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POSITION PAPER

GUARANTEES OF ORIGIN: A WAY FORWARD FROM THE FALLACIES OF CURRENT SUPPORT SYSTEMS FOR RENEWABLE ELECTRICITY

16 May 2014

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EUROPEX is a not-for-profit Association of European Energy Exchanges representing the interests of exchange-based wholesale electricity, gas and environmental markets with regard to developments of the European regulatory framework for wholesale energy trading and provides a discussion platform at European level.

Executive Summary

Renewable Energy Sources for Electricity (RES-E) production are now at the forefront of European energy policy. They have evolved from a side show into a force to be reckoned with. Member States have been very successful at increasing the RES-E connected to the network, but unfortunately a consequence of the current implementation is a distortion of the electricity market and additional financial burdens for the final consumers, and posing risks to security of supply in the long run. EUROPEX believes that RES-E are the future but they must be integrated into the market. Coupled electricity spot-markets and the progressive development of intra-day markets, clear priorities for EUROPEX, allow for this integration to happen. The mechanism of Guarantees of Origin (GO) is a tool for a market-based solution to current RES-E support dilemmas and consumer empowerment.

Introduction

RES-E is now at the forefront of European energy policy, due to its rapid development as well as financial pressures generated by support schemes. EUROPEX has already stressed its belief that market-based mechanisms are the key towards sustainable RES-E investments[1]. The GO system is an important tool for making this happen. Although the concept has been available for years, market processes critical to the success of GO are still in the development phase[2]. We aim to show that a developed GO market could also be used to solve the RES investment problem, namely to transition from the current support schemes towards a more market-based solution. While EUROPEX stresses the need for market integration and a Europe-wide solution, we do not have an exclusive preference for quota or feed-in support systems. What is clear is that end users should have more say and that is what a developed GO system can bring.

Impact of RES Support Schemes

National RES targets were a result of Directive 2009/28/EC. Since then, the growth of RES support schemes in the EU and renewable energy has been extraordinary. Eurostat recently revealed that the share of RES in EU energy consumption has increased from 8.3% in 2004 to 14.1% in 2012. Bulgaria, Estonia and Sweden have already reached their 2020 targets[3].

However, this increase has come at a cost. According to the EC, support systems for RES were introduced in order to enable such sources to compete with conventional energy within

[1] EUROPEX Position Paper on Market Design, April 2014
[2] »Fostering GO Trading: A possible role of orgnaized markets«, Europex position paper, 29 September 2011
[3] Eurostat news release, 37/2014, 10.3.2014

the confines of a rigid electricity system.[4] The resulting policy outcome could be described as a paradox. Currently, German consumers pay a dedicated levy for financing the support system for RES-E of 62 EUR/MWh[5], while baseload power was traded on the wholesale market around 30 EUR/MWh levels during the month of March 2014. This discrepancy is not confined to Germany. Another factor adding to the financial pressure of FIT systems is the difficulty of administering subsidies efficiently, particularly when costs are changing rapidly. In the case of solar PV, investment costs decreased by 80% in just five years, from 2009 to 2014. FIT RES investments get most of their revenues from outside the electricity market, but they do influence the market nonetheless. The so called "merit order" effect, meaning the decrease in market prices due to "price taking" FIT supported RES generation coming to the market on preferential terms, was estimated between 5 and 12 EUR/MWh for Spain and Germany in the period from 2005 to 2012[6]. These price decreases are even more marked in some hours and especially peak hours, once a dependable source of revenue for "peaking" units. In Germany the average spread between peak and baseload hours reached an all-time low of 4 EUR/MWh in 2013, compared to a high of 14 EUR/MWh in 2006[7]. The evolution of prices compared to the RES levy in Germany is shown in Figure 1.

