Topical Workshop

Electricity Markets and interactions with RES-Policies

Location: Universidad Pontificia Comillas, Aula Pérez del Pulgar, ICAI, Alberto Aguilera 25, 28015 Madrid, Spain

Date: October 24th, 2012

Summary of the event

A major key event for the beyond*2020* project was the *Topical Workshop "Electricity Markets and interactions with RES-Policies"*, which took place on October 24th 2012 in Madrid, Spain. The event organized by IREES and supported by all project partners within the dissemination framework, presented the deep analysis and interactive discussion around the *electricity markets and RES-policies in Europe.*

The workshop attracted the participation of about 100 different stakeholders from EU institutions, national governments and policy makers, energy companies, producers associations from the RES Industry, as well as consultants and research institutions, all of them being key target audiences to discuss and disseminate the interim findings of the project as gained during the first half of the project. Most of the attendants belong to Spanish companies and institutions. This provided a very lively discussion, given the long (and dynamic) history of support for RES in Spain, the significant amount of RES power installed in the country, and the unclear perspectives with respect to policy developments.

Major results presented at the event correspond to the identified pathways for RES support and market mechanisms beyond 2020. These include a first pre-assessment of various harmonization concepts from a techno-economic and conceptual point of view, discussing their policy practicability. In this regard, a new way of linking design elements with the expected outcomes of different pathways on markets and grids was described. Furthermore, as presented and discussed at the conference the ongoing assessment of proposed RES policy pathways within beyond2020 is multi-fold and considers a comprehensive cost-benefit analysis of policy options as well as the interactions between RES-policies and electricity markets, exhibiting several interacting aspects in grid related issues, technologies and electricity prices. Given that RES is expected to play a stronger role in the future than today, a strong emphasis is needed on market design and grid regulation. Assessing the integration of RES in balancing markets and functionalities deserves similar attention.

The active participation of the Spanish transmission grid and market operators in the event provided a comprehensive overview on the most important current issues on grid and market operation. Regarding the grid, the TSO reminded that investments are required to be able to integrate RES into the grid. The power system also needs inertia, frequency control, voltage regulation, load following capability, robustness to disturbances and firmness in power injection. The current situation as a result of a strong shift in the electricity market in the last decade including the limits and potentials of the current system were presented and intensively discussed. Thus, the importance of a stronger European integration and inter-

action on both the market and the physical transmission grid side was confirmed.

The event concluded with a roundtable discussion taking into account various views from the energy market participants such as energy producers of conventional and renewable energies, energy systems regulators and research institutes in the field providing views and findings on market designs and market policies. The discussion emphasized the successful past development of renewable energies in Spain and the need for some adjustments in policies and market regulation to ensure further progress. Among the many ideas mentioned, the ones that received more acceptance were: the need for a strong and predictable regulatory framework that reduces opportunistic behaviours and bubbles and helps secure finance and investment; a good management of capacity, given that in the future the major cost will be capital; the need for more market integration of RES; a change in the design of the electricity market, that was not designed for so many must-run technologies; giving the right price signals also to technologies that are not in the electricity market; and improving the contribution of RES to balancing and provision of firm power.

It was stressed that a strong and independent transmission system operator is crucial for a fully functioning market. In order to estimate real impacts on prices and markets precise numbers are required. These are going to be provided within the beyond2020 project next year. And most participants requested a stronger European harmonization, but not necessarily of instruments but of frameworks. There was a general consensus in that RES are the future, but we need to agree on how to make the required transition.

The beyond*2020* **project at a glance**

With Directive 2009/28/EC, the European Parliament and Council have laid the grounds for the policy framework for renewable energies until 2020. The aim of this proposed action is to look more closely beyond 2020 by designing and evaluating feasible pathways of a harmonized European policy framework for supporting an enhanced exploitation of renewable electricity in particular, and RES in general. Strategic objectives are to contribute to the forming of a European vision of a joint future RES policy framework in the mid- to long-term and to provide guidance on improving policy design.

The final outcome will be a finely-tailored policy package, offering a concise representation of key outcomes, a detailed comparison of the pros and cons of each policy pathway and roadmaps for practical implementation. The project will be embedded in an intense and interactive dissemination framework consisting of regional and topical workshops, stakeholder consultation and a final conference.

Further information is available at: www.res-policy-beyond2020.eu.

