

# The main challenges to the EU's security of supply

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The European Union (EU) is one of the biggest energy consumers in the world and imports more than half of all the energy it consumes. The EU is heavily reliant on a reduced number of energy suppliers, particularly oil and natural gas, and some countries rely entirely on the Russia Federation for their natural gas. The EU needs to continue developing short-term and long-term strategies to improve European energy security and to deal with the main challenges to security of supply.

## The European Union's energy dependence

World demand for energy has grown in the last years and the trend is to continue, including in European countries. However, EU energy production of fossil fuels continues to decrease year by year, especially gas production, which, in 2014, decreased of 11.2% from 2013 levels. The low rate of energy production resulted in the increase of energy imports, especially natural gas. Consequently, the EU's energy dependence, continued to increase, although not significantly, from 52.2% in 2005 to 53.4% in 2014, with discrepancies in the level of dependence between European countries. For example, Belgium, Ireland, Cyprus, Luxembourg and Malta are some of the EU countries with the highest share of energy dependence, between 80% and 97% in 2014. In contrast, Czech Republic, Estonia, Romania and Iceland have the lowest share of energy dependence, all below 20% ([Eurostat, 2016](#)).

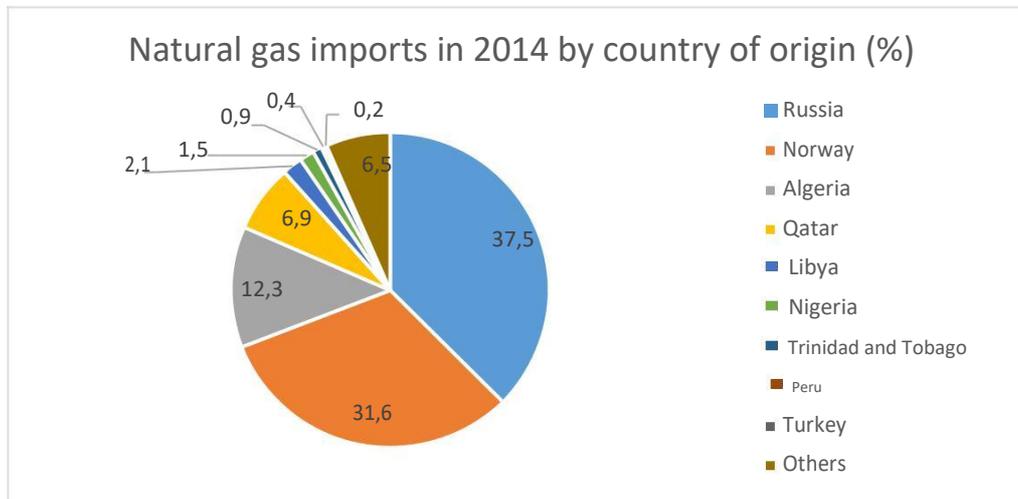
Energy dependence is the first big challenge to the EU's energy security. One of the strategies of the EU to address the problem and reduce its dependence on fossil fuels is the increase of endogenous production, namely renewable energy. The European Union has developed policies to increase the production of renewable energy resources (increase of 1.5% in 2014), especially the production of hydro-energy, and to achieve a more sustainable energy policy ([Eurostat, 2016](#)).

## Challenges to the EU's security of supply

The limited number of natural gas supplier countries has been a central challenge to the EU's security of supply (Cf. **Figure 1**). In 2014, 69.1% of natural gas imports came only from Russia and Norway, and 43.5% of crude oil imports. In 2014, Russia was the main origin for solid fuels (29%), crude oil (30.4%) and natural gas imports (37.5%) and Norway has remained the second largest supplier of EU imports of crude oil and natural gas ([Eurostat, 2016](#)). In order to minimize the risk, the EU is trying to diversify the suppliers and develop new partnerships, as in the case of crude oil imports from Nigeria, Kazakhstan, Azerbaijan and Iraq, or natural gas imports from Qatar and Libya. The dependence on Russian natural gas affects the European countries in different ways. Bulgaria, Slovakia, Estonia, Latvia, Hungary and Lithuania are extremely reliant

on Russian natural gas (between 90% to 100% of natural gas imports are from Russia). On the other hand, countries such as Portugal, Spain, Denmark or Ireland are totally free from Russian exports.

Figure 1



Source: [Eurostat, 2016](#).

Besides the problem of the limited number of suppliers, the EU faces another challenge: natural gas supplies from Russia often go through a reduced number of transit countries such as Ukraine and Belarus. This dependence leaves European countries vulnerable to supply disruptions, whether caused by technical problems in infrastructures, or political and commercial disputes. The EU has already suffered from energy crises between Russia and Ukraine (2006, 2009 and 2014). Supply disruptions represent a serious risk to European energy security. To overcome the challenges associated with the risks of disruption, the EU has developed successive strategies, such as the Early Warning Mechanism and the reform of its energy security strategy in 2014.

### Conclusion

One of the long-term measures to reduce energy dependence on fossil fuels is the increase of production of renewable energy resources and the promotion of energy efficiency and sustainability as important priorities of energy policy. The EU has been at the forefront of international efforts to mitigate climate change and reduce dependence on fossil fuels. However, due to the importance of energy security for the future of the European Union, there is a need for a realistic approach to the question. Despite the increase of renewable energy production and other developments in this area, for now and in a near future, fossil fuels will continue to have play a major part in energy consumption. That is why, besides the long-term policies of energy sustainability, the EU needs to develop short-term policies on fossil fuels to ensure its security of supply.

Despite the effort to diversify the suppliers, the EU continues to depend too much on a limited number of suppliers, especially on Russian energy resources, which can be a serious challenge to European security of supply, as has been shown before by supply

disruptions in Ukraine. Even though the EU's energy imports from Russia have decreased, they are still extremely significant. The truth is that even with the strategies that have been developed, the EU is still vulnerable to an disruption, which means that the EU must continue developing strategies to improve its security of supply. It is crucial to coordinate an efficient European energy policy, in order to find a way to reduce the heavy dependence of some countries on Russian gas.

The European Union is the 3<sup>rd</sup> largest energy consumer market and it is an extremely important market for Russia, whose economy is heavily reliant on energy exports. Energy exports to the EU are necessary to keep the economy growing, so there is a mutual dependence that demands reciprocal understanding and cooperation and that can be used by the EU to obtain some advantages in negotiations about the issue. The EU and Russia have a strong trade relationship that goes beyond energy and it is indispensable to maintain a close dialogue with Russia.

**“The line between energy security and  
the European Union’s safety is a very tenuous one.”**

To have an efficient energy policy, there is an essential element: knowledge. It is absolutely necessary to invest in research in this area, in order to explore new perspectives and increase knowledge about the issue. Research can lead to the development of better tools to prevent energy crisis and to build future scenarios. Also, it will be useful to elaborate new strategies that, coupled with the improvement of new technologies, will improve European energy security. A common and structured energy policy is a crucial priority for the future of the European project, since the line between energy security and the European Union's safety is a very tenuous one.

**Recommendations:**

In order to deal with these challenges, some of the EU's strategies can be:

- Reinforce the agreements with main suppliers to stimulate energy cooperation;
- Diversify energy suppliers and routes;
- Increase storage capacity;
- Improve energy infrastructures and interconnections;
- Continue developments to consolidate the internal energy market for electricity and gas;
- Increase the production of renewable energy to diversity the energy mix;
- Agree on common goals and speak with one voice about external energy policy.