# THE EU'S ENERGY UNION

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## TOWARDS AN INTEGRATED EUROPEAN ENERGY MARKET?

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- The European Union is heavily dependent on energy imports from abroad, which cover more than half of the EU's demand. Dependence is particularly strong in the field of fossil fuels, where Russia is the EU's main export partner.

- Following the Ukraine crisis and the ensuing tensions with Russia, the objective of diversifying the portfolio of partners has gained prominence in the EU. This is particularly relevant to gas imports, as alternatives to Russian gas are limited for several EU member states.

- National energy markets in the EU are largely disconnected from one another. Member states decide their energy mix and negotiate supply contracts with third parties without previously consulting their EU partners. This has resulted in large price differentials between member states.

- In order to tackle these issues, the European Commission has proposed the establishment of an EU Energy Union. Its main objectives include the integration of the EU energy market, diversifying suppliers, increasing energy efficiency and decarbonising the economy.

- However, the implementation of the Energy Union is likely to face several challenges. These primarily concern the reluctance of member states to renounce national prerogatives in the field of energy, diverging national interests, and the need to create adequate governance mechanisms at the EU level.

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In February 2015, the European Commission unveiled its blueprint for an EU Energy Union, one of the most widely discussed projects of the Juncker Commission's first months in office.[1] The Commission's "Energy Union package" is a strategic document that should pave the way for the creation of an integrated European energy market, where member states cooperate to strengthen their energy security, decarbonise their economy and reduce waste in energy consumption. Making the EU's energy sector more climate-friendly and decreasing its reliance on external energy suppliers are the overarching objectives of the Energy Union.

The Energy Union package reiterates some of the long-standing objectives of EU energy policy, notably the integration of the internal energy market and strengthening the security of energy supplies from abroad. However, it also includes new elements, particularly the focus on innovation and the technological upgrading of energy systems.

The proposal to create an EU Energy Union was first made by the then Polish prime minister (and now president of the European Council) Donald Tusk in April 2014. Tusk's proposal put particular emphasis on the exploitation of domestic fossil fuels (coal, oil and gas) and the creation of a joint European gas purchasing authority. This, he argued, would prevent "Russia's energy stranglehold" on Europe.[2] In the ten months that followed, however, the European Commission largely reframed and developed Tusk's initial proposal.

Tusk's call was a response to Russia's annexation of the Crimean peninsula and its destabilisation of Ukraine, which put the EU on a confrontational path with Moscow, a key fossil fuel supplier for the Union. The Commission's Energy Union package reflects concerns about excessive reliance on Russia as an energy provider. However, its rationale and objectives are much broader. The EU's climate goals and the idea of sustainable economic development profoundly influenced the philosophy of the package. The Energy Union package outlines five broad and interrelated objectives: increasing energy security, solidarity and trust; creating a fully integrated European energy market; improving energy efficiency while contributing to the moderation of demand; decarbonising the economy; and supporting research, innovation and competitiveness.

In order to implement the Energy Union, the EU will have to create adequate governance mechanisms, and address different national priorities and potential conflicts between the Commission and member states. Limited funding and the lack of ambition of the EU's renewable and energy efficiency targets pose considerable obstacles, too.

### Ukraine crisis: risks of energy reliance on Russia exposed

The European Union is heavily dependent on the import of energy from abroad. In 2013, the EU member states produced less than half of the energy they consumed. EU energy production has declined by 15% since 2004, particularly due to the drop in energy generation from declining domestic fossil fuel resources. On the other hand, the EU's import dependence increased from 46% to 53% between 2000 and 2013.[3] Dependence on energy imports is particularly high in some member states, such as Italy, Ireland (over 80% of total energy consumption), Germany, Spain and Austria (between 60% and 80%).[4]

As Vice-President of the European Commission Maroš Šefčovič highlighted at the Energy Union conference in Riga in February 2015, the EU spends 3.2% of its gross domestic product on energy imports, namely over 1 billion euros per day. At the moment, wholesale electricity prices in the EU are 30% higher than in the US. Šefčovič, who is in charge of the EU's Energy Union, has argued that the EU could reduce costs and dependence from abroad by building a single internal energy market, increasing energy efficiency and differentiating its suppliers. The question of differentiating suppliers

1 See http://ec.europa.eu/priorities/energy-union/ for the Commission's communication on the Energy Union.

2 Donald Tusk, "A united Europe can end Russia's energy stranglehold", *Financial Times*, 21 April 2014.

3 Eurostat, Energy Statistics – supply, transformation and consumption, simplified energy balances – annual data, accessed on 24 February 2015.

