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## EU's quest for energy security What role for the Energy Union?

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### BACKGROUND

The past year has pushed energy security high on the EU agenda, and with it, the need for stronger cooperation on a common energy policy. For years the EU member states have been driven by different reasons to – or not to – collaborate. The internal energy market's economic benefits have not provided a sufficient driver for cooperation. The first climate and energy targets were an achievement, but in reality action has been undermined by concerns over competitiveness. Being a global leader in setting targets has not translated in cross-border collaboration in meeting them. National interests and bilateral energy deals have weakened EU's common voice *vis-à-vis* supplier countries. Whether the recognition of EU's energy vulnerability will become a real driver for creating an Energy Union worth its name remains to be seen. The need for action could not be stronger.

Russia's illegal annexation of Crimea and instigation of war in Eastern Ukraine have triggered fundamental questions about relying on a trade partner that breaks international norms. While logically Russia could not afford to use energy as a political tool and previously disputes have not disrupted EU-Russia energy relations, President Putin's irrational behaviour and attempts to hang on to power at any cost have left their mark. The memories of the 2006 and 2009 winters, when Russia stopped gas flows to Ukraine, resulting in supply problems in many member states, have sharpened security of supply concerns. The Russian threat to stop gas transits via Ukraine, calling on the EU to build pipelines to Turkey if it wishes to get gas in the future, has further deepened mistrust in Russia as an economic partner.

The EU's energy security challenge should not come as a surprise, and goes beyond EU-Russia relations. As the EU-28 import over 53% of energy, international developments naturally affect energy security. In addition to Russia's posturing, tensions in North Africa and the Middle East threaten oil and gas supplies. The US shale gas and oil revolution, again, could benefit the EU: it has already led to an increase in coal imports and interest in a new source of LNG (liquefied natural gas). Yet, there is great uncertainty related to future energy supplies: what will be available, where and at what price? While the oil and gas prices are lower now, the total world energy consumption is expected to increase by 36% between 2008 and 2035, and competition for fossil fuels is assumed to lead to greater market volatility and higher prices in the longer term.

More than anything else, EU's energy security challenge is an internal challenge. Firstly, its energy vulnerability *vis-à-vis* Russia is of its own making. Russia is an important supplier of crude oil, natural gas and coal to the EU (respectively 34%, 39%, and 28% of EU-28 imports in 2013). Germany is the largest Russian gas importer in the EU, while Austria, Bulgaria, Hungary, Lithuania and Poland import more than 75% of their gas and/or oil from Russia. The Baltic States depend on it for operation and balancing their electricity network. It also has a strong role in nuclear power generation especially in Eastern Europe, and Hungary, Slovakia, Bulgaria, Finland and the Czech Republic are dependent on Russian fuel.

Secondly, the EU countries have been slow to recognise the benefits of collaborating on energy policy and security. For years the EU mantra has been to secure cheap and sustainable, reliable supplies of energy. Implementation, though, has been weak. The 2006 gas crisis led only to the recognition of the EU's energy vulnerability. After the 2009 crisis, first steps were taken to promote energy security. The third energy package aims

to open up the Union's gas and electricity markets. The 2020 climate and energy objectives, including increasing the renewables' share to 20% and energy efficiency by 20%, also supported this objective.

But while the call for security of supply exists on paper, it has not translated into coherent action. European energy security has been undermined by an internal challenge: short-sighted national interests, power generating companies' fear of competition, a patchwork of national mini-markets, and a lack of political cohesion, cooperation and solidarity. The member states' bilateral energy deals with Russia have allowed a major supplier to pit countries against each other. These tensions will continue to test countries' real interest in collaboration.

Thirdly, the EU's vision for climate and energy policy, and the means to achieve its objectives are constantly debated. Can the policy framework promote competitiveness and climate action, and if not, which should prevail as the higher priority? How to achieve its targets in a smart, cost-efficient way? What is the value of energy security: how much is the EU willing to invest, what actions will it take and what role should energy efficiency and domestic sources play in the energy mix? The EU needs to define its priorities and provide a stable framework for their achievement.

