

## Energy Transition: A Multifaceted Challenge for Europe

### High Level Conference: The 2030 Climate and Energy Package for the EU: the challenges that lie ahead

#### - Report -

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On the 3<sup>rd</sup> December 2014, Egmont – The Royal Institute for International Relations and the Development Group organised a high-level conference entitled 'The 2030 Climate and Energy Package for the EU: the challenges that lie ahead'. The conference took place within the framework of a series of events related to the multifaceted challenges of the EU energy transition towards a low-carbon economy which have been held in Brussels since 2011. It was the last of a series of four events in 2014.

#### **Keynote address: Main challenges of a new European climate and energy policy**

The keynote address was provided by Jos Delbeke, Director-General of the DG Climate Action at the European Commission. He began by explaining that, on the basis of the lessons learned from the 2020 package, a main target of 40% reduction of CO<sub>2</sub> emissions by 2030 (compared to 1990) had been adopted in order to prevent competition with the two other targets, i.e. renewable energy ( $\leq 27\%$  by 2030) and energy efficiency ( $\leq 27\%$  by 2030). The additional target of 15% interconnections by 2030 will be partially



financed by the € 300bn investment package of Jean-Claude Juncker. He stated that of course the EU could have committed to more ambitious targets but they can be considered as a rather good compromise, given other concerns from countries about competitiveness and coal burning. Moreover, the deal provides a valuable momentum for the international

climate negotiations in Paris in 2015. In this respect, he outlined the significance of the commitments taken by China, which is the biggest global carbon emitter. After having explained the functioning of the reformed EU ETS and the emission reductions in the non-ETS sectors, he outlined the importance of a reliable and strong governance that would be based on existing plans, transparency and predictability as well as regional cooperation. Implementing the 2030 framework is also about mastering the investment challenge. The majority of private investments will depend on a stable regulatory environment and a strengthened carbon market, while public resources should be effectively channelled to mobilize and accelerate private investment. Finally, he outlined the importance of the next steps consisting in developing a new governance system, implementing the European Energy Security Strategy, revising the EU ETS, and setting Member States targets in the non-ETS sectors.

Then, Dominique Ristori, Director-General of the DG Energy at the European Commission, stressed the good collaboration with the DG Climate. He added that the Commission is currently working on new capacity for negotiating the next global climate agreement in Paris in 2015. He also stated that now that the 2030 framework has been adopted, it should provide more certainty for investors.

### **Session 1: The necessary balance: Can the 2030 Climate and Energy Package reconcile competitiveness, security of supply and sustainability?**



Dr. Hans Bünting, CEO of RWE Innogy GmbH, considers the EU 2030 targets ambitious. The renewable energy source (RES) target is set at the EU level and contains thus no binding national RES targets. The new EU State Aid Guidelines for environmental protection and energy introduce a shift from feed-in-tariffs to RES market-integration and competitive bidding processes. However, this leads to higher development risks and potential lower remuneration levels for RES project developers. The order of magnitude of both these effects depends on three key issues, i.e. the market design of future auctioning schemes, the regulated demand and supply potential of RES, and the quality of RES sites. A detailed market analysis will thus be necessary before market entry. Then, he insisted on the fact that cooperation between member states has to increase in order to reduce additional generation costs and capital expenditure. Many member states have indicated their interest regarding the use of cooperation mechanisms but, currently only a few of them pursue the implementation actively. Finally, he outlined that investors can manage project and market risks but not regulatory risk. Therefore, a stable and wise regulation with no retroactive changes to ensure RES investment is indispensable.

Then, Simon Baker, President of Alcoa Europe, gave the perspective of an aluminium producer in Europe. He explained that although the EU aluminium industry has growing markets, its primary production has declined by 36% since 2008. According to a study of the European Commission assessing the cumulative cost of EU energy and climate policies over the period 2002-2012, there are about 30% producers not exposed to EU policies, i.e. operating under historic contracts, and around 70% producers exposed to EU policies, i.e. procuring power under EU rules market conditions. These latter producers are the least cost competitive globally. While the costs of energy and climate policies per tonne produced are equivalent to 23,5 € for producers not exposed to these policies, the costs amount to 203 € for those who are. This is mainly due to the fact that the impact of electricity costs (including ETS pass-through, grid and RES) on the aluminium industry, which is an intensive consumer of electricity, is very important. Moreover, the evolution of the EU ETS allowances price will considerably increase the production costs of producers largely exposed to electricity costs (i.e. indirect costs). The regressive state aids schemes available in some member states compensate "a minima" these indirect costs, resulting in an unstable and unlevel playing field across the EU. In order to maintain an aluminium industry based in the EU, he recommended to move to an EU-wide, stable and predictable indirect compensation regime and to ensure 100% free ETS allocation for benchmarked direct emissions plants.



Afterwards, Robert Durdilly, President of the French Union of Electricity (UFE), outlined that the new 2030 energy and climate package was all together ambitious, consistent and pragmatic. Beyond this package, UFE

agrees with Maroš Šefčovič when he says that the Energy Union must be built on five pillars: 1. Security, solidarity and trust; 2. Completion of a competitive internal market; 3. Energy efficiency; 4. Decarbonisation of the European economy; 5. Investments in R&D. Then, he explained that UFE has three priority issues to deal with. Firstly, the large and increasing EU energy dependency (53%), which encompasses major geopolitical and cost risks. Secondly, the competitive situation of the US in terms of energy prices in comparison with the EU. Thirdly, the security of supply, which has to address four main issues, namely electrical networks stability, infrastructure protection (including cyber attacks), environmental risk (including nuclear), and long-term investments financing. Finally, he outlined the key factors of an efficient energy policy, consisting in switching fossil fuel use to low carbon energy use, moderating energy demand, developing national resources, optimising exchanges between member states and increasing R&D.