4 In Finland, import dependence stood at 51% on average between 2008 and 2012; see "Member States' energy dependence: an indicator-based assessment", European Commission, Occasional Paper 196, June 2014, p. 6.

became particularly relevant at the onset of the Ukraine crisis and the ensuing standoff between the European Union and Russia. Russia is the main supplier of fossil fuels to the EU, providing 34% of the oil, 32% of the gas and 26% of the coal imported by the Union (as of 2012).[5]

Due to the difficulties and costs of importing gas from further regions of the world, dependence on Russian gas is the most sensitive issue. Some member states are more reliant on Russian gas than others: Germany and Italy are the main importers in terms of volumes, whereas for six member states (Finland, the Baltic states, Bulgaria and Slovakia) Russia is the only supplier. Some member states, notably those in East-Central Europe, have little or no backups for Russian gas in the sectors where it is used (i.e. household heating).

From the EU's perspective, excessive reliance on Russian gas is a problem for both economic and political reasons. Russia has sold gas to EU member states at different prices (often imposing higher prices on politically hostile countries), which hinders the creation of an integrated European energy market.

Moreover, Russian gas supplies to the EU may become subject to disruptions due to the crisis between Russia and Ukraine. Around 50% of Russian gas exports to the EU reach the Union via Ukraine. In 2006 and 2009, disagreements between Moscow and Kiev over the price of Russian gas sold to Ukraine resulted in disruptions of the flow of gas towards European markets.

The EU has mediated an agreement between Russia and Ukraine to secure the regular flow of gas during the winter of 2014–2015. However, the current agreement will expire during spring 2015 and, given the extremely tense relationship between Moscow and Kiev, disruptions are possible the following winter.

Uncertainty over the future of supplies heightened following Russia's announcement that it will no longer channel gas through Ukraine in the future, but will rely on Turkey as a transit country instead. The necessary infrastructure for the announced transport route is not available yet and its construction would require both time and large sums of money.

### The EU's 2030 framework and the "green face" of the Energy Union

Besides being a response to the EU's energy dependence from abroad, the Energy Union is an attempt to address climate policy needs. In October 2014, EU leaders agreed to set targets to reduce greenhouse gas emissions and enhance the production of energy from renewable sources. The targets include a 40% binding reduction in greenhouse gas emissions (compared to 1990 levels), boosting the share of renewables to at least 27% of total energy consumption and increasing energy efficiency by 27%. These goals are to be achieved by 2030.

The targets build on the so-called "20-20-20" goals already agreed for 2020, which encompass a 20% reduction in greenhouse gas emissions and raising the share of renewables to 20%. In addition, they form the basis of the EU's negotiating position at the upcoming United Nations Framework Convention on Climate Change in Paris in December 2015, where global goals to reduce greenhouse gas emissions should be agreed.[6]

The 2020 and 2030 targets should contribute to making the EU less dependent on energy imports: as the consumption of fossil fuels is reduced to limit greenhouse gas emissions, the Union's reliance on imports of these raw materials will likewise be reduced. In this respect, the climate and energy goals and the Energy Union are two steps in the same direction. Indeed, the Energy Union could complement and strengthen the EU's climate policy if its governance bodies strengthen the governance of the Union's climate and energy policy as a whole.

In particular, governance mechanisms that supervise the implementation of the 27% renewables target at national level are highly desirable, as the target is only binding at the EU level. The same

5 Eurostat, Main origin of primary energy imports, EU-28.

6 On climate negotiations in the UN, see also Antto Vihma, "How to reform the UN climate negotiations? Perspectives from the past, present and neighbour negotiations", *FIIA Working Paper 82*, October 2014.

applies to the efficiency target, which is not binding at all and could be circumvented by some member states.

### Energy security in the (gas) pipeline

Increasing energy security is a cornerstone of the Energy Union. According to the Commission's communication on the Energy Union, this will be achieved through the construction of new pipelines carrying gas from Central Asia to Europe (the Southern gas corridor) and the creation of liquefied natural gas (LNG) hubs in East-Central Europe and the Mediterranean.

