

Completing the IEM and paving the way towards 2030 through network codes

EEF Dinner debate in Strasbourg

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About ENTSO-E



41

TSOs
from 34 countries



532

million
citizens served



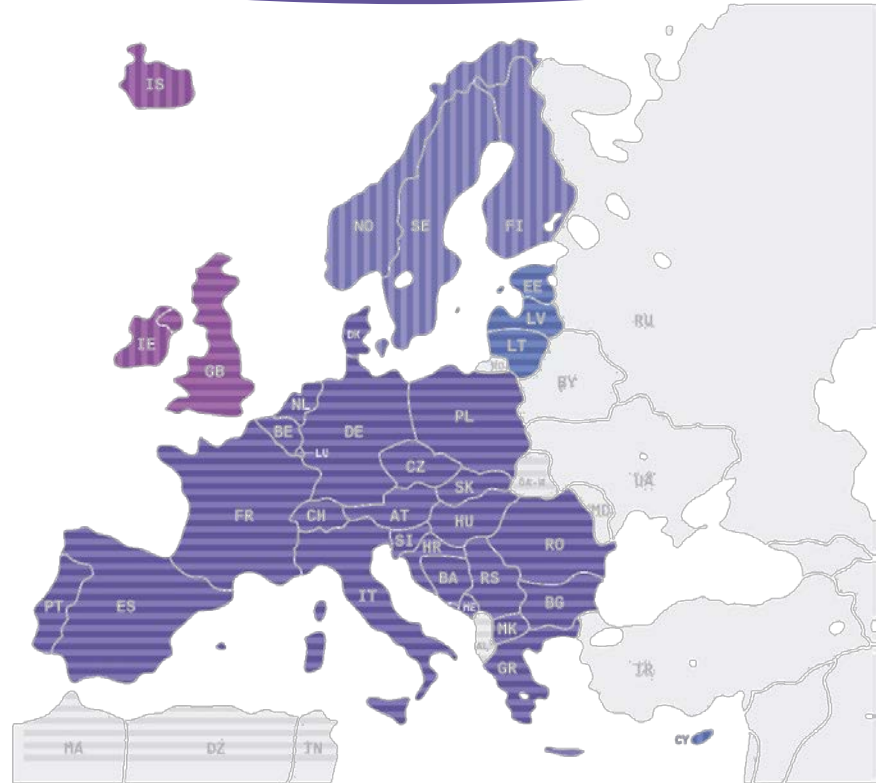
828

GW
generation



305

Thousand Km
of transmission lines



**Ten-Year
Network
Development
Plans**

**Adequacy
forecasts**

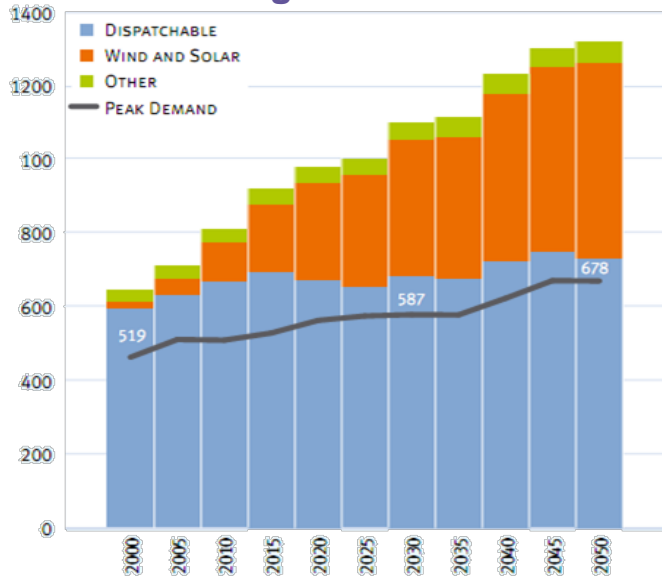
R&D plans

**Tools for Market
Integration**

Network Codes

The IEM: meeting Europe's low carbon target

Variable generation



Thousands of small units



Huge flows all over Europe



Challenges

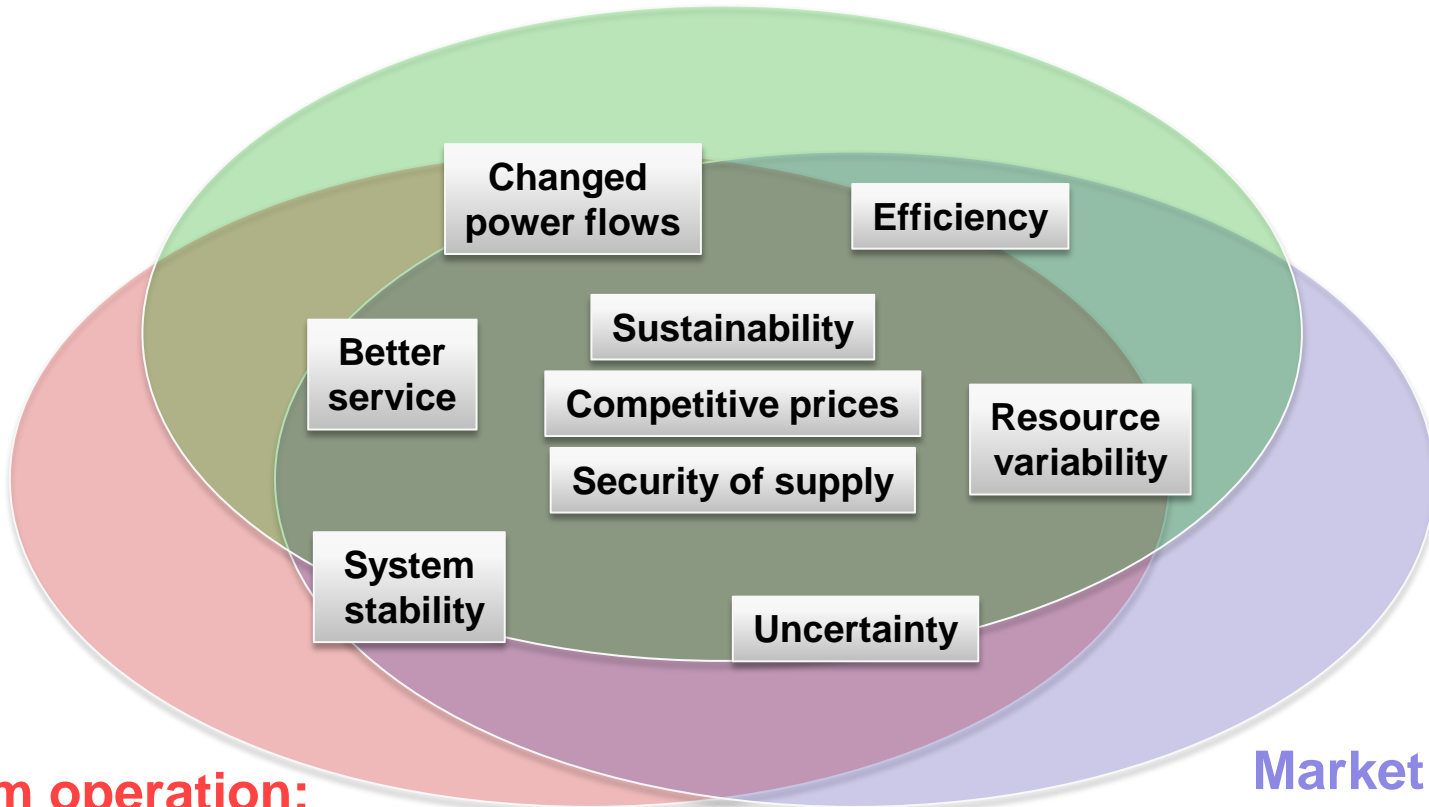
System Stability, Resource Variability, Uncertainty, New connections, Changed power flows

Three pillars for delivering the IEM



Infrastructure:

Delivering a fit for purpose network



System operation:

Delivering coordinated schemes

Market:

Delivering well designed
pan-European markets

Therefore: network codes matter; they form the foundation on which the IEM is being built

Internal electricity market

3 Connection Network Codes

set requirements for

- Generators
- Demand-side
- HVDC connections

...paving the way for offshore wind...

3 Market Network Codes

set market rules for

- Day ahead/intraday & Capacity calculation
- Long-term timeframes
- System balancing

... day-ahead market coupling...

4 Operational Network Codes

set common rules for

- Assessing adequacy
- Planning outages
- System security
- Emergency situations

...regional security coordination initiatives...

Conditions for network investment

1. Customer need
2. Optimised plan
3. Regulatory frameworks
4. Permitting
5. Supply chain capacity



In Conclusion

The European power system is evolving significantly

A fully interconnected market will address the challenges this brings

Network codes are fundamental to the completion of the IEM

Smooth adoption of network codes in autumn 2014 needed

Thank you for your attention

More info: <http://networkcodes.entsoe.eu/>

Questions?