Fourthly, the EU has an enormous structural and investment challenge. According to the European Commission, transition towards a more secure and sustainable energy system will require €200 billion in annual investments in the next decade. The International Energy Agency warns that half of the EU's electricity generating capacity is expected to close in the coming decades. While renewables could help to cover some of the gap, they continue to need a base-load electricity supply, be it gas, nuclear or coal, and the decisions on needed investments must be made now. The EU also needs to upgrade the existing network and build the needed interconnectors between countries in order to create a market where this electricity can flow

## STATE OF PLAY

Developments in Ukraine have renewed EU's interest to strengthen common energy policy and security. It is recognised that with determined action Russia's role in the EU's fuel balances can be reduced to something more manageable. The Commission's Energy Security Strategy, published in May 2014, suggested short- and medium-term measures. This included stress tests that assessed member states' dependency on Russian gas and showed the vulnerabilities of especially some East European countries. The autumn saw some swift efforts to break the dependency, exemplified by Lithuania's gas deal with Norwegian Statoil and Estonia receiving its first gas delivery via regional cooperation.

At the October 2014 European Council meeting, the EU heads of state and government stressed the importance of energy security, and agreed on the 2030 energy and climate framework. Creating a link between security of supply, reducing greenhouse gas emissions, and the need for an internal energy market, including interconnectors, paved the way for the Commission's work on the Energy Union.

Energy became a key policy priority in the new Commission that started in November 2014. Under Vice-President for Energy Union Maros Sefcovic's guidance, the Commission put together the *Energy Union Framework Strategy* (including a 3-year action plan), a plan to achieve the 10% interconnection target by 2020 and the communication on the Paris Protocol, which were adopted on 25 February 2015.

While the nature of the package is aspirational, it aims to build on the political momentum and create the basis for cooperation. Recognising energy policy's cross-policy nature and bridging the existing objectives of 1) energy security, while emphasising the importance of solidarity and trust, 2) completing the internal energy market, 3) increasing energy efficiency, 4) decarbonising the economy, and 5) promoting research, innovation and competitiveness, provides a good starting point, if it leads to coherent action. It is now up to the Commissioner for Climate Action and Energy Miguel Arias Cañete to work on concrete legislative proposals, and test member states' real political and economic willingness to cooperate.

## PROSPECTS

***The strategy should lead to policies and investment decisions that are future-proofed.*** This means considering trends like global competition for fossil fuels, and goals to replace Russian gas with other alternatives, increase EU's energy efficiency and reduce emissions. Envisaged changes in energy use must be considered: electrification of lifestyles; improving heating by replacing gas and oil with renewables; changing mobility including more hybrid,

electric, potentially hydrogen cars on roads; and producing more power and electricity with renewables. Future plans for gas and/or electricity infrastructure and interconnectors must be aligned with these considerations.

Coherence between EU policies that impact energy security, sustainability and competitiveness must be ensured. The strategy sees fossil fuels as an external and internal source. Can this be aligned with the *2030 Climate and Energy Framework and the Energy Roadmap* that calls for reducing emissions by 80% by 2050? There is a strong emphasis on gas: diversification of supplies, constructing infrastructure to deliver new sources to and within the EU. The potential with domestic shale gas and oil is recognised. Encouraging development of carbon capture and storage (CCS) as well as use (CCU) suggest a continuing role for coal in the EU's energy mix. The importance of domestically produced energy from renewables is recognised, though concrete plans will have to wait until 2016-17. The limited emphasis on nuclear's role and ignoring it as a decarbonisation tool runs counter to energy security and emission reduction objectives, raising the question to what extent this is influenced by Germany's opposition to nuclear. While countries decide their energy mixes, the Commission influences these and provides investment signals via targets, financial support and environmental regulation – and should use this role wisely.

**Energy efficiency is the low hanging fruit** for reducing dependency on foreign energy imports – every 1% in energy savings cut EU gas imports by 2.6% – while lowering EU emissions and energy costs for consumers, and creating jobs e.g. in construction sector. The Commission's financial support for energy efficiency in transport and buildings sectors, and a review of existing legislation in 2015 and 2016 are needed. Better recognition of the energy efficiency's multiple benefits would help to convince citizens, businesses, regions and member states of the needed action, such as using standards for buildings, consumer products and road vehicles.

**Also, the Commission rightly recognises that increasing security of supply requires an integrated energy market.** It is questionable whether there can be a truly integrated market without harmonising national energy policies and support schemes, but before this can even be considered, other challenges remain to be tackled. This starts with having an independent regulator, be it the Commission or the Agency for Cooperation of Energy regulators (ACER), to supervise and ensure implementation and enforcement of existing legislation.

Integrating alternative sources and increasing lines of supply for gas and electricity requires investments. While e.g. the European Investment Bank, the Connecting Europe Facility and the European Fund for Strategic Investments can support energy projects, to succeed, they must leverage private financing. The EU's climate and energy policies must provide a long-term vision and regulatory certainty to guide investment decisions.

While the Commission's stress on the minimum 10% interconnection target for electricity by 2020 is good, money will not help, if countries do not recognise the benefits of collaboration. The EU cannot afford to have countries like France oppose building interconnectors because neighbours' renewable electricity would create competition on its market.

