

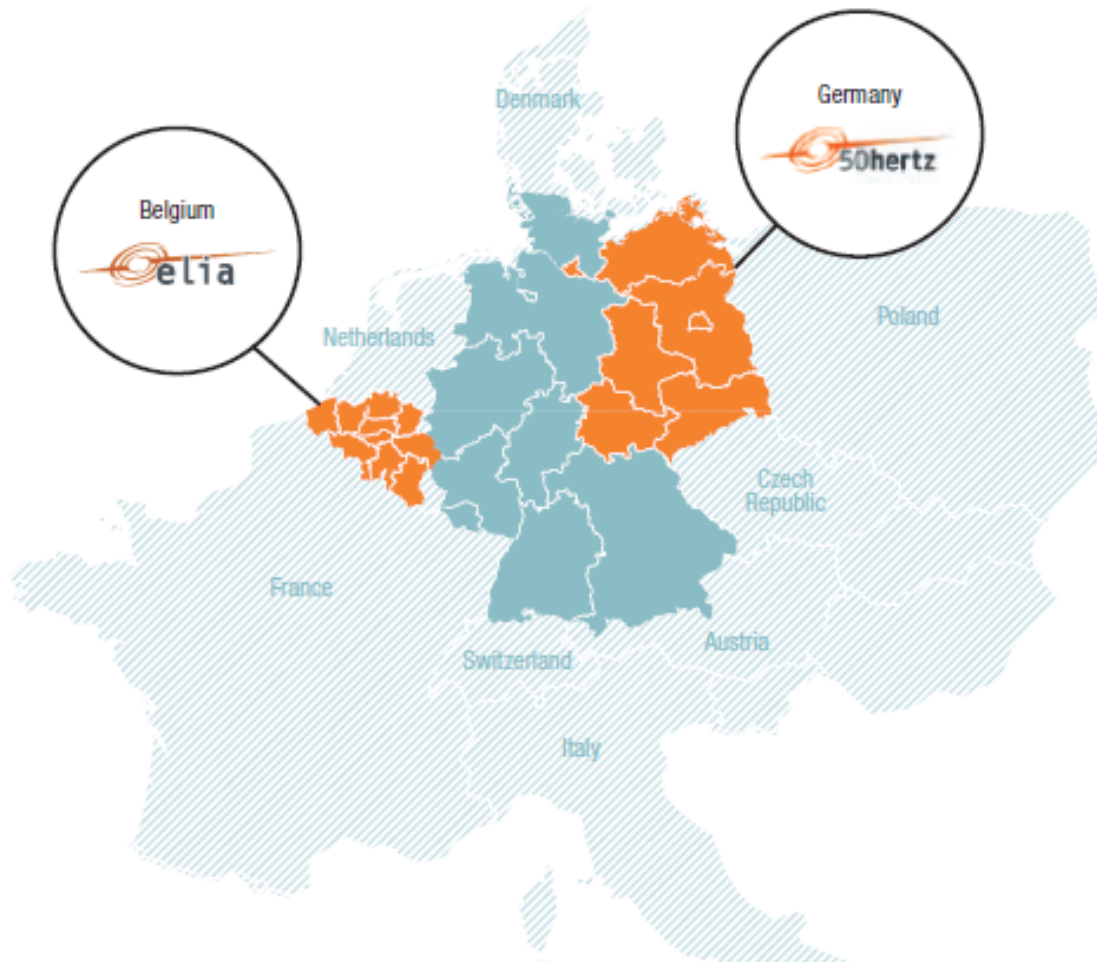


Barriers to the completion of the EU internal electricity market: a TSO perspective

Brussels, 5.5.2015
Olivier Feix



The Elia Group




30,000,000
residents covered


143,000 km
covered


800
experienced engineers
and technicians


30,000 MW
installed capacity
of renewable energy


18,000 km
high-voltage lines in Belgium
and in Germany


2,000
employees


6
interconnections


22
nationalities

The EU top 5 position gives the Elia Group the critical mass to play a leading role in reshaping the electricity market.

Transmission System Operators:

Backbone of the European Electricity System



Owner and operator of the transmission grid

In charge of operation, maintenance and the development of **extra-high-voltage lines** and the grid **connection of offshore wind farms**.



Operator of the Electricity System

Responsible for **system stability** of the transmission system around the clock: frequency control and voltage regulation, congestion management.

