

# Energy Union — a more secure Europe?

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## EU Energy in Numbers

The European Commissioner for the Energy Union, Maroš Šefčovič, noted quite accurately in an interview that Europe is already tired of the discussions held each summer about what the situation will be like with gas supplies in the winter. The European Union should not have such concerns. The current Russian-Ukrainian conflict has added to the urgency of creating an Energy Union. Although the situation is unknown for Europe, given the fighting taking place in Eastern Ukraine, it is much more serious than it has ever been before.

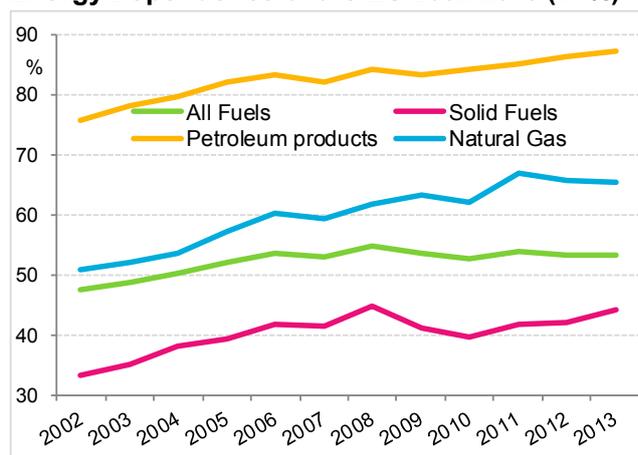
What is behind the term Energy Union? One of the most ambitious projects? The issues related to securing energy and its costs, environmental aspects and reduction of blackouts are related. The aim and vision is to create a union in which member states would mutually recognise that they depend on each other for energy and will show solidarity towards each other in the event of insufficient or a lack of energy supplies.

Another impulse for resolving the energy situation is the fact that the European Union can boast the title of "the biggest energy importer in the world", as according to the most recent data from 2013, the EU was dependent on imports for 53.2% of its energy. Seven EU states (according to Eurostat data from 2013) are also entirely (two of them are almost entirely) dependent on a single supplier of natural gas. They are Finland, Lithuania, Latvia, Estonia and Bulgaria (entirely dependent) and Slovakia and the Czech Republic (almost entirely dependent).

In view of this dependence on imports and since until the year 2030 the EU has an obligation to reduce emissions by at least 40% compared to 1990, the effort to secure safe and sustainable energy at competitive prices for citizens and businesses in the EU is more than understandable.

Therefore, the Energy Union is among the European Commission's most important priorities.

**Energy Dependence of the EU 2002-2013 (in %)**



Source: Eurostat

### Energy dependence of the EU

	2013 (in %)	Δ 2002-2013 in pp		2013 (in %)	Δ 2002-2013 in pp
<b>Malta</b>	104.1	+4.3	<b>Croatia</b>	52.3	-7.4
<b>Luxembourg</b>	96.9	-1.7	<b>Hungary</b>	52.3	-4.5
<b>Cyprus</b>	96.4	-3.7	<b>Finland</b>	48.7	-3.4
<b>Ireland</b>	89.0	+0.1	<b>France</b>	47.9	-3.2
<b>Lithuania</b>	78.3	+36.7	<b>Slovenia</b>	47.0	-3.6
<b>Belgium</b>	77.5	0.0	<b>UK</b>	46.4	+58.7
<b>Italy</b>	76.9	-9.1	<b>Bulgaria</b>	37.8	-7.9
<b>Portugal</b>	73.5	-10.6	<b>Šveden</b>	31.6	-5.6
<b>Špain</b>	70.5	-8.0	<b>ČR</b>	27.9	+1.5
<b>Germany</b>	62.7	+2.6	<b>Netherlands</b>	26.0	-7.4
<b>Austria</b>	62.3	-5.6	<b>Poland</b>	25.8	+15.2
<b>Greece</b>	62.1	-9.4	<b>Romania</b>	18.6	-5.5
<b>Slovakia</b>	59.6	-4.3	<b>Denmark</b>	12.3	+54.1
<b>Latvia</b>	55.9	-2.8	<b>Estonia</b>	11.9	-17.7
<b>EU</b>	<b>53.2</b>	<b>5.7</b>			

Source: Eurostat

## The Five Dimensions of the Energy Union

The Energy Union strategy of 25 February 2015 consisted of **five basic** mutually strengthening and interconnected **dimensions**, via which the EU wants to achieve its energy goals.

