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REPORT

on

The future of the EU Energy policy and its implications for the EEA

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1 Introduction: The EU Energy Policy and the EEA

Since the 1990's energy issues have moved into the forefront of EU policy making. The mid-nineties saw the first steps of establishing the internal electricity and gas market. More recently, the Lisbon Treaty gave new impetus to the development of the EU Energy policy, by providing a new legal basis and recognising powers of the EU to develop an energy policy.¹ Throughout this development the European Parliament (EP) has been a key actor in shaping the EU's energy policy in important areas, including internal market for electricity and gas, security of supply, energy efficiency and renewables.

Energy matters are, for various reasons, of considerable importance in the relations between the EU and the EEA EFTA States. Most importantly, the EEA EFTA States are part of the internal energy market by virtue of Article 24, in conjunction with Annex IV of the EEA Agreement. Iceland, Liechtenstein and Norway apply most of the EU *acquis*, including legislation on the internal energy market and related flanking policies (competition, environment, consumer protection, research and development programmes etc.). The EEA EFTA States are therefore fully integrated into the internal energy market.

In addition, the EU has to rely increasingly on imports of energy products from third countries. Norway is the second biggest supplier of both oil and natural gas to the European Union, after Russia. In 2010, 14% of European oil imports and 27% of European natural gas imports were coming from Norway. The imported energy from Norway helps the EU to diversify its supply lines. From a Norwegian perspective, the EU is an important market for its energy products.

2 The future of the EU Energy Policy - from an EU Energy Action Plan to the EU Energy Roadmap 2050

Against the backdrop of rising energy prices, concerns about the security of supply and the EU's climate goals, energy issues have been high on the political agenda of the EU, with a number of key initiatives adopted in the recent years.

The EU energy policy gained momentum especially after the adoption of the first EU Energy Action Plan in 2007. The Action Plan laid out the three major challenges for the European policy in this field, which form the core of the common energy policy until today: sustainability, security of supply, and competitiveness. It also stipulated the famous 20-20-20 targets, which have defined the European energy policy in recent years. These targets refer to three 20% goals, to be reached until 2020:²

¹ Notwithstanding the gradual “Europeanisation” of energy policy, some important aspects of energy policy, notably related to the energy mix, remain the Member States' competence.

² It is important to note that only the two former targets are currently binding, whereas the overall 20% energy efficiency target is indicative, and will soon be complemented by the recently adopted Energy Efficiency Directive (2012/27/EU), which will apply from 5 June 2014.

- A reduction in EU greenhouse gas emissions of at least 20% below 1990 levels
- 20% of EU energy consumption to come from renewable resources
- 20% reduction in primary energy use compared with projected levels, to be achieved by improving energy efficiency.

The Energy 2020 Strategy, adopted by the European Commission on 10 November 2010, defines the energy priorities until 2020 and lays out the actions to be taken in order to tackle the challenges of saving energy, achieving a market with competitive prices and secure supplies, boosting technological leadership, and effectively negotiate with the EU's international partners.

Against the backdrop of the EU's climate goals and the proposed transformation to a low-carbon economy, the EU has started to reflect on possible scenarios for a deep decarbonisation by 2050 (80%-95% emission cuts compared to 1990 levels). The EU Energy Roadmap 2050, which was published by the European Commission on 15 December 2011, is an analysis of the implications of the EU's potential and alternative decarbonisation policies for the energy sector (high energy efficiency, diversified supply technologies, high renewable energy sources, delayed CCS and low nuclear). It argues that decarbonisation of the European energy system by 2050 is feasible and that associated costs, according to all scenarios, could be close to those of the reference scenario due to increasing fossil fuel prices.

The EU's long term energy targets seem to be compatible with the commitments taken by the EEA EFTA States. In particular, Norway has very ambitious national targets with an objective of 9% greenhouse gas emission cut for the 2008-2012 period (which goes beyond its +1% Kyoto commitment) and a long-term goal of carbon neutrality by 2050. Iceland's targets are comparable with those of the EU. Liechtenstein has not adopted any equivalent mid- or long-term targets.