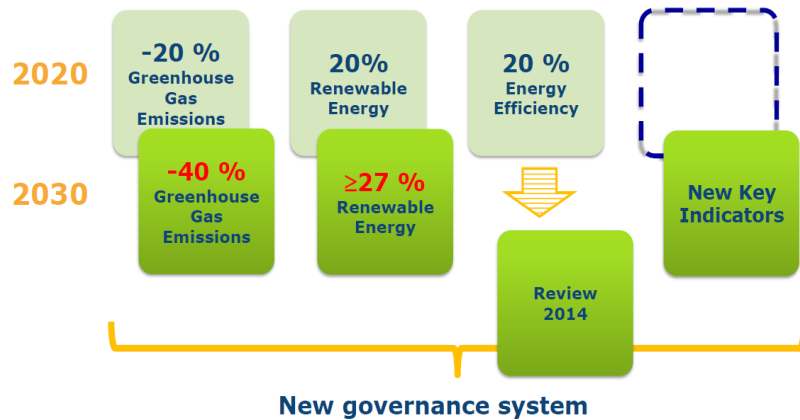
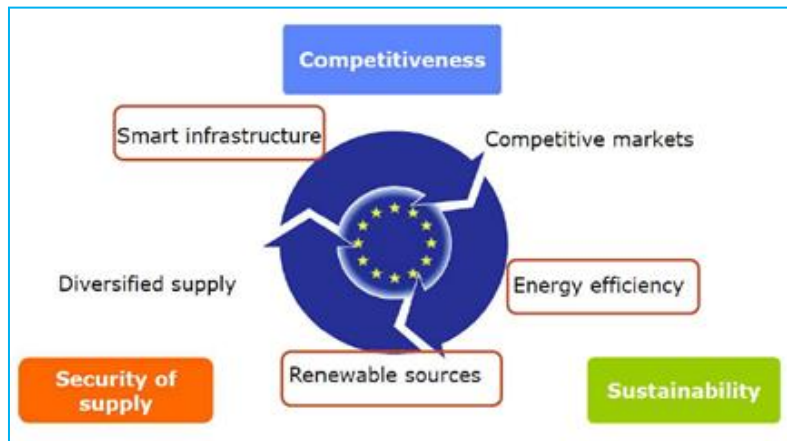


Market developer and facilitator

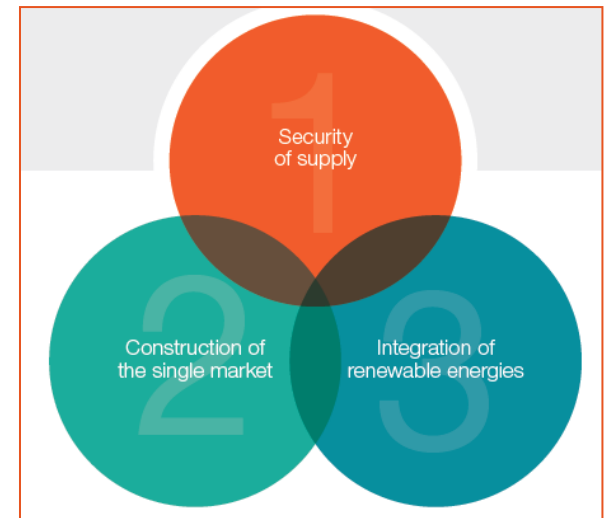
Catalyst for the **development of the energy market**, especially in Northern and Central-Eastern Europe.

European Objectives: challenges for TSOs

EU Objectives



TSO Challenges



Energy Transition: impact on the electricity system



Further growth of renewable and decentralized generation leads to fundamental change in the handling of the whole electricity system.



Competitiveness of energy prices and inefficiencies in the former development.



Decreasing profitability of conventional generation under current market conditions.



Legal and procedural framework must be further developed to keep pace with renewables expansion (first important steps have been made in 2014).