Final Agenda:

9:00-9:30	Registration
9:30-9:45	Welcome and Overview of the beyond*2020* project André Ortner, EEG
9:45-10:15	Policy criteria and possible policy pathways for harmonization Pablo del Rio, CSIC
10:15-10:45	Quantitative scenarios on Policy Pathways André Ortner, EEG
10:45-11:05	Discussion
11:05-11:30	Coffee Break
11:30-12:00	Impacts of RES policies on electricity market development, a first assessment Marian Klobasa, Fraunhofer ISI
12:00-12:30	Major aspects of RES policy related to grid regulation and practical experiences with grid operation. Miguel de la Torre, REE
12:30-13:00	Electricity markets and RES-E integration by OMIE Juan Bogas, OMIE
13.00-13.30	Discussion
13.30-15.00	Lunch Break
15:00-15:30	Infrastructure needs and grid management improvements, a first assessment Michel Rivier, Comillas
15:30 - 17:00	Roundtable: Market designs for an increased RES penetration and the impacts of policy on electricity markets Carlos Batlle, Comillas (Moderator) José López-Tafall, ACCIONA Julian Barquin, Endesa Heikki Willstedt, Asociación Empresarial Eólica José Antonio Castro, National Energy Commission
17:00-17:15	Closing remarks-up and closing round Pedro Linares, Comillas

Key content / statements of the beyond*2020* team and external speakers:

Policy criteria and possible policy pathways for harmonization (Pablo del Rio, CSIC)

The aim is to provide a definition and elaboration of policy criteria and feasible policy pathways. Seven assessment criteria are elaborated: Effectiveness, cost-effectiveness, dynamic efficiency, environmental and economic effects, socio-political- and legal feasibility. A matrix of policy pathways including pathway components (policy instruments and framework conditions) and degrees of harmonization is provided and discussed with the audience.

Quantitative scenarios on Policy Pathways (André Ortner, EEG)

The RES directive (Directive 2009/28/EC) lays the ground for the RES policy framework until 2020 but a strategy and clear commitment to RES beyond 2020 is of need (if RES shall deliver what is expected). The initial results of

the policy assessment indicate that cooperation and coordination among Member States appears beneficial and required to tackle current problems in RES markets. Thus, both policy options appear fruitful also for the period beyond 2020. In contrast to that, "simplistic approaches" for RES policy harmonization (e.g. via a uniform RES certificate trading) cannot be recommended in the short- and the long-term.

Impacts of RES policies on electricity market development, a first assessment (Marian Klobasa, Fraunhofer ISI)

Design elements of instruments, technologies, markets, grids etc. differ among countries. Electricity price projections from the Power ACE model show a long term increase of the average market prices mainly due to the assumed increase of CO2 prices and possible capacity shortages. Strong average annual price volatility is projected in case of a high share of RES due to weather conditions.

Major aspects of RES policy related to grid regulation and practical experiences with grid operation. (Miguel de la Torre, REE)

A brief overview of the installed generation capacity in Spain shows the strong development of RES. Due to a high volatility electricity demand covered by RES varied in recent weeks from 3% to 64%. However, 64% of RES generation is regarded as the current system limit as the remaining share cannot be reduced due to system security reasons for instance. Some suggested solutions of this problem for a further RES increase in Spain are a better grid interconnection with France, improvement of monitoring and control from CECRE (Control Centre of Renewable Energies), improvement of prediction tools, participation of RES generators in system control and a better management of demand, supply and storage.

Electricity markets and RES-E integration by OMIE (Juan Bogas, OMIE)

The presentation of the current electricity market and price finding mechanism in Spain shows the strengths and weaknesses of the current system. The possible problem of a surplus of produced non manageable energy (including RES) leading to a market price of zero can be solved by an expansion of the demand side through market coupling with France within the PCR project (price coupling for regions). Also an efficient intraday market may contribute to a better allocation of demand and supply.

Infrastructure needs and grid management improvements, a first assessment (Michel Rivier, Comillas)

A literature review analyzing the interactions between grid policies, regulatory frameworks and RES support schemes has been done. A transmission network coping with a high amount and volatility of RES including an appropriate regulatory framework for the important issues of different supply, transmission and demand regions and various technologies is required. The set up of institutional and regulatory issues of cost allocation, siting, construction and operation and the elimination of barriers is crucial for a further development.