They are:

- *Energy security, solidarity and trust;*
- *A fully integrated European energy market;*
- *Energy efficiency contributing to easing of demand;*
- *De-carbonisation of the economy;*
- *Research, innovation and competitiveness.*

### 1. Energy security, solidarity and trust

The European Union remains vulnerable and must tackle the issue of instability of external energy supplies. The main factors for ensuring safe and stable energy supplies include completion of the single internal market with energy and more efficient consumption.

These are the joint approaches by member states to energy, which can strengthen the EU in the event of fluctuations or outages in energy supplies. A fundamental challenge and necessary step for ensuring secure energy supplies is diversification of sources, suppliers and routes.

According to the Commission, it is necessary to intensify work on construction of a southern corridor, so that gas can flow to the EU from countries in Central Asia.

Security of energy supplies is already now being boosted by establishing nodes for liquefied natural gas (LNG) in Northern Europe. The same path should be taken by Central and Eastern Europe.

Increasing trade with LNG would also help harmonise the prices of natural gas. However, LNG prices remain higher than the prices for gas transported via pipelines, due to high processing and transport costs.

Therefore, the Commission is preparing a targeted strategy for solving these problems and will also focus on eliminating obstacles to importation of LNG from the USA.

An important part of ensuring energy security is harmonisation of agreements on purchasing of energy from non-EU countries with EU regulations.

Currently, the compliance of such arrangements is checked only after an agreement has been entered into between a member state and a non-EU country.

Therefore, the Commission should be informed about arrangement of agreements already at the start.

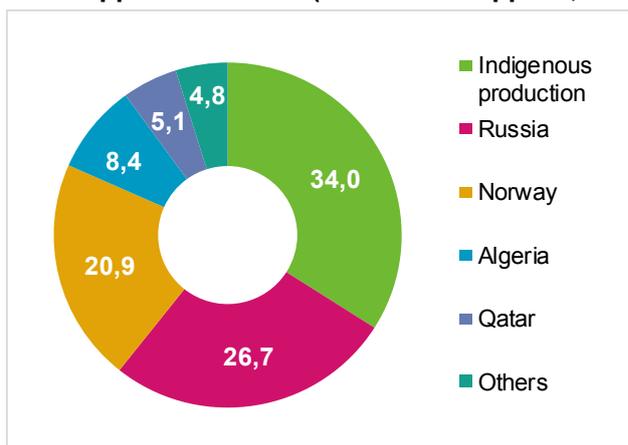
### 2. A fully integrated European energy market

The systems for carrying electricity and natural gas in the EU are not currently sufficient for the internal energy market to function as it should. However, work on infrastructure projects has sped up in recent years. In 2014, the EU's energy security strategy involved the selection of 33 projects with major importance for increasing the security of supplies and linking energy markets.

The EU has set a minimum goal for such linking of 10% of installed capacity for production of electricity. This goal should be achieved by 2020, and in 2016 the Commission wants to issue a report regarding the measures needed for achievement of a 15% goal by 2030.

The European Commission insist on full implementation of the third energy package. It mainly wants to achieve separation and independence of regulatory bodies. The modernisation and greater integration will apply to the European Network of Transmission System Operators for electricity and gas (ENTSO-E/G). New regional operating centres will be established.

Gas Supplies in the EU (% of Total Supplies, 2013)



Source: Eurogas

In order to create a single energy market, it is necessary to appoint a single regulator. It will be the Agency for the Cooperation of Energy Regulators (ACER), which already functions, but whose staff are currently limited to issuing recommendations and opinions. Its authority and independence will be boosted.

### 3. Energy efficiency contributing to easing of demand

One of the ways to reduce demands for energy is to increase energy efficiency. In 2014, the EU set an ambitious goal, which was to increase energy efficiency by 27% by 2030. Until 2020, this goal will be re-examined, because the Commission is considering increasing the target value to 30%. The EU will have a major opportunity to increase energy efficiency in construction. The largest source of demand for energy in Europe is heating and cooling, and most imported natural gas is used for these purposes. Another sector in which the EU wants to achieve higher energy efficiency is transport, which represents more than 30% of the final consumption of energy in Europe.

In relation to it, it is necessary to focus on creating stricter standards for CO<sub>2</sub> emissions.

The European Union also wants to focus on shattering dependence on petroleum and on de-carbonisation of transport (mainly road traffic and railways).

### 4. De-carbonisation of the economy

De-carbonisation of the economy is an important dimension related to the already previously defined efforts to ensure a more climate-friendly and environmentally friendly approach to energy policy.

