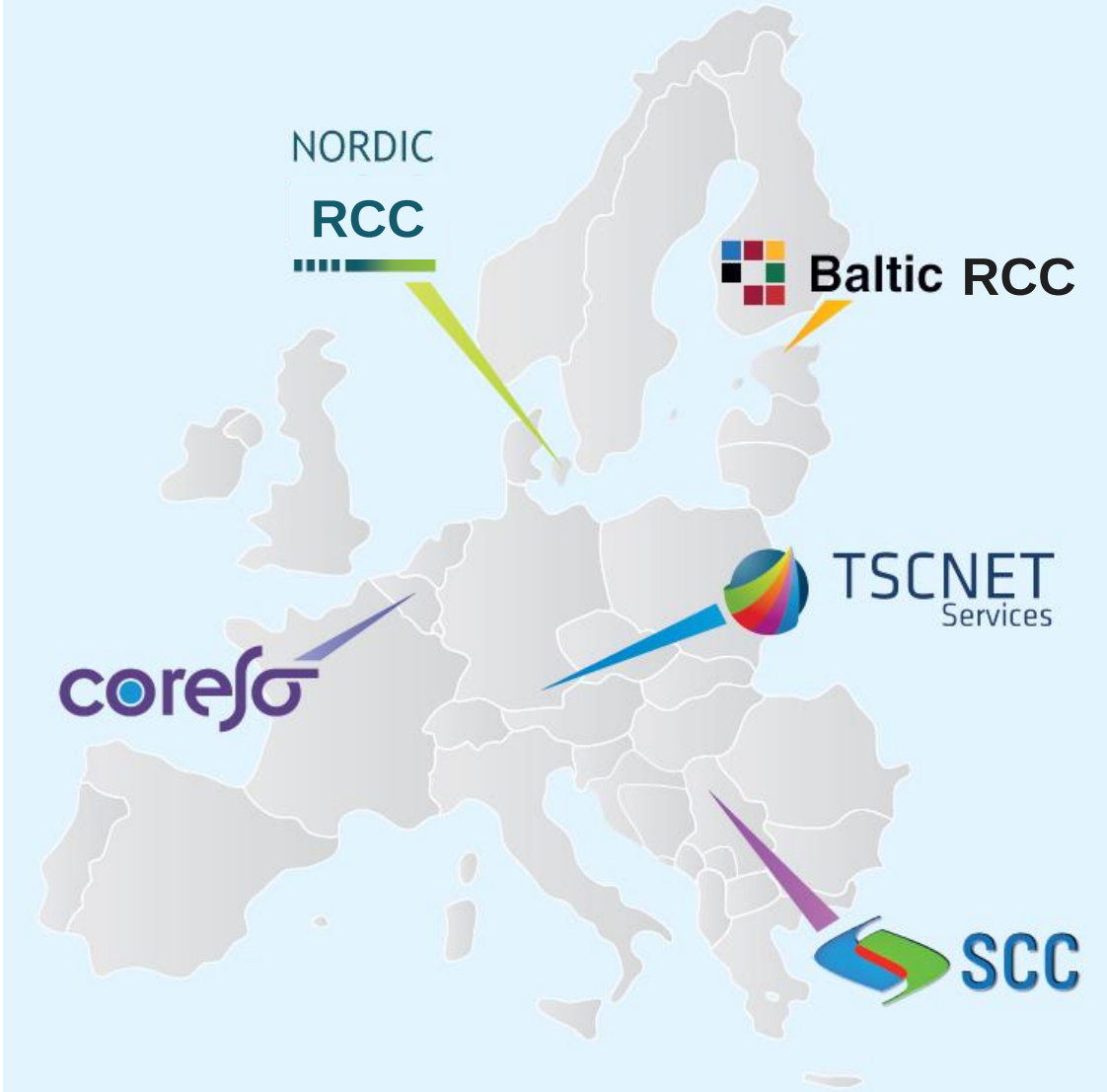
Network Codes deliver regional cooperation

Regional Coordination Centers (RCC):

1. Capacity calculation
2. Security analysis
3. Common grid model
4. Adequacy forecast
5. Outage planning

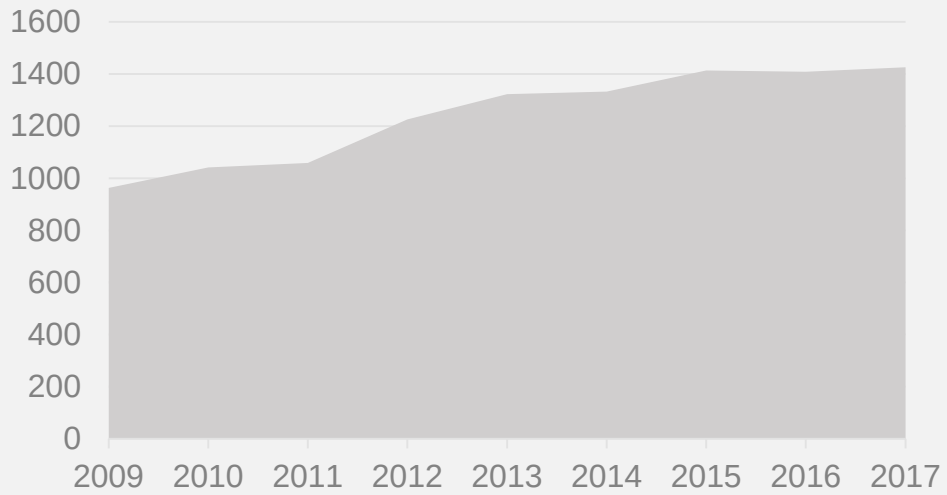
We are prepared to take on new tasks from CEP