Empowering European consumers, be it citizens or business, could make them strong advocates for the Energy Union. A fully integrated gas market could save them up to €30 billion and an electricity market up to €35 billion a year. They would save if allowed to switch suppliers for gas and electricity and would benefit from greater transparency on energy costs and prices.

**The EU must utilise the potential with alternative domestic sources of energy**, including combined heat and power systems, bioenergy, geothermal systems and solar heat collectors. According to a recent study, the EU could replace all imported Russian gas with 54 million additional heat-pumps. While environmental and safety considerations must remain priority, nuclear power and unconventional gas should be considered as they support both energy security and emission reduction goals. While waste should become energy only as a last resort, the examples of Malmö where 60% of heat and Lille where biogas for buses are produced from waste provide interesting case studies.

The Commission calls the EU to utilise the current low oil and gas prices to move towards an Energy Union. This is a perfect opportunity for EU countries to raise taxes on both, and use the extra revenue to support transition into a greener, more self-sufficient energy system.

**EU's commitment to become a leader in renewables requires learning from past mistakes.** The *Energiewende*, Germany's attempt to move from nuclear and fossil fuels towards renewable energy is a showcase of what not to do. The expensive subsidies for renewables, increase in coal power production, no sustainable back-up option, wide opposition to a grid for integrating renewables and its loss of ground on technology development and production are good lessons also for the Commission as it works on its renewable energy legislation.

Although difficult to achieve in a short-term, the EU needs a single market for renewables. National renewable policies and support schemes have hindered smart development and use of renewables and distorted EU's energy market. The cross-border consequences of the *Energiewende* run the risk of becoming costly also for its neighbours. Member states must seek best return on investment and stop expensive support schemes in places where the sun does not shine or the wind blow. A functioning smart grid that integrates existing and new renewables in the network is needed. And investments into first generation renewables should be coupled with supporting the development of new high performance and low-cost solutions.

**Europe needs alternative external sources of supply.** This includes increasing LNG imports from Algeria, Qatar or Nigeria, increasing gas imports from Norway and exploring the possibility to import shale gas from the US. There is great potential with the Southern Gas Corridor. For oil and coal the supplier can be changed swiftly, as they are readily available on global markets. But, when exploring alternative sources and building new infrastructure, this must be aligned with EU's move towards a low-carbon economy.

**The EU needs a new strategy vis-à-vis Russia.** When negotiating energy deals with Russia, it is in the member states' interest to collaborate. The Commission's proposal to assess options for voluntary common purchasing of gas and to ensure that member states' energy deals comply with EU law are steps in the right direction. The EU must bring Russia's influence over its energy market under check. Russian investments in EU energy infrastructure and implications for security of supply must be analysed and discussed openly. Russia needs the EU. With the decrease in gas and oil prices and the Russian economy in shatters, the need for European investments and knowledge in modernising its economy is greater than ever. While taking steps to reduce EU's energy dependency, if it stands together, the EU can pressurise Russia to carry out needed reforms internally and stop aggression outside its borders.

**Achieving a global climate deal** in Paris at the end of 2015 would provide the basis for developing a sustainable European energy system and economy. The EU's strong diplomatic push this year must build, not on lecturing, but showcasing the benefits of reducing global emissions, fighting climate change locally, securing energy supplies, promoting wider socio-economic interests and increasing competitiveness – all at the same time.

**Energy security is built from within.** It starts with having a common vision, objectives, and speaking with a united voice. While the member states should have by now learned from past mistakes and be committed to work together, the EU's biggest challenge will be maintaining the momentum for action. Redirecting EU countries from the path of sleepwalking into repeated crises to collaborating on securing the Union's energy supplies requires both sticks and carrots. The Energy Union provides a vision to strengthen the momentum for action, but this must be followed by real regulation with real impact. The Commission must strengthen governance and enforce implementation of energy legislation.

The benefits are known, and are for the countries, industry and citizens up for the taking. Building a functioning energy market would bring enormous benefits. Opening national markets to competition would lower energy prices. Reducing air pollution brings health benefits. Reducing energy demand lowers energy bills. Low-carbon, energy-efficient solutions benefit consumers, society and the environment. Scaling-up these solutions, for which there is demand also outside the EU, would profit industry and create jobs. Closer European co-operation would strengthen the EU's hand in dealing with Russia on energy questions. EU's energy challenge is about much more than just energy, and to succeed, the Energy Union must be seen as a part of a bigger deal that benefits all and encourages moving forward.

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