



10 years of achievements after the 3rd Package

Joachim Vanzetta Board Chair ENTSO-E

EEF Dinner 17 September 2019 Strasbourg

Who we are

- 43 TSOs in 36 countries
- 500 million citizens served
- 480 000 kilometers of power lines
- 467 000 GWh of electricity exchanges in 2018





What we do

Enabling the European energy transition through:

- European long term grid planning
- European security analysis
- Technical/market rules
- European platforms
- Standardisation & research
- Regional & global cooperation





What TSOs do for Europe

- TSOs drive Market Integration
- TSOs engage in numerous Initiatives to integrate the Market
- TSO initiatives foster Increased Cross-Border Trade
- TSO initiatives foster Price Convergence

Network Market Planning & Integration Innovation TSO Cooperation System Operation

- TSO Coordinated Planning generates Welfare Gains
- TSOs actively engage in Innovation/New technologies
- TSOs couple Distant Markets
- TSO Measures to foster Acceptance

- TSOs anticipated need for cooperation
- TSOs efficiently responded to new challenges
- TSO Regional Cooperation is a Success Story
- Despite of new challenges Maintenance of high level of security of supply



10 years of achievements for European customers

8 network codes and guidelines + related methodologies & pilot projects	 Pan-European IT Transparency Platform ENTSO-E Awareness System Common Grid Model 	Competitiveness	Doubling of cross border electricity exchanges in last 20 years
5 research , development & innovation roadmaps	5 regional security coordinators	Security of supply	Successful coordination of solar eclipse in 2015, cold spell 2017
5 ten-year network development plans	8 security of supply assessments + 20 summer & winter outlooks	Sustainability	30% share of renewables in the electricity mix

TSOs' regional coordination in markets

Voluntary cooperation



1990s - NORD POOL



2006

MAY 2014

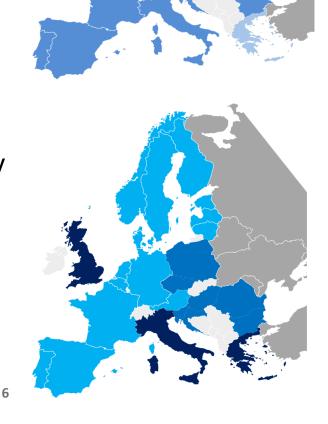




Multi Regional Coupling

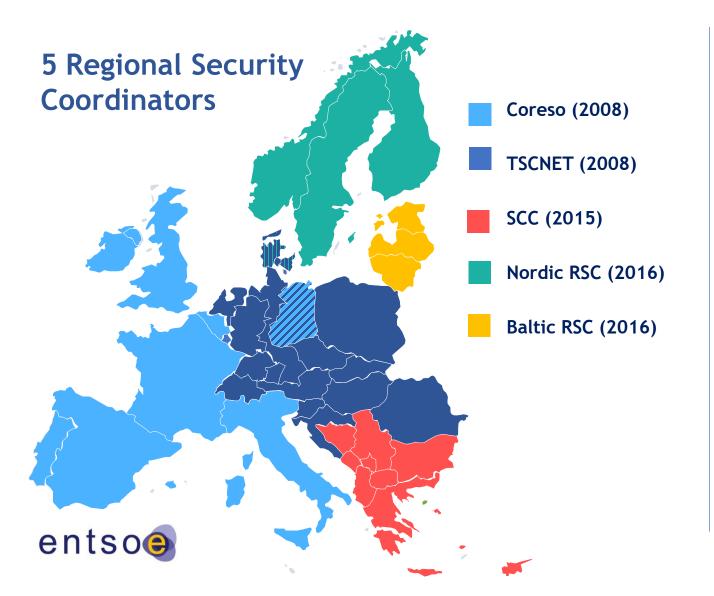
Single Day Ahead Coupling

Single Intraday Coupling





TSOs' regional coordination in operations



servicesSecurity
analysisCapacity
CalculationCommon Grid
ModelOutage
planning

5 coordinated

Adequacy forecast

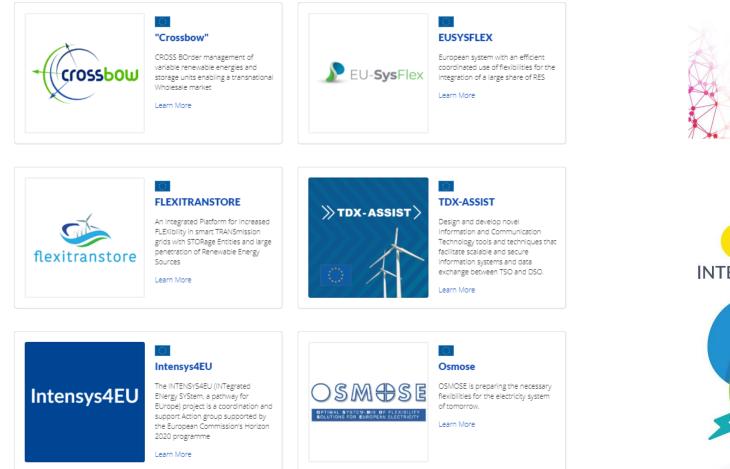
TSOs cooperate in grid planning for the benefit of society