Network codes deliver efficient markets

DAY-AHEAD MARKETS

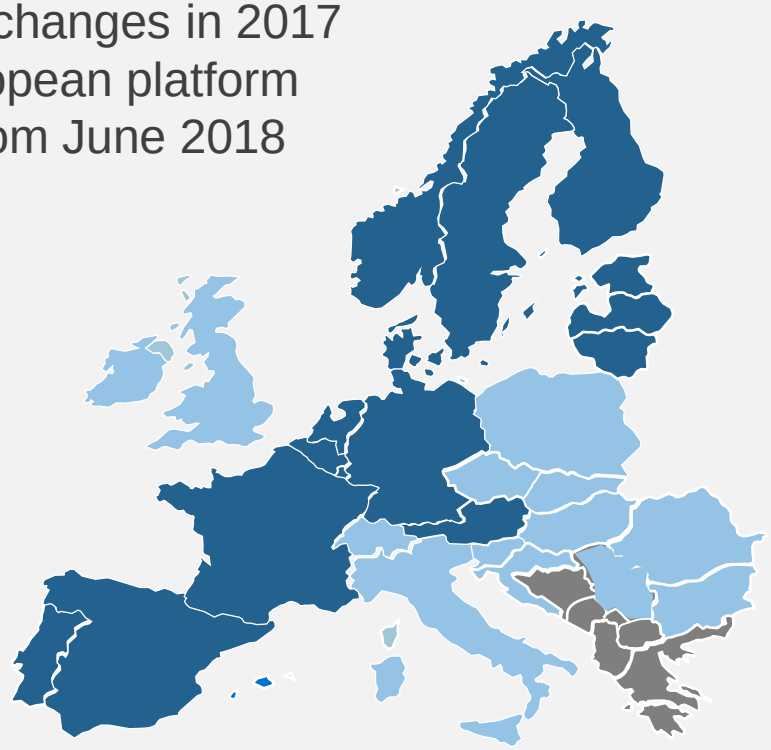
- **1400 TWh**, **50%** of consumption in European market coupling
- **1 B€/year** in social welfare



Source: Nordpool, EpexSpot, OMIE, GME

INTRADAY MARKETS

- **140 TWh** traded on main power exchanges in 2017
- New European platform (XBID) from June 2018



Network Codes will deliver balancing markets

BALANCING MARKET MILESTONES

2021 (derogation to 2025)
- Imbalance settlement period, 15 minutes

Q4/2021
- aFRR and mFRR

Q4/2019
- Replacement reserves

Q4/2019
- Imbalance netting Continental Europe

+ 400 mil €/year in welfare through balancing markets

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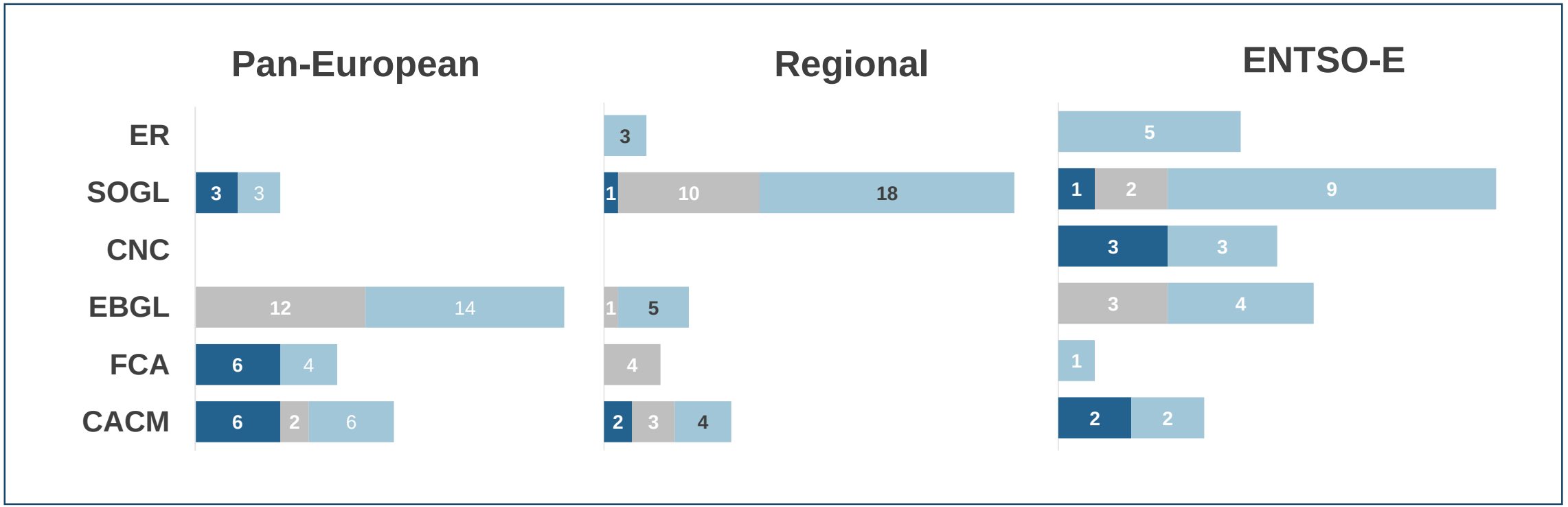
74% of Network Codes methods are already completed or underway