3 Internal Energy Market

The internal energy market has been at the centre of the above-mentioned initiatives. The 2007 Energy Action Plan highlighted the importance of completing the internal energy market for competitiveness, sustainability and security of supply. It suggested that a number of measures related, inter alia, to unbundling, transparency and infrastructure “*with the objective of creating within three years a European Gas and Electricity Grid and truly competitive European-wide energy market*”. The Energy 2020 Strategy considers completing the internal energy market as one of the five areas of priority, especially for reaching 20-20-20 goals. The strategy prioritises the implementation of the relevant legislation and puts a special focus on the infrastructure projects that would be necessary for the completion of the internal energy market. The 2050 EU Energy roadmap considers the internal energy market as a cornerstone for a deep decarbonisation in Europe.

The main objective of the internal energy market legislation is to establish a fully competitive European market with a level-playing field, enabling all producers to be

able to connect to the grid in order to sell their energy, and for consumers to choose their provider. To that end three liberalisation packages applicable to the electricity and gas markets were adopted from 1996 to 2009.³

The third and the most recent of the three liberalisation packages was adopted in 2009 and entered into force in March 2011. It aims in particular at separating supply and production from transmission activities, giving member states the opportunity to choose between three options: the full ownership unbundling, the independent system operator (ISO), or the independent transmission operator (ITO). The package includes also provisions on public service obligation and consumer protection. Last but not least, it establishes the Agency for the Cooperation of Energy Regulators (ACER) and the European Networks of Transmission System Operators (ENTSOs) for both gas and electricity, in charge of developing harmonised grid codes and safety standards. These network rules are subsequently to be approved by ACER and adopted by the Commission through a comitology procedure.

The third energy package had to be transposed into EU Member States' law by 3 March 2011. Unfortunately that has not happened in all Member States. The monitoring of the transposition and implementation of the third liberalisation package in the Member States shows that there are delays in the process.

The Single Market Act II⁴ (SMA II) was published 3 October 2012 to improve the implementation and enforcement of internal market legislation. As one of the four main drivers of growth identified, the SMA II proposes a set of priority actions to make the application of existing EU energy legislation more effective and make cross-border markets a reality.

The Second Energy Market Package is incorporated into the EEA agreement. It has been transposed by the EEA EFTA Member States into their national legislation, except for the gas directive in Iceland. The incorporation of the Third Energy Package is currently under discussion. One of the important pending issues concerns the nature of EEA countries' participation within ACER and the ENTSOs.

4 Energy Infrastructure

Energy infrastructure is a top priority in both mid- and long-term EU energy policy strategies. It is seen as a building block for the internal energy market, the securing of energy supply and the promotion of renewable energy and energy efficiency. Today the EU's interconnection capacity is generally still low, with parts of Europe still isolated. In particular, the planned increased deployment of renewables requires a significant overall increase of interconnection capacities.

According to the European Commission massive investment of up to EUR 1 trillion will be needed by 2020, if the energy sector is to meet its policy objectives, including climate targets. An investment of EUR 200 billion will be required solely for energy transmission networks. The challenge lies in delivering on this ambition and meeting the investment needs. The proposed Multiannual Financial Framework 2014-2020,

³ http://europa.eu/legislation_summaries/energy/internal_energy_market/index_en.htm

⁴ COM(2012) 573

which is currently under negotiation, contains some sources of financing to that end, in particular through the Connecting Europe Facility. The latter will finance infrastructure projects with a strong European and Single Market dimension in the energy, transport and ICT sectors. It has a budget of EUR 9.1 billion to promote the completion of priority energy infrastructures.

So far Iceland is not connected to the rest of the European electricity grid and consequently there is no import or export in relation to Europe. However, the country is now evaluating the opportunity to build a 1000 km overseas electricity cable to export a part of its surplus electricity to the European Union. Moreover, electricity cable projects connecting Norway further with Germany and the UK have recently been approved.