Failing to invest in infrastructure will cost Europeans 40 billion euros per year as of 2040. Wasting more than 150 TWh of clean electricity and increasing risks to security of supply. Investing in #infrastructure is crucial for Europe. #EnergyUnion



TSOs invest in research & innovation



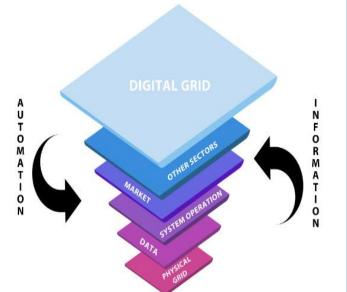






TSOs and digitization

Link between TSOs & DSOs



Pan-European operational planning data exchange



Transparency of market & grid data





Evolution in mandated tasks

2020

- Clean Energy Package:
- ✓ Electricity Regulation & Risk preparedness
- ✓ Regional coordination centres
- ✓ Pan-European resource adequacy assessment
- ✓ New Network Codes

2015

TEN-E Regulation/PCIs

2018

Common Grid Model

Bidding zones study

Advanced Adequacy

assessment - MAF

New TYNDP methodology

- Transparency Regulation
- REMIT Regulation

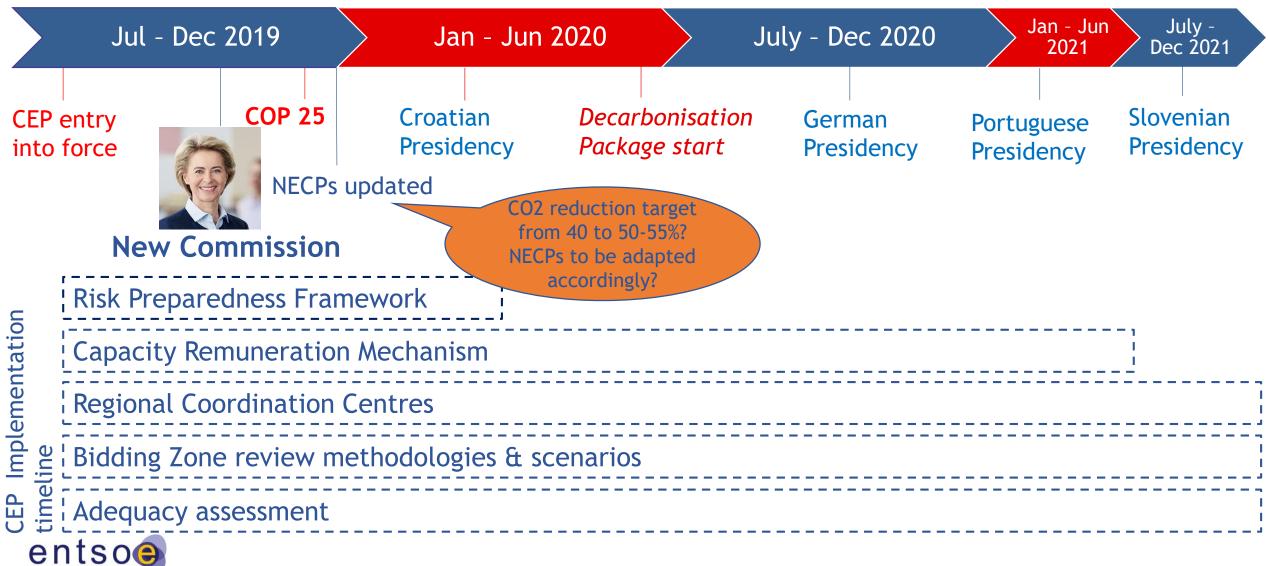
2009

- Third Package:
- ✓ Network codes
- ✓ TYNDP
- ✓ Generation adequacy
- ✓ RDI roadmaps



Average of 50 consultations a year

• European Regulatory timeline 2019-2021



2020 and beyond: what do we want to achieve?





Mission & Identity

- Implementation of legal mandates
- Technical advisor for policy makers

Operational Excellence

- Align operations with core mission
- Deliver high quality

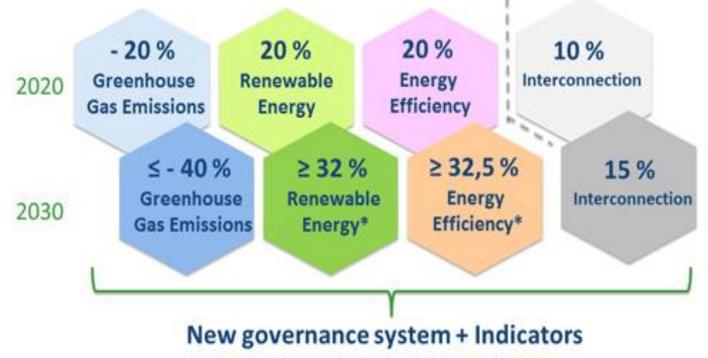
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Content of our mission

- Energy system 2030 up to 2050
- Decarbonisation, sector coupling and market design
- Sound IT backbone



2020, 2030 & beyond



 CLIMATE NEUTRAL

 EUROPE

 0050

 2050

 #EU2050

* With a possible upward revision in the target in 2023

Source: www.climat.be



ENTSO-E 10 years conference

Helsinki 13 November 2019 LOOKING BACK FOR LOOKING FORWARD

ANNIVERSARY

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RELIABLE SUSTAINABLE CONNECTED