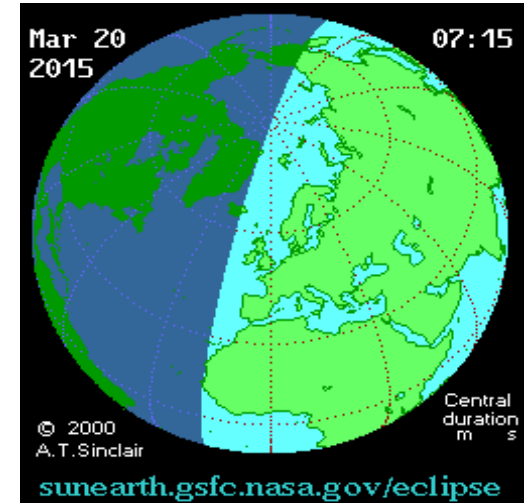
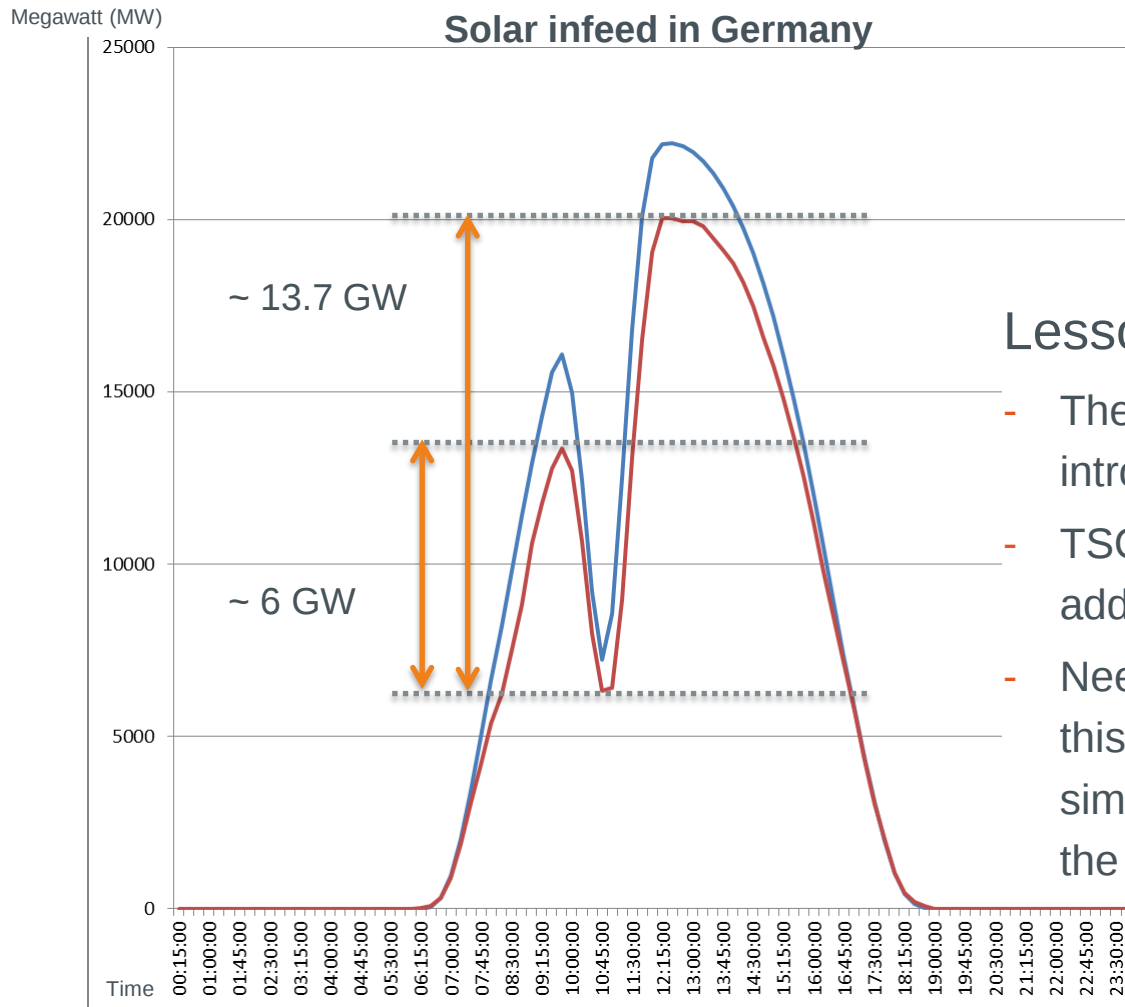


Remaining gap between grid development and renewables development.



Limited public acceptance for the consequences of the Energy Transition (infrastructure, costs...).

Solar eclipse: successful test for the electricity system of the future!



Lessons learned:

- The market products developed and introduced in the last years worked well
- TSOs properly secured the system via additional security measures
- Need for increased flexibility shown by this kind of situation as we will face similar needs on a more regular basis in the future

Major areas to work on...

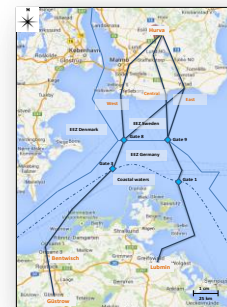
Renewables 
Grid Initiative

**Public Acceptance
and dialogue**
Active and participatory
dialogue



entsoe
Reliable Sustainable Connected

Grid development
Regulatory stability/
Internal/external
developments

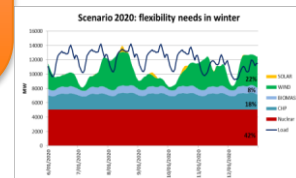


coreso

**Real-time
cooperation**
Data exchange/
Controllability of
generators and loads

eeX

**Market &
products**
Trading of 1/4 hour
products/ improved
liquidity



 **TSC**
Transmission System Operator
Security Cooperation

Many thanks for your attention!

Olivier Feix

Elia Group

olivier.feix@eliagroup.eu

www.eliagroup.eu

Brussels, 5.5.2015