The European Commission has proposed a new Regulation on guidelines for "Trans-European energy infrastructure"⁵ in order to promote the establishment of an integrated European energy market, by better linking national energy networks and reinforcing relations with third countries. It identified 12 priority corridors and areas covering electricity, gas, oil and CO₂ transport networks. Among the 12 corridors three affect Norway: the Northern Seas offshore grid, the Baltic Energy Market Interconnection Plan in electricity, the Baltic Energy Market Interconnection Plan in gas. While some projects are already ongoing as part of these initiatives, recent progress reports have underlined a number of delays and postponements, frequently due to lengthy and unpredictable permitting procedures.

5 Renewable energy

The main rationale behind the EU Renewable Energy Directive⁶ is that the increased usage of renewable energy offers the benefits of not only reducing greenhouse gas emissions and diversification of energy supply, but also of generating economic growth. Article 3 of the Directive states that at least 20 % of final energy consumption should come from renewable energy sources by 2020. The date for implementing the Directive in EU Member States was set to 29 December 2010.

The EU Renewable Energy Directive was incorporated into the EEA agreement in 2011. The directive does not apply to Liechtenstein and the targets for Iceland and Norway were set at 64% and 67.5%, respectively. Both of these targets are higher than any of the targets of the EU Member States.⁷ Iceland has already achieved its target. Beyond the targets introduced by the incorporation of the directive within the EEA agreement, the EEA EFTA States can potentially be involved in cooperation mechanisms such as joint projects and joint support schemes with one or more EU member states.

⁵ COM(2011) 658.

⁶ Directive 2009/28/EC on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC

⁷ Sweden has the highest target among the EU Member States with 49%. The EU average is 20% by 2020.

The first such support scheme for renewables was established by Norway and Sweden. The so-called green certificate system has been in operation since 1 January 2012 and should increase production from renewable sources with 26,4 TWh by 2020.

Both Norway and Iceland have a leadership position in terms of high shares of renewable energy. Norway's energy mix is characterised by the prominence of hydropower, which contributes to 95% of the electricity consumed nationally. A combination of thermal and wind power accounts for the remaining 5 % of electricity generation. Norway has also been developing innovative energy technologies, such as renewable energy or CCS both by providing financial incentives and via legislation in the respective sectors.

As a result of a rapid expansion in Iceland's energy intensive industry, the demand for electricity has increased considerably, which has been met by development of renewable energy, in particular geothermal. In 2009, 84% of Iceland's total primary energy use came from renewables, of which geothermal accounted for 66% and hydropower 20%. In terms of electricity, 100% was produced from indigenous renewable sources, of which hydropower accounted for 75.5% and the remaining form geothermal. Geothermal energy is the prime source for household heating. 89% of households in Iceland are heated this way.

Liechtenstein, on the other hand, is heavily dependent on energy imports. In 2010, 91% of the total energy consumption was imported. The main source of the domestic energy production is hydropower, with about 95%. The remaining 5% comes from firewood and biogas.

6 Energy Efficiency

The EU Directive on Energy End-Use Efficiency and Energy Services, with the objective of improving the energy efficiency of the European economy, was adopted in 2006. The Directive has so far not been incorporated in the EEA Agreement. The new Energy Efficiency Directive⁸ sets a number of mandatory measures: annual target renovation rate of 3 % for public buildings, Energy efficiency obligation schemes set up by the Member States to mandate energy companies to reduce their energy sales by a minimum of 1.5 % per year. Member States will also have to define indicative national targets and submit a long-term strategy for an energy efficient buildings sector.

In relation to energy efficiency as means to reduce CO₂, it is important to take into account that both Iceland and Norway have very high shares of renewable energy, which means that their national energy context is very different from most EU countries. Nevertheless, the new Energy Efficiency Directive was adopted as a text with EEA Relevance by the EU, and it has been included in the list of EU acts which are under discussion for their incorporation into the EEA Agreement.