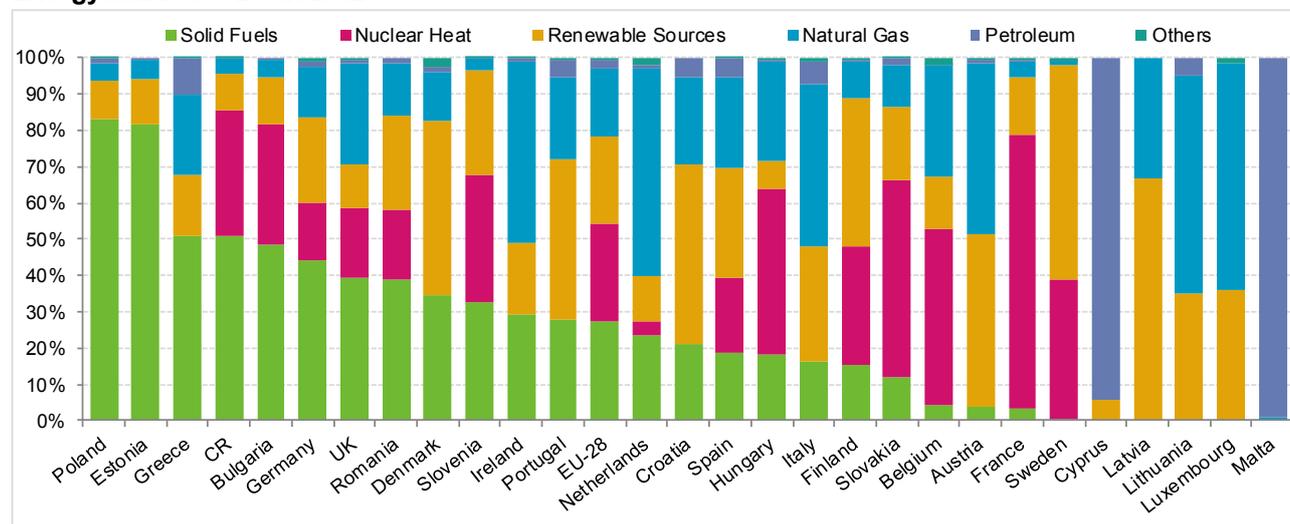
In relation to it as well, we can sense a certain effort at comprehensiveness, since individual aspects of the Energy Union will not appear separately, but will mutually determine the future direction and setting of energy policy.

The European Commission has focused on climate already during the proposed energy measures for 2020 as well as those that should be achieved by 2030, when competitiveness, a secure and low-carbon EU economy and reduction of greenhouse gases by 40% compared to their level in 1990 will be required, along with the binding objective of at least 27% of the EU's energy mix consisting of renewable resources.

In order to be able to expand production of energy from renewable resources, it is necessary to implement existing legislation and new rules, which will enable the implementation of new technology and intelligent networks.

In the upcoming period, the Commission is expected to present a new directive related to renewable energy resources.

#### Energy Mix in the EU in 2012



Source: Eurostat

### 5. Research, innovation and competitiveness

The final, fifth pillar is based on research, innovation and competitiveness. If the EU wants to succeed with the Energy Union, it will need to ensure that it does not neglect these important aspects, which are necessary for further development and can help ensure a leading position for the EU in the area of intelligent networks and technology for intelligent households, clean transport as well as clean fossil fuels.

All of this will be fundamental for the transformation of the Energy Union to a driving force during the creation of growth, jobs and strengthening of competitiveness.

Research is not currently fully coordinated. The programmes of the EU and member states need to be combined effectively, so that they are directed towards achieving common goals.

The new European approach to research and investments in energy should also speed up the transformation of the energy system. This should be based on the Horizon 2020 programme and should involve all member states, involved entities and the European Commission.

Besides these joint priorities, there are also other research priorities related to capturing and storage of CO<sub>2</sub> and its further use during energy production and in industrial sectors, which will have decisive importance for achieving the European Union's climate goals by 2050 in a cost-effective manner.

Moreover, nearly 30% of the EU's generated electricity comes from nuclear power plants.

Therefore, it is necessary for the European Union to ensure that the member states will use the highest standards of safety, protection, waste management and non-proliferation of nuclear weapons.



## Requirement for 10% Network Connection

The EU currently faces a very important task. It must figure out how to make the energy market more effective, ensure quality electricity supplies and reduce energy dependence.

After all, the European Union suffers from ageing energy infrastructure and high prices of energy for end consumers, regardless of whether the end consumer is an individual or a business, and this situation is reducing the competitiveness of the EU's economy in the world.

Last, but not least, sustainable development and de-carbonisation should be focused on.

