The EU energy targets leading to 2050, the transition to a low-carbon economy and the role of energy regulation

Fernando Hernández, CNMC
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What the EU is doing already: 2020 targets

- Reduce GHG emissions by 20% (compared to 1990)
  - EU Emissions Trading System (EU ETS)

- Increase share of renewables in EU’s energy mix to 20%
  - Mandatory National targets

- Improve energy efficiency by 20% compared to business as usual projections
2020 vs 2030 targets (I)

- Agreed headline targets. 2030 Framework for Climate and Energy:

2020

-20% Greenhouse Gas Emissions

2030

≤ - 40% Greenhouse Gas Emissions

≥ 27% Renewable Energy

≥ 27% Energy Efficiency

10% Interconnection

* To be reviewed by 2020, having in mind an EU level of 30%

New governance system + indicators

Source: European Commission
2020 vs 2030 targets (II)

- Emission reductions in ETS and non-ETS

Source: European Commission
2020 vs 2030 targets (III)

- Share of RES in gross final energy consumption

Source: European Commission
Roadmap to 2050: European Council Conclusions*

• Science consensus **global emissions should be cut by -50% by 2050** compared to 1990

• **EU objective** of reducing greenhouse gas emissions by **80-95% by 2050** compared to 1990

• Need for a low carbon 2050 strategy providing the framework for the longer term action

• Need to fix intermediary stages towards reaching the 2050 objective

• Need to keep developments under review on a regular basis

* 4 February 2011
80% GHG reduction in the EU by 2050 is feasible

- With currently available technologies,
- With behavioral change only induced through prices
- If all economic sectors contribute to a varying degree & pace.

Source: European Commission
The role of RES (I):
CEER Status Review of RES in Europe 2012/13

- Proportion of gross electricity receiving RES support around 15% at EE average, though with wide differences

Chart 3: Share of total electricity produced receiving RES support (2012)\textsuperscript{19}
• Wide range of instruments used to promote RES: investment grants, feed.in.tariffs, feed.in.premium, green certificates, calls for tenders or system similar to network remuneration.

• Wide differences across technologies and across countries.

• Weighted average support across EU 110,65 €/MWh
In terms of market integration:

- RES electricity generally sold through the same channels as conventional electricity.
- RES same financial responsibility as conventional plants for electricity balance.
- RES plants generally given priority in terms of network access and dispatching.
- RES support generally financed by non-tax levies or passed down to consumers.
Delivering the internal energy market and making the most of public intervention

- Development of demand-side response
- Need for generation adequacy
- Further integrating national markets
- Well-designed, targeted and proportional interventions
- Keeping costs low and considering impact to consumers
- Monitoring, evaluation and phasing out of support
Guidelines on State aid for environmental protection and energy 2014-2020 (I)

Implications for RES:
- Sets forth general conditions for investment and operating aid to energy from RES.
- Market instruments, such as auctioning or competitive bidding process open to all generators producing electricity from RES. Green certificates schemes also allowed.
- Ensure that subsidies are reduced to a minimum in view of their complete phasing out.
- Technology specific tenders, to be carried out by Member States, allowed.
- Support schemes that are open to other EEA or Energy Community countries are encouraged.
Guidelines on State aid for environmental protection and energy 2014-2020 (II)

• Incentivise the market integration of electricity from RES. Sell this electricity directly in the market and subject to market obligations:
  ► Premium in addition to the market price (instead of feed-in tariffs).
  ► Subject to standard balancing responsibilities.
  ► Avoid incentives to generate electricity under negative prices.
Energy Union

• Communication on Energy Union Strategy Framework adopted by the EC on 25 February, alongside:
  ► Communication The Paris Protocol – A blueprint for tackling global climate change beyond 2020
  ► Communication on Progress towards the 10% electricity interconnectivity target

What exactly will change? The EC proposes:

► doing more to ensure that Member States implement and enforce existing legislation
► passing legislation to increase gas and electricity supply security and other measures to reduce Europe’s reliance on dominant suppliers
► setting up an Energy Infrastructure Forum to make sure major infrastructure projects are delivered where and when needed
► passing legislation to modernise the European energy market and reinforce the regulatory framework at regional and European level
► passing legislation to ensure the 2030 climate and energy targets are reached
► making energy costs and prices more transparent
► making buildings more energy-efficient and decarbonising the transport sector
► putting an initiative on global energy and climate technology and innovation leadership in place
Energy Union

• **Specific sustainability measures announced:**
  - Revision of Renewable Energy Directive (Nr 1 in RES)
  - Communication on best practice in self-consumption schemes
  - Co-legislators to adopt the Market Stability Reserve
  - Commission proposal (later in 2015) for legislation to achieve agreed 2030 emission reduction targets in the ETS and non-ETS sectors
  - Revision of the Directives on Eco-Design and Labelling (in 2015), and on Buildings and Energy Efficiency
  - Review of the State Aid Guidelines
  - Commission to propose an upgraded Strategic Energy Technology Plan
  - Commission and Member states to establish integrated Governance scheme for the Energy Union, including on 2030 targets
The role of European energy regulators

High level objectives*:

• Establishing liquid, competitive and integrated wholesale energy market
• Enhancing Europe’s security of supply and channeling the external element of IEM
• Moving to a low carbon society with increased renewables and smart, flexible responsive energy supply
• Developing a functioning retail market that benefits consumers
• Building stakeholder dialogue, cooperation and new governance arrangements

* High level objectives expressed in the paper “Energy Regulation: A Bridge to 2025”. Recommendation of the Agency for the Cooperation of Energy Regulators No 05/2014 of 19 September 2014 on the regulatory response to the future challenges emerging from developments in the internal energy market
The role of European energy regulators (II)

- Revision of **Renewable Energy Directive** (in 2016-2017), to ensure that the 2030 EU RES target is met cost-effectively
- Communication on **best practice** in self-consumption and renewable support schemes (in 2016-2017)
- Commission to facilitate **cooperation and convergence** of national RES support schemes leading to more cross border opening (see Market Design initiative above)
- Legislation to achieve agreed **2030 emission reduction targets** in the **ETS** and **non-ETS sectors** (proposals in 2015-2016)
- Revision of the **Directives** on **Eco-Design and Labelling** (in 2015), and on **Buildings** and on **Energy Efficiency** (in 2016)
- Commission to propose an upgraded **Strategic Energy Technology Plan** (in 2016)
- Commission and Member states to establish integrated **Governance scheme for the Energy Union**, including on 2030 targets (2015 onward)
Thank you for your attention!

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