⁸ (2012/27/EU, published on 14 November 2012)

The Framework Directive on Ecodesign⁹ is an additional instrument in order to promote energy efficiency within the EU, by defining requirements for the conception of energy-related products, looking at their entire life-cycle. The directive has recently been incorporated into the EEA Agreement and entered into force on 1 November 2012. Furthermore, on 19 May 2010, the EU adopted Directive 2010/30/EU on labelling of energy-related products¹⁰, which helps consumers to choose products which consume less energy and provide incentives for the industry to develop and invest in energy efficient product design.

7 Nordic Cooperation and the Arctic: Energy aspects

The EU's relations with the EEA EFTA States in the field of energy have a strong regional component. Nordic countries have a long-standing cooperation in the field of energy policy. Norway's restructuring of its electricity sector in the early 1990s, followed by Sweden, created the first international market place for electricity – Nord Pool. Subsequently Denmark, Finland and more recently Estonia and Lithuania joined. The Nord Pool Power exchange is the largest power exchange in the World in terms of contract volumes. It accounts for about 72% of the electricity consumed in Nordic countries. Cooperation between Nordic countries includes issues such as common grid planning, operation rules, technical requirements for grid connection and contingency planning. In many respects, the Nordic market can be seen as a role model for the future EU internal energy market, in the sense of an integrated regional market through cooperation between national governments, regulators and transmission system operators.

The rising political and economic importance of the Arctic has implications for the relations between the EU and the EEA EFTA States. From the point of view of the EU energy policy, the oil and gas stocks of the Arctic could help to guarantee Europe's energy security. Both Norwegian and Icelandic strategies for the Arctic region highlight the potential for oil and gas exploration in their territorial waters. According to the US Geological Survey (2012), the Arctic accounts for about 13 percent of the undiscovered oil, 30 percent of the undiscovered natural gas, and 20 percent of the undiscovered natural gas liquids in the world. About 84 percent of the estimated resources are expected to occur offshore.

At the same time there are considerable risks related to offshore oil and gas activities. EU's, Norway's and Iceland's arctic policy equally recognise the need to minimise the impact of the new economic activities in the Arctic to the environment and local communities, inter alia, by promoting the use of environmentally friendly, low-risk technologies that could be used by extractive industries in the High North.

The European Commission has recently proposed legislation aiming at harmonising the environmental procedures and risk management related to offshore oil and gas activities. A proposal for a regulation on the safety of offshore oil and gas prospection, exploration and production activities was presented by the Commission

⁹ Directive 2009/125/EC

¹⁰ Directive 2010/30/EU

on 27 October 2011. Under the rules of the proposed new legislation, offshore oil and gas firms would have to submit major hazard reports and emergency response plans before getting a licence to drill in European Union territory. It is currently being discussed in the EU institutions whether the proposal for a regulation should be changed into a directive.

The Norwegian government has taken the view that the proposed regulation by the European Commission falls outside the geographic and substantive scope of the EEA agreement.

8 Future challenges and perspectives

Completion of the internal energy market should be prioritised both in the EU and in the EEA EFTA States in the coming years.

The incorporation of all EEA relevant EU energy policy instruments into the EEA agreement should be considered as a matter of priority for completing the single energy market within the EEA. The EU Member States need to completely transpose and implement the Third Liberalisation Package. The Package should also be incorporated into the EEA agreement and implemented in the EEA EFTA States as soon as possible.

Infrastructure development should be a priority area for the achievement of the goals of the EU energy policy. The interdependencies between the EEA and the EU internal energy markets are nowhere so clear as in infrastructure needs. A seamlessly functioning EU internal energy market is a precondition for a well functioning EEA internal energy market and vice versa. Thus, investment in transmission capacity in relevant regions that would enable electricity flows across borders is needed.

Last but not least, the EEA Agreement has a potential to spur innovation through knowledge and capacity sharing in technology fields that are of key importance for the energy sector. Technology cooperation between the EU and the EEA EFTA States could include areas such as offshore exploration and production of oil and gas, hydropower, Carbon Capture Storage as well as geothermal energy, biofuels and hydrogen technologies.