The New Energy Union:
Priorities and Conflicting Policy Objectives

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Abstract

The paper examines the priorities of the recently proclaimed European Energy Union, which creates a new policy framework and energy strategy vision for the EU. I critically assess each of the priority areas and discuss conflicting policy objectives for reaching climate and energy targets that were specified in the EU framework for climate and energy policies that was released on October 23, 2014. I explore deviations from the energy roadmap for 2050 and potential implications for new renewable and fossil fuel energy directions in Europe.

I want to reform and reorganise Europe's energy policy in a new European Energy Union. - Jean-Claude Juncker (March 19, 2015)

The concept of an energy union emerged at the height of the Ukrainian crisis in 2014 when it became evident how vulnerable Europe and particularly the Central and Eastern European member states are in terms of secure energy supply. The Polish Prime Minister Donald Tusk in April 2014 wrote a provocative article in the Financial Times (D.

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Tusk 2014) in which he called for a shift in focus in the EU's climate and energy policy and strategy framework towards more reliance on indigenous fossil-fuel-based energy sources and nuclear energy to secure energy supply. The EU framework for climate and energy policies that was released on October 23, 2014 emphasized the concept of an *Energy Union*, and in February of 2015 the EU Commission's Vice President Maros Sefcovic presented the concept with a goal of a "resilient Energy Union with a forward-looking climate change policy at its core." The European Commission then published an official Energy Union Package (European Commission 2015). The Vice President is currently conducting an "energy tour" through all of the member states to explain and promote the concept.

The energy union concept is not new but builds on the Energy Roadmap 2050 (European Commission 2011), the European Energy Security Strategy (European Commission 2014), and the recently announced EU framework for climate and energy policies (European Council 2014). The latter proclaimed 8 objectives, one of which was the concept of an Energy Union. The fifth objective of energy integration by building an "Energy Union" has become its own package with references to all of the other objectives stated in the earlier announced framework. The Energy Union emphasizes solidarity between members, supply security, enhanced and accelerated integration of the internal energy market, energy efficiency, and the resulting reduction of energy imports, new infrastructure and technologies, and research and innovation. The European Commission clearly states the goal of the Energy Union is to give EU consumers (households and businesses) secure, sustainable, competitive and affordable energy (EU Commission 2015). This marks a change in direction from the EU energy strategy as laid out in the Energy Roadmap 2050 (European Commission 2011). In the Energy Roadmap 2050 the focus of the energy strategy was on decarbonisation, security of energy supply and competitiveness, and the development of a long-term European technology-neutral framework (Schott and Campbell 2013). In fact, the new energy strategy is closely in line with the focus of the U.S. energy strategy (The White House 2011) that focuses on increasing domestic energy supply, reducing energy imports, reduction of energy costs, energy efficiency, and R&D for clean energy technologies (Schott and Campbell 2013; The White House 2011).

The increased emphasis on energy security, affordability, and limiting energy imports is caused by a number of challenges and recent events. The EU imports more than half of all the energy it consumes. Its import dependency is particularly high for crude oil (more than 90 %) and natural gas (66 %). Many countries (Sweden, Finland, Denmark, the Baltic States and Slovakia) are also heavily reliant on a single supplier, including some that rely entirely on Russia for their natural gas. This dependence leaves them vulnerable to supply disruptions, whether caused by political or commercial disputes, or infrastructure failure. A good example is the 2009 gas dispute between Russia and transit-country Ukraine, which left many EU countries with severe shortages. Currently the member states cannot address this security and import dependence because of relatively fragmented energy markets and systems. Energy markets are not fully integrated, many household consumers have too little choice of energy suppliers, and the energy infrastructure is ageing and not sufficiently interconnected. As a consequence

wholesale prices are on average 30 % higher than in the U.S. and retail prices are some of the highest in the world.