This would diminish Russia's role in the portfolio of EU gas providers. However, it would not reduce EU energy dependence on authoritarian regimes, as gas for the Southern corridor would be predominantly bought in Azerbaijan and, potentially, Turkmenistan. Additional reliance on LNG would not be unproblematic either, due to the cost and environmental impact of transportation and regasification of liquefied gas from distant countries such as the US and Qatar. The new infrastructure would be complemented by new gas storage sites and the possibility of using "reverse flows", namely channelling the gas wherever it is needed in the EU market and beyond. In 2014, for instance, the EU used reverse flows to supply Ukraine with gas, following Russia's decision to suspend deliveries to Kiev.

The Energy Union package recommended that member states should be able to rely on their neighbours in gas supply crises. However, it did not include a plan for joint gas purchasing, which was a key element of Tusk's initial proposal. This was largely due to the stance of some member states, such as Germany, which highlighted how joint purchasing would run counter to the liberalisation of gas markets. The package only stated that the Commission would assess voluntary demand aggregation mechanisms for gas purchasing in crisis situations or for member states depending on a single supplier. Some experts argue that East-Central European and Balkan countries could set up joint gas purchasing.[7]

However, even leaving aside technical difficulties, it is uncertain whether such a regional mechanism would be sufficient to extract cheaper prices from Russia.

Furthermore, the Commission asked to be informed about intergovernmental agreements (IGAs) on gas supplies with third countries from an early stage of the negotiations, so that it could review them and make sure they comply with EU rules and goals. This request follows a dispute between the Commission and six member states that signed IGAs with Russia for the construction of the South Stream pipeline, which would have shipped Russian gas to South Eastern and Central Europe. In December 2013, the Commission declared that the IGAs had breached EU law, and the construction of the pipeline was later stopped due to the Ukraine crisis.

The package only briefly mentioned the controversial question of shale gas and oil exploitation in Europe. It argued that it could contribute to decreasing import dependency for states that choose to invest in it, after having adequately assessed public acceptance and environmental risks. Due to its ecological risks (most notably the pollution and depletion of water sources), environmental organisations have harshly criticised shale gas extraction, and some member states (such as France and the Netherlands) have banned it.

While differentiating suppliers will reduce over-reliance on single countries, building an internal energy market will even out domestic prices and provide further supply security. In order to achieve this, the Energy Union package has set a minimum interconnection target of 10% to be met by 2020. This means that all member states would have to be able to transfer at least 10% of their installed electricity production capacity to their EU neighbours. The Commission has produced a separate Communication outlining how this target can be achieved, thereby confirming that it is an immediate priority. Linking the remaining energy islands – notably the Baltic republics and the Iberian peninsula – to the main electricity and gas network is considered particularly urgent.

The question of governance has also been addressed. Establishing adequate governance mechanisms is essential for the implementation of the Energy Union. The Commission has recommended the full

7 Fabio Genoese et al., "Energy Union: Can Europe learn from Japan's joint gas purchasing?", *CEPS Commentary*, December 2014, pp. 1–2.

implementation of the 3rd Internal Energy Market package, a set of rules liberalising the sector (such as unbundling energy production from distribution).

Most importantly, the Commission has advocated the strengthening of the Agency for Cooperation of Energy Regulators (ACER) in order to enable it to oversee the development of the internal energy market. Until now, ACER has focused primarily on assisting national energy regulators, but the Commission seems to be planning to transform it into the main governing body of the Energy Union. If this is indeed the Commission's intention, member states' acceptance of the new role of ACER will be essential for its successful functioning.

### Leader in energy efficiency, renewables and innovation?

The Commission's communication defines energy efficiency as "an energy source in its own right". It identifies the transport and building sectors among the most critical ones. 75% of the European housing stock is energy inefficient. As the majority of EU gas imports are used for the heating and cooling of buildings, improving their energy efficiency would reduce both costs and dependence on external gas suppliers.

As for the transport sector, 94% of transport relies on oil products, of which 90% are imported. As the Commission noted, making the sector more efficient and decarbonising it – particularly through the electrification of road and rail transport – would help break the oil dependence. However, the target of increasing energy efficiency by 27% in the 2030 climate and energy framework is not binding, hence member states will have little additional incentive to address the issue.

By contrast, the fourth goal of the Energy Union, decarbonising the economy, is likely to meet with at least some success, as member states have agreed to a binding 40% reduction in greenhouse gas emissions by 2030. Reforming the Emissions Trading System (ETS), which regulates the EU carbon emissions market, would assist the EU in meeting the target and in developing renewable energy.