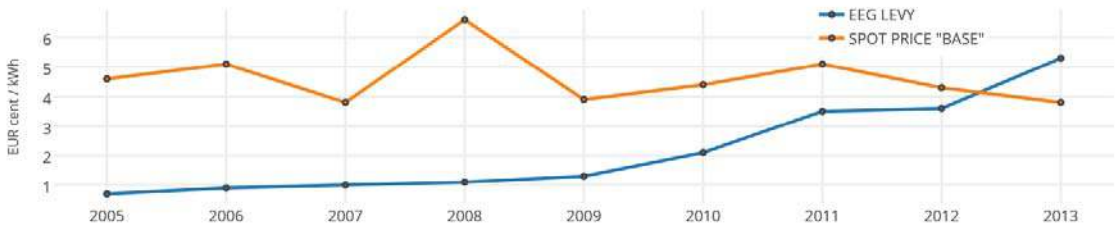

Figure 1: The evolution of the EEG Levy and »Base« spot prices in Germany (source: EEX)

Low operating hours and closures or mothballing of fossil fuel, in particular gas-fired, units are proof that RES are not a sideshow but are influencing the working of the market. The "paradox" is thus that what was meant to correct existing subsidies and imperfect competition actually distorted competition even more and leads to a discussion about further subsidies in the form of capacity payments, to keep units, necessary for the stability of the power system, online. Since any impact on prices also impacts investment, it is not only a question of how to keep existing capacities online but also building new ones. Open legal proceedings challenging FIT systems, new Guidelines on environmental and energy aid, as well as drastic

[4] SWD(2013) 439 final
[5] Data valid for March 2013
[6] Cludius et al (2013) - The Merit Order Effect of Wind and Photovoltaic Electricity Generation in Germany 2008-2012
[7] Source: Frauhofer ISE – Electricity Spot-Prices and Production Data in Germany 2013 (J. Mayer, 16.1.2014)

changes to FIT systems in the EU are signs that we are approaching major changes in the sector. One of these changes could well be a more pronounced role for the GO system.

THE EVOLVING GO SYSTEM

GO are not a new tool. They were included in the first RES Directive 2001/77/EC yet received a proper boost only with Directive 2009/28/EC, as well as through the expansion of preceding systems, such as RECS certificates. Their expansion – the market size in the EU is now over 300 TWh per year – was due in part to the development of the EECS standard, developed by the Association of Issuing Bodies (AIB), which is now formalized in a CEN/CENELEC standard. Local electronic registries, connected through the AIB HUB Registry, have made the transfer procedure relatively easy and the system more trustworthy.

EUROPEX members play important roles in various capacities. Several provide GO Registries and act as Issuing Bodies, others provide trading platforms for "green" electricity (i.e. electricity coupled with GO) or for GO as a separate trading product. As EUROPEX has stressed in its 2011 position paper "Fostering GO trading: a possible role of organized markets" this market would benefit from more transparency and organization besides standardization[8]. This is happening, albeit slowly.

The primary role of GO is to serve as a basis or tool for disclosure, i.e. informing consumers about what kind of electricity they are using. This would be better served by expanding the system to all types of generation, not just RES-E and high efficiency combined heat and power (CHP). In this way, disclosure of electricity's origin would be simpler and more transparent. Such an approach has currently only been adopted by some Member States. Due to the detailed information they provide, GO offer a solid basis for serving other purposes as well, such as labels and support systems, driven by customer choice.

The evolving GO system could be strengthened by several additional measures.

First, national rules and regulations on GO differ considerably though they are all based on a single European directive. This leads to fragmented markets for GO, a low level of comparability and rather non-transparent markets for GO. AIB and RE-DISS have played an important role in harmonising GOs over Europe, however, there is still work to do, e.g. regarding the acceptance of foreign GO or the connection to the AIB-Hub.