While facing these energy security, competiveness, and affordability issues the EU is also an active proponent of climate change mitigation. The EU advocates ambitious climate change, renewable energy, and energy efficiency targets. For the climate conference in Paris at the end of 2015 the EU agreed on a binding EU target of at least a 40 % domestic reduction in greenhouse gas emissions by 2030 compared to 1990. An EU target of at least 27 % is set for the share of renewable energy of final energy consumption in the EU in 2030. This target is now binding at the EU level and it is not clear how the EU can be made accountable for not reaching its target. An indicative target at the EU level of at least 27 % is set for improving energy efficiency in 2030. The latter is quite vague and it is not clear how this will be achieved.

A consistent non-conflicting approach to deal with energy and climate change challenges is difficult to find, particularly as energy is the largest emitting sector and the only effectively regulated and controlled sector for carbon emission reductions. The other major emitting sectors, namely, transport, agriculture, and forestry are largely exempt from binding emissions trading through the EU emissions trading system (ETS). This is something that needs to be addressed in detail in the near future.

The Energy Union package has 5 major priorities and makes some suggestions how to advance each one of them.

1. Supply security

A major emphasis is made on diversifying Europe's sources of energy and making better, more efficient use of energy produced within the EU. It tries to achieve this by further enabling Central Asian countries to export their gas to Europe, by establishing liquid gas hubs with multiple suppliers in Northern Europe, Central and Eastern Europe and in the Mediterranean, by removing obstacles to liquefied natural gas (LNG) imports from the U.S. and other LNG producers, and by advancing domestic production of oil and gas from unconventional sources such as shale gas as long as public acceptance and environmental impacts are adequately addressed.   The European Commission also plans to revitalize European energy and climate diplomacy by establishing strategic energy partnerships with important transit countries or regions such as Algeria, Turkey, Azerbaijan, Turkmenistan, the Middle East, and Africa, by strengthening partnerships with Norway, and by developing new partnerships with the U.S. and Canada.

There are at least two problems with this priority. First it will require massive investments in LNG terminals and infrastructure and it is not specified how the financing could be secured. Secondly member states have very fragmented shale gas policies and do not agree on a common approach. Poland, for example, has promising reserves but already got in trouble with the European Commission. In August 2014, Poland amended the 2011 Geological and Mining Law to streamline licensing procedures and strengthen supervisory powers. The European Commission opened legal proceedings against Poland in June 2014, on the grounds that the new law infringes the environmental impact

assessment (EIA) directive by allowing drilling at depths of up to 5,000 metres without having assessed the potential environmental impact. In addition, Poland is creating tax advantages for shale gas exploration that are in conflict with some of the other priorities of the Energy Union. In order to encourage shale gas exploration, domestic shale gas extraction will be tax-free in Poland until the end of 2020, and taxes will not exceed 40 % after that. This is in conflict with creating a more integrated, smoother energy market that phases out subsidies and regulated prices. Also a suggested voluntary demand aggregation mechanism (European Commission 2015) for collective purchasing of gas during a crisis or where member states are dependent on a single supplier might create some market distortions.

2.   A fully-integrated internal energy market

The transition towards a more secure and sustainable energy system will require major investments in generation, networks, and energy efficiency to reach a 15 % target of interconnection of electricity production capacity. The Commission estimates investment requirement in the range of € 200 billion (286 billion CAD) annually in the next decade. The private sector is supposed to bear the major share of this burden. The Commission will explore proposals for energy investment regimes that pool resources to finance economically viable investments, while avoiding market distortion and fragmentation. The Commission alludes to some necessary public investments as well, such as the building of regional operational centres for transmission system operators and the reinforcement of the powers and independence of the Agency for the Cooperation of Energy Regulators (ACER) to carry out regulatory functions at the European level. It also wants to develop new high-voltage supergrids (long distance connections) and new storage technologies.