In particular, the cap of allowed carbon emissions should be adjusted to the 40% target. This would have an impact on the price of emissions and provide incentives to invest in renewables and green technologies. At the moment, the carbon price in the ETS is very low due mostly to an oversupply of emissions permits, which was caused by an overestimation of future emissions when the ETS was set up in 2005.

It is important that the Commission presented – as part of the Energy Union package – a communication on preparing for the climate change negotiations in Paris in December 2015. It is essential that the EU arrives at the conference with a single position and a strong, coherent delegation. This would allow it to negotiate on a par with the US and China and to profile itself as a leader in climate change policy.

The Energy Union package also states that the EU should become "number one in renewables". However, besides arguing that energy markets and grids have to be adapted and fit for renewables, it does not add much substance to the debate on how this should be achieved. It simply recalls the 27% target of the 2030 framework, without addressing either the uneasy question of its implementation at the national level or the fact that the target itself is modest and should be revised upwards.[8]

Research and innovation in renewable technologies, energy storage, smart grids and sustainable transport are essential in order to decarbonise the economy and achieve EU climate goals. The Energy Union package stresses this in its fifth dimension. However, this section includes some ambiguity that could be exploited by member states that are reluctant to decarbonise their economies and invest in renewables.

In particular, the package argues that the EU should invest in "clean fossil fuels", a contradictory statement: burning fossil fuels pollutes by definition (one can only argue that some pollute less than others, but none are "clean"). Furthermore, the Commission emphasised carbon capture and storage (CCS), a technology that allows carbon emissions to be captured and stored before they spread in

8 According to the Commission's impact assessment, a share of 27% of renewables in energy production is the minimum to achieve a 40% reduction in greenhouse emissions. Cf. Georg Zachmann, "Elements of Europe's Energy Union", *Bruegel Policy Brief*, September 2014, p. 3.

the atmosphere. The use of CCS in the power and industrial sectors is considered "critical to reaching the 2050 climate objectives in a cost-effective way".[9] However, CCS is expensive and would not be financed by private investments alone. It is important to ensure that investments in CCS do not divert funds away from research in renewables and do not prop up the coal sector; the latter should be phased out as soon as possible in order to meet climate goals because coal pollutes more than oil and gas.

### Breakthrough or repackaging?

Creating the Energy Union will take time and face numerous challenges. In the short run, funds will have to be found to finance the 33 infrastructure projects that the European Energy Security Strategy identified as essential to improve supply security and market integration. The Commission hopes that private investments will pay for most of the new infrastructure. However, if this is not forthcoming, a selection of the most urgent projects will be necessary and the EU will have to allocate more public funds (for example, from the new Investment Plan).

In order to level energy prices and create a truly integrated energy market, national fuel mixes should be coordinated and subsidies to national energy industries should be phased out. This will not be easy, as member states will most likely defend their national industries and their prerogative to determine their energy mix. This prerogative is enshrined in Article 194 of the Treaty on the Functioning of the European Union (TFEU). According to Article 4 of the TFEU, member states and the EU share competence on energy policy. Hence, the Energy Union will have to be implemented in close coordination with member states. Their political will and support is essential for its functioning.

However, conflict between the Commission and member states is to be expected with regard to the Commission's request to screen intergovernmental agreements on energy supplies with third parties before they are concluded. Hungarian Prime Minister Viktor Orbán has already argued that this would constitute a "major problem" and hinder national sovereignty. Another potential risk is that the rhetoric of some EU leaders concerning the Energy Union aggravates political confrontation with Russia. Tusk's initial proposal reflected this problem. Moreover, potential Russian objections to the mechanisms of the Energy Union (such as reverse flows or aggregated gas purchasing) could worsen political tensions. As Russia will remain a key supplier for the EU at least in the medium term, the EU should attempt to develop a fair business relationship, while ensuring that its internal market rules are respected.

Overcoming these obstacles will be very demanding. However, if the Commission is successful, there is a good chance that the EU will finally have an integrated and fully functioning energy market, with lower prices and a greener energy mix. Through its emphasis on efficiency and renewables, the Energy Union could also help the EU to achieve its 2030 climate policy goals, or even make them *de facto* more ambitious. EU leadership, the political will of member states to coordinate their energy policies, environmental awareness across the Union and the availability of sufficient funds to implement infrastructure projects will be the key determinants of success. If any of these are missing, the Energy Union may develop into a simple "repackaging" of existing arrangements and fail to deliver a united energy market.

9 The EU's roadmap for 2050 states that the Union should cut its emissions by 80% compared to 1990 levels.

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