Second, GO are tools for power disclosure and should improve transparency on power disclosure towards end consumers. However, trust in GO tends to be low; GO are frequently

[8] »Fostering GO Trading: A possible role of orgnaized markets«, Europex position paper, 29 September 2011

considered as being tools for green-washing. The credibility of GO might be strengthened both by more closely matching energy generation and use of GO times (i.e. shortening the disclosure period) and by expanding the system to all generation types and thus making it a universal tool for disclosure.

Third, GO-markets are Europe-wide markets requiring the same level of security as EUA, gas or power markets. In the aforementioned markets VAT is usually charged by applying reverse charge in order to avoid VAT fraud. However, this is not yet the case for GO-market. It is EUROPEX´s view that reverse charge should also be applied to GO-trading to keep any damage caused by possible VAT fraud away from GO.

The use of GO for support is not limited to various so-called quota systems, i.e. systems that set a mandatory RES quota for suppliers instead of fixing prices as is the case in FIT systems. GO segments the market, enabling voluntary support where consumers decide to pay for a specific product mix, be it "green", "CO_2 free" or potentially even nuclear. Various types of "green certificates" have been used it quota support systems, sometimes in parallel to GO. With GO systems up and running there is no need for a parallel system, since green certificates basically perform the same function and GO can contain all the necessary data even for use in a green certificate quota system. Even some FIT systems require GO transfer as proof of eligible generation and thus a condition for receiving FIT payments.

Urgent Need for Better Coordination of RES Support Systems

EUROPEX's perspective on RES development stems from its perspective on markets in general: connecting markets brings liquidity, stability and efficiency, as demonstrated by a series of bilateral or multilateral market coupling activities by EUROPEX members, that reduced inefficiencies in cross-border capacity utilization.

Currently, RES-E support systems are national, with a few notable exceptions. EUROPEX understands that in some cases subsidies are needed, but they should have a clearly defined endpoint and they should not, as is currently the predominant case in FIT system, be allowed to remain exempt from the market through preferential dispatch or other exemptions from system requirements, such as no requirements for schedules or reactive power compensation. RES-E power plants are able to function on the market alone or through an aggregator – a supplier or even a virtual power plant (VPP) system. Even the intermittency problem, often cited as a key drawback of most RES, particularly wind and solar PV, will decrease with progressive development of connected intraday and balancing electricity markets, which are priority areas for EUROPEX.

With a functioning GO system including all energy sources consumers will be able to influence the generation mix, by actively purchasing a product that suits their wishes. Even in the presence of a quota it can still be the customer who decides what exactly will fill this quota.

How could such a system work in practice, and how would it avoid the "greenwashing" label? If a target – mandatory or not – is set, a quota can be used to achieve it. Sources that are mature are not eligible for support, but still count for the quota. Sources that are in the early development or even experimental phase are supported by R&D grants or a similar system, not directly through the electricity market. GO are used for the system – both for disclosure and for support in a "green certificate" manner. And GO can come from anywhere in the EU – they count for the quota where they are cancelled and are subtracted from the mix in the country of origin. The GO system is used universally for all forms of energy. Suppliers offer differentiated products based on GO, making it possible for consumers to take the extra step voluntarily. This all sounds familiar – so where would the difference to classic quota systems actually be? In the universally applicable GO system, used for all energy sources and technologies, in connecting disclosure and support through the same system and in making sure that support is available only when needed and in the needed amount, which is made possible by a EU-wide approach that brings competition.

Conclusion

A solution for current RES-E support problems should fulfil the following:

- Be a European, not a national one;
- Support the integration of RES into the electricity market and thus avoid distortions on the market;
- Any subsidies must have a clearly defined endpoint and that holds for all types of generation;
- Subsidies should be available only where needed, market-ready technologies should go to the market and a functioning CO_2 emissions markets that puts a clear price on externalities will help them to;
- Technologies that are not market ready should receive support through other mechanisms, such as R&D grants;
- Put the focus back on consumers, by using the GO system as a tool;
- Put all power plants and subject on the same footing and make their contribution to the stability of the electric system commensurate to their size.

We believe this is the way forward.