Electricity markets
What is the European Union up for?

Workshop on
Challenges and Prospects for Regional
Electricity Cooperation and Trade
in Central Asia and the Caucasus

Baku, 18/10/2016

Hans ten Berge
EURELECTRIC
The European decarbonisation agenda brings a new reality to the power system...

Long term EU 2050 Roadmap

2030 Energy & Climate Framework

GHG emission reduction objectives of the EU

Source: EURELECTRIC

* RM refers to COP15 where “world leaders agreed that global average temperature should not rise more than 2°C”

...and the Paris Agreement will probably speed up that process

- Art. 2(1a) speaks of “well below 2°C” and “to pursue efforts to limit [the increase] to 1,5°C”
- The Provisions in the Paris Agreement make it probable that the EU’s GHG ambition will be updated before 2030

- Impact Assessment mentions “limit global temperature rise to below 2°C”
- EUCO “will revert to this issue after the Paris Conference”
What does the 40% decarbonisation target mean for the power sector?

40% across the whole economy

43% compared to 2005
- ETS sectors
  - = power and energy intensive industry
  - power sector decarbonisation signal
  - Linear factor
  - Stability reserve

30% compared to 2005
- Effort-sharing sectors
  - = transport, buildings... agriculture etc
  - electrification signal
  - CO2 cars
  - Energy efficiency
  - Energy labelling
  - EPBD
  - Eco-design
Low-carbon technologies represent 56% of EU electricity generation

→ Low-carbon technologies contribute to more than 50% of EU power generation since 2012.
→ decreasing share of fossil fuels in the power mix and a decrease in demand are contributing to a decline in the CO₂ emissions in the power sector

Source: EURELECTRIC
All new capacity is green: continued capacity growth in a stagnating market

→ The pace of RES capacity additions slowed down in 2014 (annual additions of solar power decreased, while wind capacity additions increased).

→ Decommissioning of gas capacities continued: in 2014 more capacity was decommissioned than added to the system.

Source: EURELECTRIC
Building the European electricity market

First energy package
- Common rules for the internal energy markets, start of market opening, separation of monopoly activities

Second energy package
- Breaking up monopolies - unbundling, strengthening national energy regulators, liberalization for non-household

Third energy package
- Ownership unbundling/ITO, protecting consumer rights, ACER, ENTSO-E, Network Codes and IEM

Main purposes
- The main purpose of the packages:
  - enhance competitiveness
  - guaranteeing security of supply
  - increasing energy efficiency
  - effective consumer interests prevail
Revision of the 3rd package is expected in December 2016

Now - Sept 2016
Impact assessments of market design options

Dec 2016
Commission makes legislative proposals

2017-2018...
Legislation in Council and Parliament

2018-2020
National implementation
Key elements of the “Winter Package”
European wholesale prices keep on decreasing…

Platts, 30 August 2016
…but consumers’ bills keep on increasing due to taxes and levies
How to achieve a cost-efficient low-carbon transition?

Current RES support weighs on the bill

High shares of RES are needed to decarbonise

A cost-efficient transition is needed!

Source: EURELECTRIC, 2016
The effectiveness of EU ETS today as driver for decarbonisation, renewables, energy efficiency

On track for RES

But is the carbon price delivering a low carbon investment signal?

On track for CO2
Ensure that RES are integrated in the market

Ensure that RES can participate in all markets (balancing, ancillary services)

Progressively implement balance responsibility and remove priority of dispatch

Ensure that possible RES support is market-based and cost-efficient
Improve the energy market to better integrate renewables and attract flexibility resources

- Cross-border capacity & market integration
- Transmission tariffs respect the market & the merit orders
- Robust intraday and balancing, with shorter gate closure
Energy, flexibility and capacity must be valued in a well-functioning market design

**ENERGY**
Selling KWh

Markets:
• Forward, day-ahead, intraday markets

**FLEXIBILITY**
Adjusting to short-term variations

Markets:
• Day-ahead, intraday, balancing markets, ancillary services

**CAPACITY**
Firm capacity for security of supply

Markets:
• Market-based capacity mechanisms where relevant, national and regional adequacy assessments to be taken into account
CAPACITY MECHANISMS IN EUROPE

Source: EURELECTRIC
SECURITY OF SUPPLY: FINDING EUROPEAN SYNERGIES

- Stakeholders involvement
- Regional scenarios
- Economic viability of assets
- Sound and transparent methodology
- Taken into account when introducing capacity mechanisms

WHERE THEY EXIST, WELL-DESIGNED CAPACITY MARKETS ARE A TOOL FOR ADEQUACY ASSESSMENTS
CAPACITY MARKETS SHOULD BE WELL-DESIGNED AND HAVE A REGIONAL PERSPECTIVE TO ENSURE Security of Supply

Capacity markets’ objective is to ensure Security of Supply

Climate objectives must be tackled through other e.g. EU ETS
THANK YOU

More publications and recommendations: www.eurelectric.org