All of this will require major financial commitments by the member states and agreements on the magnitude, timing, and location of investments. It is questionable if the member states are ready at this stage to make these investments and commitments and if they are willing to give up enough energy sovereignty. Most member states have their own energy strategies and vision (for example "die Energiewende" in Germany) and have made some long term investments in either renewable infrastructures or nuclear. There are already disagreements in increasing interconnection between the Iberian Peninsula and France. Portugal and Spain are advocating for a much larger interconnection with France to export a significant proportion of their renewable capacity to other European countries. France, on the other hand, is reluctant, as it has major nuclear power capacity that cannot be shut off, even when renewable energy is being produced.

An efficient and well-integrated market also needs to phase out regulated prices and harmful subsidies to fossil fuels. Clear market signals including the strengthening of carbon prices are needed for the right investment decisions and compensation schemes to various energy providers. The Commission will produce biennial reports on energy prices, analyze in depth the role of taxes, levies and subsidies, and seek the phasing out of regulated prices below cost.

3. Energy efficiency

The European Council set in October 2014 an indicative target at the EU level of at least 27 % for improving energy efficiency by 2030. This will be reviewed by 2020, with an even more ambitious EU level of 30 % in mind. As part of the market design review, the Commission will ensure that energy efficiency measures and demand side responses are properly valued in the displacement of generation capacity.   The Commission will try to achieve this by encouraging member states to give energy efficiency primary consideration in their policies and through energy labeling and ecodesign legislation. Many of the suggested policies are relatively soft and even the impacts of the European ecolabelling efforts are not clear. Harder measures especially in the building and transport sector are necessary to achieve the relatively ambitious targets. Here the Commission will propose a strategy to facilitate investment in heating and cooling. It also will review all relevant energy efficiency legislation and will propose revisions where needed. The latter is quite an intrusion in national sovereignty and might be ignored or challenged by certain member states.

4. Emissions reduction

The agreement on the 2030 climate and energy framework has defined the EU commitment of an at least 40 % domestic reduction in greenhouse gas emissions compared to 1990. The Commission, together with the member states, plans to engage with other major economies to convince them to join Europe's ambition. It intends to do this through active European climate diplomacy that makes full use of trade and development instruments. It is not clear if this will involve import tariffs or cross-border adjustments for certain goods. It also wants to stimulate the uptake of renewables and other low-carbon and energy-efficient technologies through the carbon price formation in the EU ETS. The latter is, however, recently trading for a number of years at a disappointing carbon price signal below € 10 (approx. 14 CAD). Some argue that national renewable targets are undermining the effectiveness of the EU ETS. In addition, the EU recently has had difficulties in either agreeing on tighter emissions caps or a price floor of emission credits that would force a higher carbon price.   The renewable targets and the EU ETS price signals need to be more closely coordinated, which requires carefully designed markets for emissions trading, renewable certificates, and short and long term bidding into the electricity system. Currently, there are so many subsidies, free emission permit allocations, and non- transparent rules of electricity markets that make it challenging to create the right incentives and to create a fair and effective integrated EU system.

5. Research and innovation

The Commission wishes to support breakthroughs in low-carbon technologies by coordinating research and helping to finance projects in partnership with the private sector. It identified four core priorities:

- Being the world leader in developing the next generation of renewable energy technologies

- Developing smart grids and smart cities;
- Building efficient energy systems; and,
- Creating more sustainable transport systems.

The new strategy for research and innovation is discussed at a very high level without concrete steps and plans. It also still relies on a "forward-looking" approach to carbon capture and storage (CCS) and carbon capture and use (CCU) for the power and industrial sectors to reach the 2050 climate objectives in a cost effective way. CCS and CCU have proven to be cost effective and presumably there is hope that a breakthrough will be reached soon. It also allows the EU to continue focusing on certain fossil fuels that are in large abundance and low cost for power production. This focus is in direct contrast to the ambitious and progressive development of alternative energy resources, and is more targeted to less developed areas of the EU that need to catch up to the rest of the EU.

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