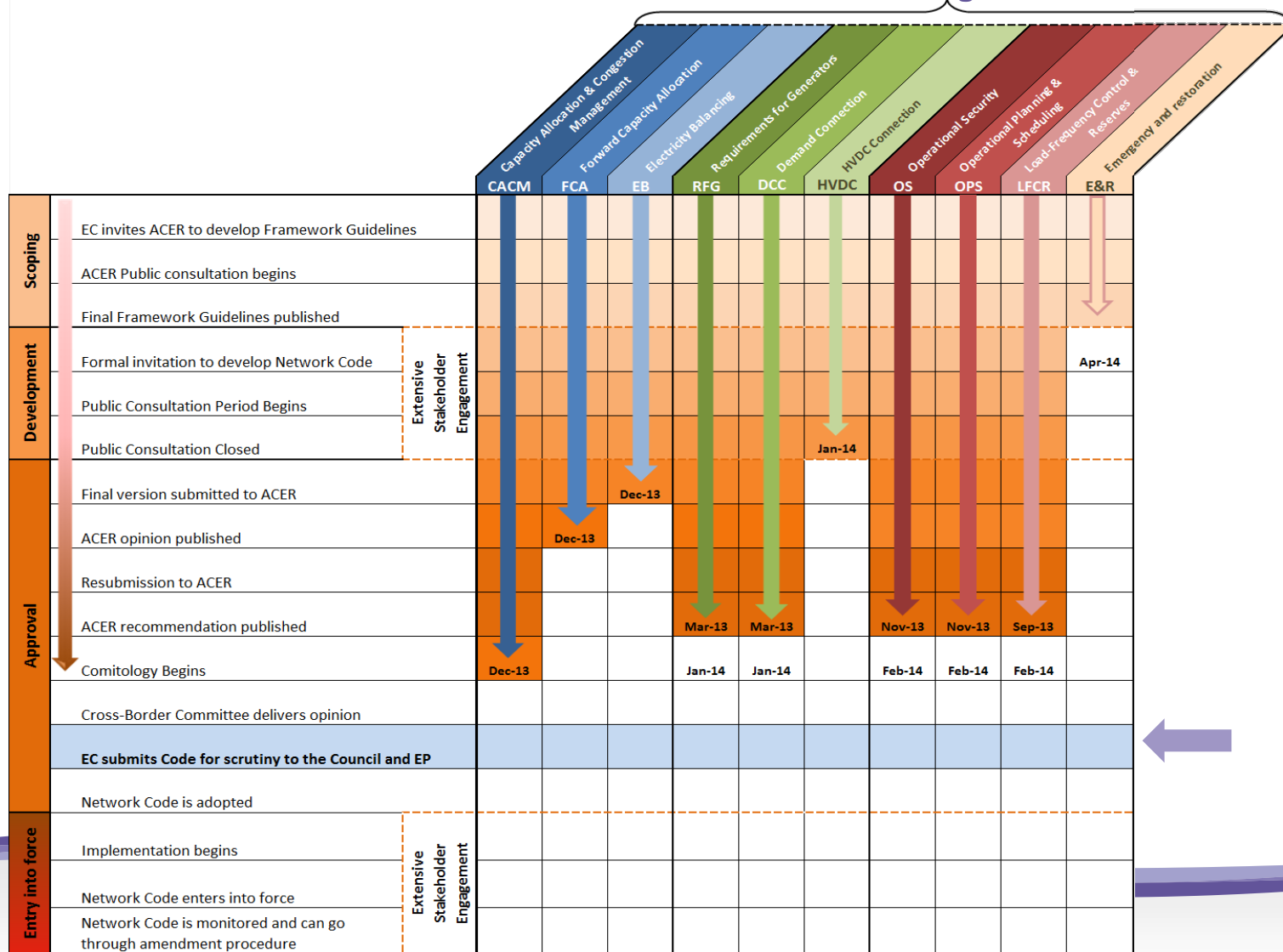
Reliable Sustainable Connected



Back-up slides

Annex : current status of the codes

Delivering the IEM



Benefits for European consumers

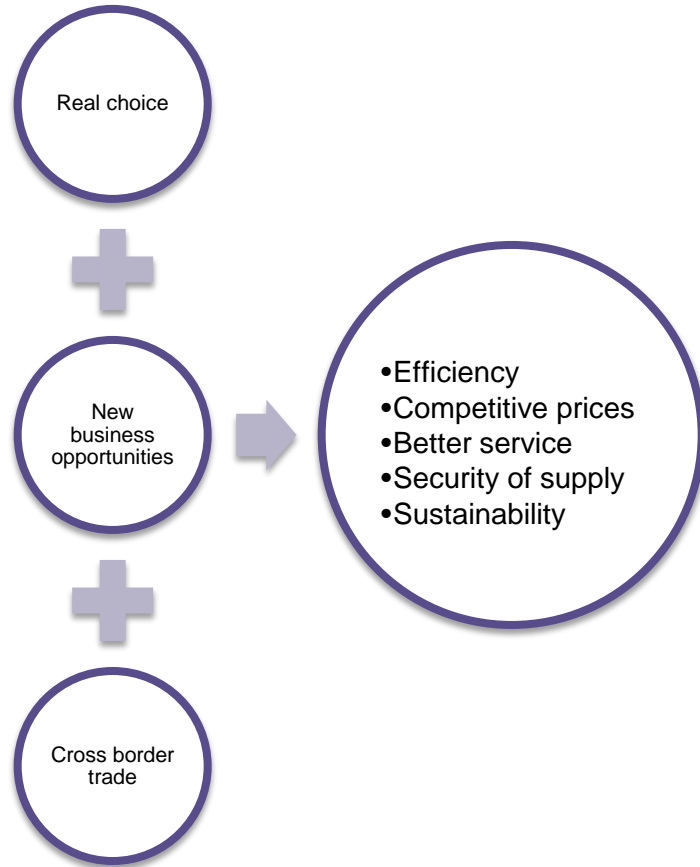


Delivering better service and more choice to European customers

Paving the way for technological innovation

Securing Europe's future competitiveness

The IEM: creating benefits for European customers



420 billion €
electricity sector's annual turnover

80 % of power generation
still controlled by the long-established utilities

13 billion €/ year
saved by EU customers through IEM

Source: Third Energy Package and EC communications