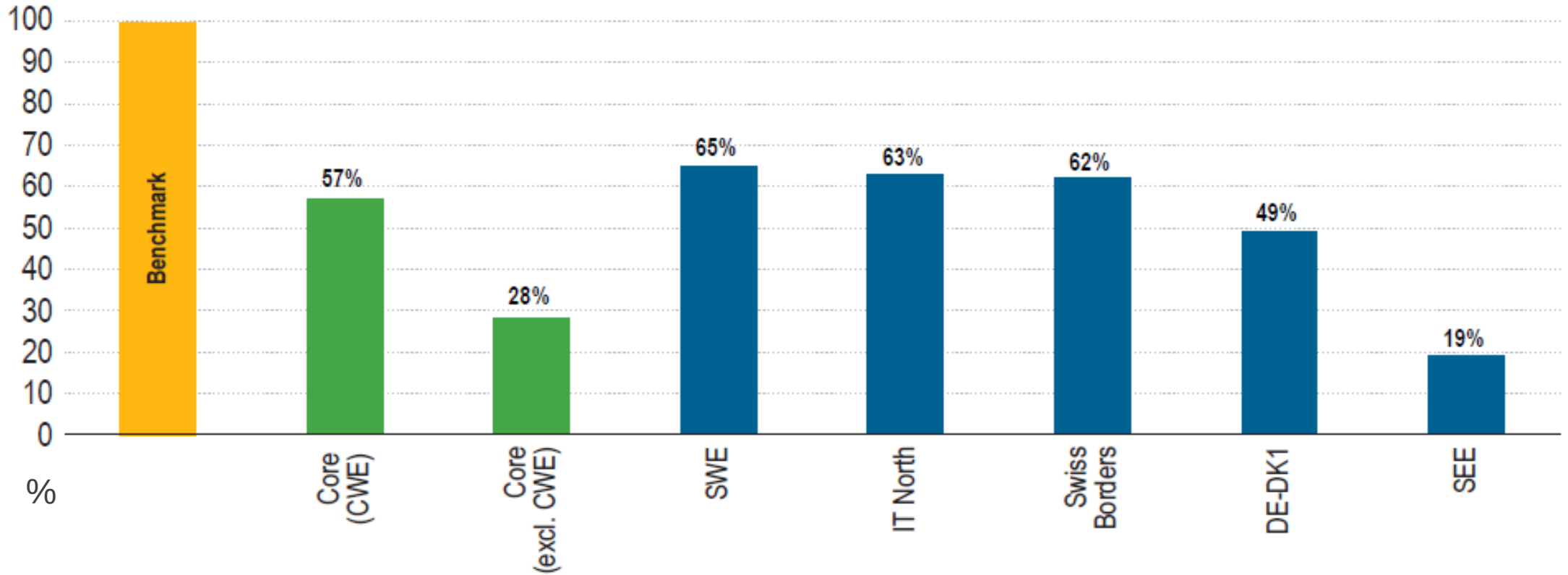
24 completed	37 planned	81 in progress



Source: ENTSO-E (October 2018)

Implementing CACM NC will increase the capacity on borders

Ratio between available tradable capacity and the benchmark capacity of HVAC interconnectors per region – 2017 (%)



Source: ACER market monitoring 2017; in green: flow-based methodologies; in blue: coordinated net transfer capacity

What we need is to implement the Codes

- 5 RCCs are established with capacity calculation function
- Capacity calculation methods are developed in each region, scrutinized by regional NRAs. If disagreement, ACER takes over
- Regional methods developed for re-dispatch and countertrading
- A procedure for bidding zone configuration involving TSOs, NRAs and ACER

Let us complete the job – delete Articles 13 and 14

Don't jeopardize our market model

- No clear definition of suggested targets of 75%
- No assessment of consequences

We do not need a regulatory experiment that:

- Challenges operations and security of supply
- Increases costs for consumers
- Weakens price signals
- Reduces incentives to build interconnectors

Thank you for your attention