Lastly, David Maclean, Manager for Natural Gas Liquids and New Business Development (Europe and Caspian) at ExxonMobil Gas and Power Marketing, started by showing the different economic performance between the EU and the US. The European industrial production decreased sharply in 2009 due to the economic recession, took up a little bit in 2011 and has been quite stable since then. The US economic performance, excluding oil and gas extraction, follows more or less the same line as the EU between 2008 and 2011, but since then it has increasingly grown. When taking into account the oil and gas extraction, one can see that the US industrial production has exploded since 2009, being six times bigger than the EU's in 2014. He also underlined the difference in the EU and US gas markets. In the EU, the gas production is decreasing, the import dependency is increasing and the gas prices were 2.8 times higher than in the US in 2013. Conversely, in the US, the gas production is increasing thanks to the unconventional production and the prices and import dependency are decreasing. Finally, he showed the difference in industrial electricity prices among the EU countries, as well as Texas.

## **Session 2: The necessary governance and policy instruments: How can the 2030 Climate and Energy Package be implemented in a cost-effective and collective way?**



Konstantin Staschus, Secretary-General of ENTSO-E, explained that decarbonising Europe's power system will require integrating unprecedented levels of RES into the system. ENTSO-E will thus continue to work closely with all stakeholders in order (1) to upgrade existing transmission lines and building new ones, (2) to harmonise rules and regulations through network codes and (3) to design a fit-for-purpose market. Firstly, upgrading and building transmission infrastructure is key to integrate an increasing share of variable RES generated far from consumption centres. The Ten Year Network Development Plan represents the main tool to deliver the necessary infrastructure. It should bring up to € 150bn for projects of pan-EU



significance by 2030. The EU objective is to double the interconnection capacity and to integrate the four “electric peninsulas” by 2030. However, the challenges to implement infrastructure on time are permit granting, public acceptance and financing. Secondly, network codes are essential to deliver a low-carbon electricity system. They are harmonised technical rules related to grid connection, system operation and market arrangements. In addition to helping complete the internal energy market, network codes are intended to play a role in facilitating the integration of RES. Thirdly, designing a fit-for purpose market is essential. Good progress has already been made through successful market coupling and network codes. However, current market design can be improved through the reflection of full system costs in balancing prices, the integration of all RES into the market, and the participation of demand side as much as possible in all markets.

Afterwards, Pekka Sauri, Deputy Mayor of Helsinki and Board member of Energy Cities, presented Helsinki, which is the northernmost capital city in the EU, as a model of green city. The share of combined heat and power production accounts for more than 90%. Moreover, a system allows waste heat to be fed into the district-heating network. Helsinki also benefits from the world’s largest heat pump plant, which produces district heat and district cooling from both purified sewage water and seawater. The overall efficiency and market share of district heating represent more than 90% as well. Helsinki has also recently invested in a waste to energy plant, which started to operate in October 2014. By recycling household waste, it reduces local use of fossil fuels by 30% and local CO<sub>2</sub> emissions by 20%. Finally, if the city would have followed a business as usual scenario, it would have cut its carbon emissions by 24% by 2020. But due to its programme on energy and heat generation, as well as 18 additional measures, carbon emissions should be reduced by 44%. This programme will require major investments but if all measures are implemented, Helsinki will have cut its total emissions by 92% by 2050.



Then, Jean-Arnod Vinois, Honorary-Director of the DG Energy at the European Commission, started by recalling that it was only in 2007-2008, when the 2020 climate and energy package was negotiated, that a European energy policy truly became an area of concern at EU level. Even by then, the 2020 package was mainly focused on climate change. There is thus still a fair amount of work to do in order to develop a European energy policy. Of course article 194 of the Treaty brought some improvements but this article also tells us much about the willingness of member states to remain sovereign in key areas, namely the energy mix, the exploitation of natural resources and energy taxation. He also noticed a step backwards in terms of Europeanisation between the 2020 package and the 2030 package. He was thus wondering if the governance system that seems to emerge from the 2030 package does not mean a certain form of renationalization of the energy and climate policies. As example of concerns, he took the current

development of capacity mechanisms at national level rather than being designed at EU level. Then, he reminded that in any governance systems at EU level, the first player is the Commission. Quoting Juncker, he said that the new Commission's organization has a key role to play "to overcome silo mentalities by working jointly on those areas where we can really make a difference". Finally, he explained that the European Commission should put in place a governance system that would allow the optimization of resources, requiring finding the right balance between the European, regional, national and local levels.



Finally, as the discussant, Jayesh Parmar, agreed with most of the speakers on the fact that the problem is not really about strategy or targets but much more about bad implementation and timing. To a question he asked to Mr. Staschus on the rational structure of pricing, the latter answered that wholesale market pricing functions quite well, the problem is much more about retail prices. They are still too many member states regulating their retail prices. On another question about the complexity of network codes, he replied that they only address cross-border aspects. Commenting on Mr. Sauri's presentation, Mr. Parmar was struck by the efficiency that can be delivered with an integrated system. He thus asked Mr. Sauri how Helsinki manages the combination of individual choices versus social benefits. The latter replied that local governments have to find solutions for global problems at the local level with one of the main answers being education. Then, Mr. Parmar turned to Mr. Vinois asking him how the EU could rationalise the development of national capacity mechanisms so as to move towards a pan European system. He answered that a European framework for security of electricity supply was missing. At the moment the governance is ensured by the state aid guidelines that only allow a case by case approach, missing out the global perspective.

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