

Re-Thinking Europe's Energy Security



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Dr. Juergen Landgrebe, Ben McWilliams

With the outbreak of the Russian invasion of Ukraine, the energy security in Europe is forced to reform its system in order to dissolve its dependency on Russia and accelerate the transition towards renewable energy. With Dr. Juergen Landgrebe and Ben McWilliams, we explored the status quo as well as the measures that could be taken both on the supply and demand side.

Everyday, Europe pays around 800 million euros to Russia for fossil fuels. This is split between coal, oil and natural gas - in the order of how easy it would be to switch from Russia's supplies. While coal can be purchased elsewhere, Ben McWilliams, research analyst of climate and energy policy at Bruegel, points out that oil and gas are where the difficulties begin. 25-30% of crude oil in Europe is imported from Russia, particularly by countries towards the east of Europe, which then is produced into gasoline, diesel, fuel oil, and kerosene at refineries built along the pipelines. Europe's purchase from Russia amounts to around 3.5% in the global oil market, which is around 20-30% of European supply that needs to be made up for by cutting Russian supply. On the supply side sits OPEC, which follows the post-COVID plan to increase production. Immediate transition is particularly difficult for areas that draw the supplies from the Northern Druzhba pipeline

which goes through Poland, Germany and further south, whereas cities with ports have it much easier to replace supply sources.

Similarly, infrastructure for Russian gas import has been long established, bringing in around 40% of natural gas in Europe. The most challenging time for the EU would be the winter of 2022/23 due to the little time available to roll out necessary measures to diversify gas supply and develop alternatives. The import of LNG, especially from the US, is increasing drastically as an alternative, however there are economic and coordination problems that need to be addressed, such as infrastructure and storage. For both oil and gas, Mr. McWilliams pointed out that it is essential to reduce demand, particularly for lowering prices and to minimize the damage on the global economy.

Dr. Juergen Landgrebe, department head of UBA / German Environment Agency, noted that reducing demand on Russian oil and gas is also a booster of all previous efforts towards energy efficiency and sufficiency, and to increase the share of renewable energy. He calculates that the potential of energy efficiency in Germany can reduce more than 50% of energy demand. For example, slowing down the speed of transport to 100km/h could save almost 4% of fuel consumed in

the transport sector. Demand reduction applies to both households and industry. Chemical industry, which resides at the top of the delivery chain, is very dependent on the use of natural gas, yet they also have reduction potential such as in thermal insulation of their production lines. Highest potential for gas consumption reduction is in the household sector, and in order to realize its full potential, investments need to be made in solutions such as promoting insulation. Nuclear power cannot be considered a long term sustainable option; there are no solutions yet for nuclear waste, there are high risks in operation as well as security issues as we have recently seen in Ukraine.

How quickly could Europe and Germany detach itself from Russian supplies? While both experts agree that immediate transition to cutting Russian gas is not possible for Germany due to the lack of infrastructure, there seems to be potential for a significant acceleration in the development of sustainable and resilient energy supply in the future, with a good mix of European cooperation with countries moving in the direction towards renewable energy.



Relevant websites:

<https://www.bruegel.org/>

<https://www.umweltbundesamt.de/en>