Policy Best Practices for accelerating the Deployment of LCE and Climate Technologies

IEA workshop

Paris, 23 Sept 2014

Session 3: experiences, challenges and forward thinking

Key elements in the EU:

- A common framework for the production and promotion of energy from renewable sources has been set by the Renewables Directive:

20% of energy from renewable sources by 2020

- Over the past years, consistent RES policy at EU:

- Energy Roadmap 2050: reducing greenhouse gas emissions to 80-95% below 1990 levels by 2050
- Energy and Climate objectives by 2030: RES at least 27%

- Member States mandated to establish National Reneable Plans with detailed roadmaps to reach the binding 2020 targets.

- The Emission Trading System has put a price on carbon emissions: giving value to saved emissions and promoting investment in clean energy technologies

Lessons Learned (1)

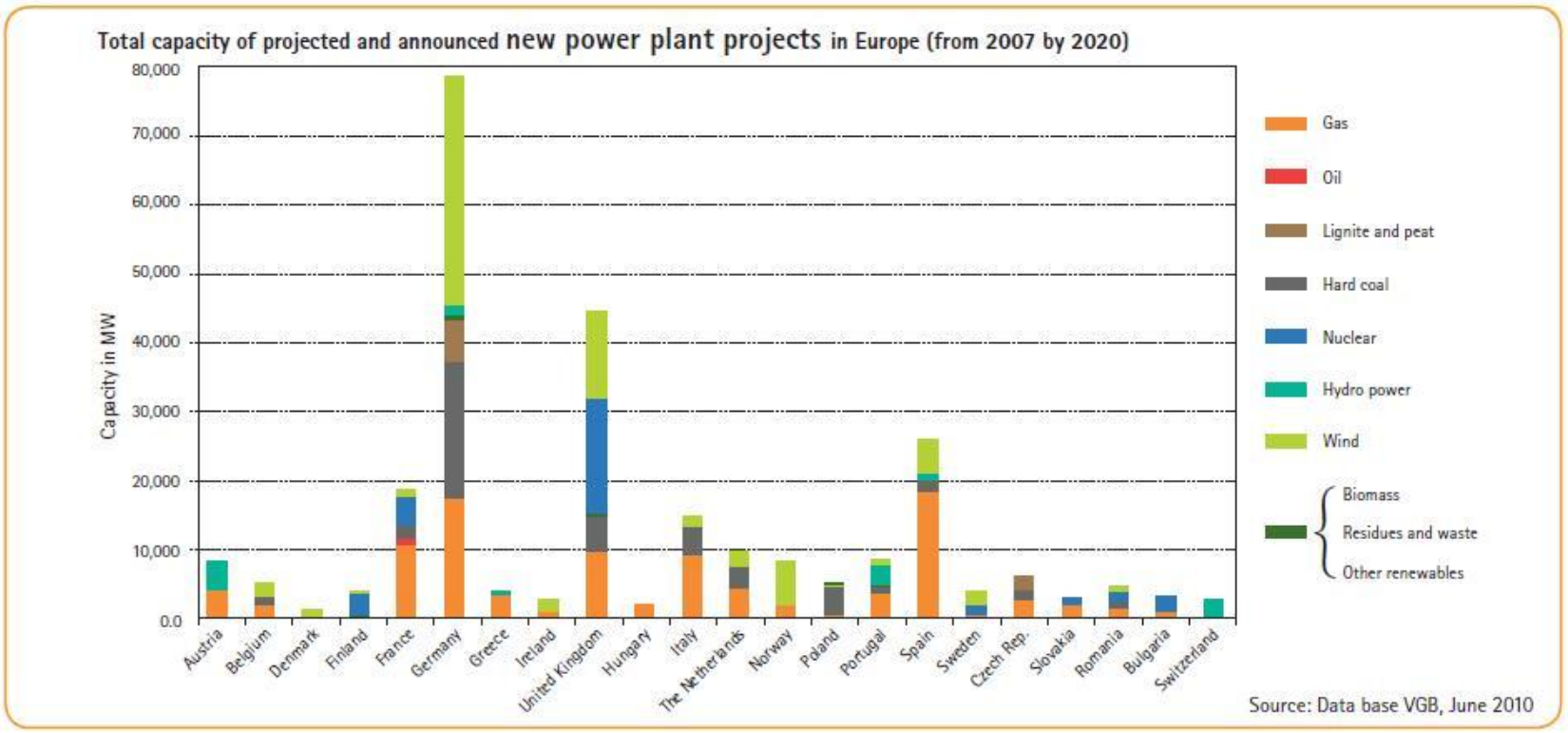
- Share of electricity receiving RES support is fast growing across EU, but system impact is felt more and more with growing penetration

Member State	Electricity receiving RES-support (GWh)	Total gross electricity production (Eurostat) (GWh)	Share of electricity receiving RES-support (%)
Austria	5,148	68,804	7.5%
Belgium	4,581	90,783	5.0%
Czech Republic	3,270	82,240	4.0%
Denmark	9,420	36,205	26.0%
France	15,090	542,390	2.8%
Germany	75,053	533,240	14.1%
Great Britain	20,373	375,663	5.4%
Hungary	2,127	35,999	5.9%
Italy	25,608	289,914	8.8%
Lithuania	628	14,251	4.4%
Luxembourg	140	3,841	3.6%
Norway	1,611	130,607	1.2%
Portugal	10,436	38,033	27.4%
Spain	79,122	276,399	28.6%
Sweden	15,570	137,198	11.3%
The Netherlands	8,715	112,231	7.8%