The tool and one of the steps for the accepted Energy Union is expected to be a defined goal of achieving connection of 10% of the energy systems in the EU by 2020.

However, currently based on a request issued by the European Council last spring, the European Commission has proposed increasing this 10% target to 15% by 2030, having taken into consideration costs and the potential for trade exchanges in respective regions.

What all should the mentioned connection of European energy networks help?

Achieving the goal of having at least 10% of all installed electric power generating capacity connected in all member states will be significant for energy security, greater competition within the internal energy market and more affordable prices.

In view of the already set targets related to carbon footprint reduction, to which the EU has committed itself, the connection of energy infrastructure should also help with environmental protection.

### Benefits of energy network connection

The European Commission, in its statement to the European Parliament and Council, specifies a number of benefits that the connection of systems will bring about.

The connection of electric power networks will improve the security of energy supplies in Europe, which will result in greater reliability as well as increase the quality of services, also due to the reduction in the number of interruptions of energy supplies and production losses in trade and industry.

Besides ensuring supplies, the connection of electricity networks should help reduce Europe's high dependence on fuel imports. The connected networks will result in greater competition and effectiveness, and besides yielding better and more cost-effective use of resources will also result in more affordable prices on the internal market.

The better connections will also bring about greater effectiveness, reduction of costs and investments into production and storage capacities needed during peak energy consumption periods, since it would not be necessary to use individual countries' power plants at the same time.

The fact that it should not be necessary to build more power plants will also result in economic savings.

Declining input and potentially also lower investments into production together with saving of costs for fuel may be reflected in competitive prices of electricity for end consumers, who according to the study "Benefits of an integrated European energy market" (Booz & Co.) could save 12-40 billion euros by 2030.

The situation related to connection of electric power systems was not very satisfactory in 2014. The goal of having 10% of their electricity networks connected has not yet been achieved by 12 EU member states.

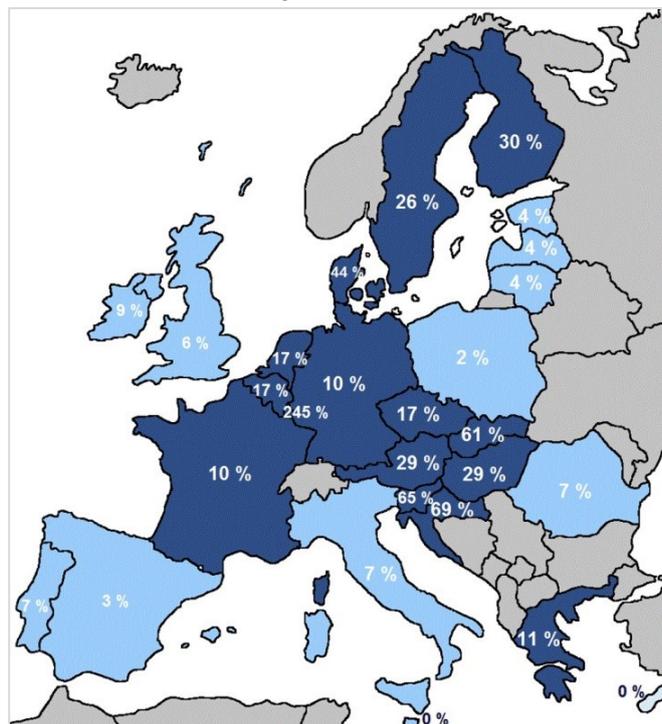
These states include: Ireland, Italy, Romania, Portugal, the UK, Spain, Poland, Cyprus, Malta, Estonia, Lithuania and Latvia. Although the Baltic States are not yet synchronised with the European network, they are already fully integrated mutually. The status of connection of these 3 states to the European market corresponds to the situation in the spring of 2014 (4%). With the completion of the Estlink2 project, this connection is expected to grow to approximately 10%.

Other states are also carrying out projects of shared interest. The first such Union list was adopted in 2013 with 248 projects, just under half of which related to electricity, of which 52 related to connection of electricity networks, and an additional project should enable connection in the future.

The list of projects is not final, and every two years it is updated. The European Commission should approve the second list this autumn. The existing projects are in various phases of development, from the initial phases to construction. From the first list, approximately  $\frac{3}{4}$  of the projects should be completed by 2020.

If the particular projects are realised, the EU should achieve its goal of having 10% of the electricity networks in member states connected. However, Spain and Cyprus could experience certain problems with fulfilling the goal, although thanks to better coordination and the use of available resources they could reach the 10% mark in 2020.

**Connection of Electricity Networks in the EU in 2014**



Source: ENTSO-E, Scenario Outlook and Adequacy Forecast