The Role of Power Market Design for the Achievement of the 20% Renewables Target

Brussels, Tuesday April 20th 2010

Representation of the State of North Rhine-Westphalia to the European Union, Rue Montoyer 47, 1000 Brüssel

Version 02.03.2010

The EU Renewables Directive requires that by 2020 a share of 20% of final energy has to be provided from renewable sources, and it is likely that renewable electricity from wind and other intermittent sources will provide a high share of this energy.

There are concerns that the deployment might not go forward unless the power grid can be significantly upgraded. However, due to public opposition such upgrades might be significantly delayed. The purpose of the workshop is to discuss whether an improvement of the European power market design can:

- Increase capacity to connect intermittent renewable generation sources to the network,
- Reduce costs of network expansion and system services through enhanced network utilization,
- Increase flexibility to limit the repercussions from delays in individual grid expansion or power generation projects,
- Enhance system security by (i) effective sharing of resources on a European level, and (ii) improving and standardizing information exchange between European system operators.

In short – does the performance of the power market design match the technical potential of the grid? The power market design varies across European countries. Both within individual countries and also on the European scale design reflects historic development, the interests of large utilities, and the requirements of power systems dominated by conventional power stations.

The workshop will discuss which efficiency and security gains are possible by moving to a power market design that reflects the physical reality of the network and of generation plants. For example, nodal pricing provides an alternative approach to address the different technical constraints of power systems and transmission. It has been successfully implemented by several markets in the USA, including PJM, NY-ISO, ISO-NE, MISO, and since April 2009 in California. We will discuss different options for the implementation of nodal pricing with respect to their institutional evolution, treatment of intra-day balancing, allocation of start-up costs, and automatic market power monitoring procedures, amongst others.

It is rarely disputed that a shift towards a more efficient power market design can contribute to the objectives of cost reduction, improved system security, and increased integration of intermittent generation sources. The purpose of the workshop is therefore to discuss how big these benefits are, and whether they justify the political effort and transition costs associated with change.

Climate Policy Initiative, c/o DIW Berlin, Mohrenstraße 58, 10117 Berlin
Tel: 0049 30 897 89 470, Events@cpiberlin.org

09:00 **Opening**

- Opening comments (Andrea Hercsuth, Policy Officer, Directorate General for Transport and Energy, European Commission)
- The challenge ahead – deployment scenarios of intermittent power (Mario Ragwitz, Head of Business Unit Renewable Energies, Fraunhofer ISI)
- Overview to the day (Karsten Neuhoff, Research Director, CPI and DIW Berlin)

09:30 **Balancing Markets**

Chair: Mark O'Malley, Professor of Electrical Engineering, University College Dublin

- The uncertainty of wind output - How does it decline during the day (Safewind speaker, TBC)
- German approach to balancing markets (Christoph Weber, Professor for Management Sciences and Energy Economics, University Duisburg-Essen)
- Spanish example - Adjustment of unit dispatch in Spain (José Luis Fernández, Senior Expert of the Planning Division, Red Electrica, TBC)
- Informal use of balancing from neighboring countries (Klaus Thostrup, Head of Section International Development, Energinet.dk)
- Quantifying opportunities (Frieder Borggrefe, Research Associate, Institute of Energy Economics, University of Cologne)

11:00 Coffee and Tea

11:30 **Congestion Management**

Chair: Julián Barquín Gil, Associate Professor, Universidad Pontificia Comillas

- The challenge for congestion management – reporting on trade wind insights (Christian Nabe, Head of Power Systems and Markets, Ecofys)
- The recent improvements of congestion management - Market coupling, Multiple market regions (Charles Verhaeghe, Commission de Régulation de l'Energie)
- The development in South Eastern European countries (Jean Constantinescu, President, Romanian Institute for Energy Development Studies)
- Options of nodal pricing (Ben Hobbs, Member of CAISO Market Surveillance Committee, California)
- Quantifying opportunities (Karsten Neuhoff, Research Director, CPI and DIW Berlin)

12:45 Buffet Lunch

13:45 **Institutional Questions**

Chair: Christian von Hirschhausen, Professor, Technical University Berlin / DIW Berlin

- Information sharing and system security (Janusz Bialek, Professor of Electrical Engineering, University of Durham)
- Technical feasibility (Andrew Ott, Senior Vice President Markets, PJM)
- The political economy of rent allocation (David Newbery, Professor of Economics, Cambridge University)
- Transitional strategy / integrated multi-country TSOs / The role of the EU to harmonise designs (Jean-Michel Glachant, Director of the Florence School of Regulation)

15:15 Coffee and Tea

15:45 **The politics and economics of European power market design changes**

Chair: Péter Kaderják, Director, REKK, Corvinus University Budapest

Panel participants:

- Yves Smeers, Professor, Université catholique de Louvain
- Matti Supponen, B2 internal electricity and gas market unit of DG ENER, European Commission

Further panel participants from: TSOs, Generation, Renewables, EU and National politics

- Is nodal pricing compatible with liberalized markets?
- Role of bilateral contracts for energy
- Impact for liquidity
- The role of consistent policy frameworks for power generation investment security
- What are the transition costs of power market design changes? (TSO, Market participants, regulator)
- What are the politics of power market design changes? (benefits, costs, work)

17:00 Close of Sessions

If you would like to attend, please send a registration email to: Events@cpiberlin.org indicating:

Your Name:
Your affiliation:
Attendance: Workshop on Tuesday 20th April, Brussels: 9.00am to 5.00pm: Yes/No

CPI Berlin office hosted by DIW BERLIN

RE-Shaping
Shaping an effective and efficient European renewable energy market

Climate Policy Initiative Berlin – 20th April Conference in Brussels

Representation of the State of North Rhine-Westphalia to the European Union

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