Source: CEER, May 2011

Lessons Learned (2)

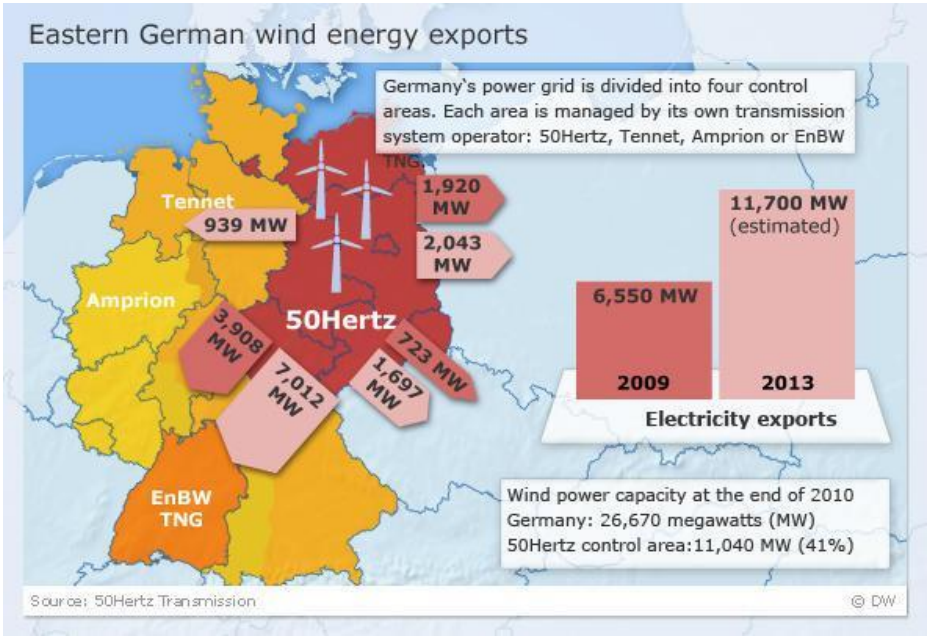
- Policy support facilitates investments in RES versus other sources (biased energy market)

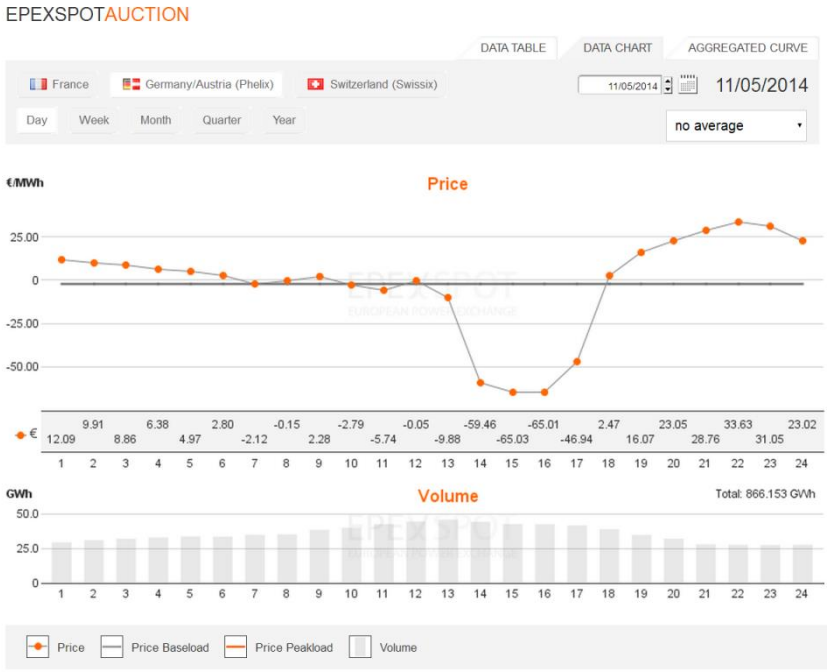


Lessons Learned (3)

- High penetration of renewables poses a series of challenges:

- technical: increased flexibility and grid reinforcements are needed
- market: negative prices and weak business case for backup capacity





Lessons learned (4)

The stability of regulatory policies has proven to be essential for:

- *the creation of shorter terms incentives, as well as for*
- *the creation of longer term markets*

Lessons Learned

- *Renewable technology and innovation is important in view of need for new solutions and costs reductions*
- *The introduction of renewables need to be accompanied by a wider system considerations, both economic and technical*
- *There is need to ensure that economic efficiency and energy technical system optimisation go hand-in-hand, hence the need for new market designs*
- *Stability of regulatory policies is essential*
- *Energy issues do not stop at borders*

Replicability

- *Design the future energy system holistically:*
  - fully decarbonised
  - smarter (ICT inclusion at the different levels of the energy system)
  - consumer centric (final consumers empowered to be active actors in the energy system)
  - new and evolving economic roles in an appropriate market design (eg new services provided by new actors)

- *Define the policy actions, the market measures and the technologies support schemes with the energy system "**end**" result in mind*

Support to ETC and SEMED regions

The European Union supports these regions, also in the area of Renewable Energy development.

Thank you