



10/31/2022

European Energy Crisis

A Search for Solutions



Algeria is preparing to provide more Gas for Europe this Winter [Paudal.com]

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European Energy Crisis - A Search for Solutions



France has many Nuclear Plants and is therefore less vulnerable to a Russian Gas shutdown.
Photo Credit: Climate Scorecard

Russia has responded to Europe's condemnation of its invasion of Ukraine by cutting the amount of gas that flows into Europe. Officially, Russia has said the reason for the gas cut-off is a leak, however, it is largely expected that the real reason is to put pressure on and divide the EU over the conflict. In the last year, Russian gas shipments to Europe have decreased by 89%. This sharp decrease in gas shipments is especially concerning considering that 40% of gas shipments to Europe used to come from Russia.¹ The decrease in Russian gas has caused energy prices in Europe to skyrocket. And it is not just gas prices that are rising; electricity prices have also risen. Experts are predicting that Europe will be totally without Russian gas this winter. If this is the case, it will be

¹ <https://www.pbs.org/newshour/world/europe-is-facing-an-energy-crisis-as-russia-cuts-gas-heres-why>

the hardest winter Europe has faced in decades. Europe will likely deal with shortage by power rationing and blackouts, as well as heavy inflation from the high price of energy.²

Despite the short-term worries, Europe's gas crisis has exposed a much larger long-term problem that Europe is dealing with, which is its overreliance on Russian energy. Europe's reliance on Russia for energy is problematic because the entities are often at odds with each other, and Russia can use Europe's reliance on its energy as leverage. However, this current crisis has shown Europe that long-term they need to look to other sources of energy which are not from Russia. Many European countries are now making plans to change the way they get energy in the future.



Solar Power in Europe is more reliable in a place like Spain Image Credit: Solarpanelindustry.com

Solar Power

During the early days of the energy crisis, Europe began to rely more on solar power than they ever have in the past. In fact, over the summer Europe generated 99.4 terawatt hours of solar electricity, which is a record. This move kept Europe from having to buy 20 billion cubic meters of fossil gas and saved them nearly 30 billion dollars.³ This is a huge step for Europe, especially

² <https://www.pbs.org/newshour/world/europe-is-facing-an-energy-crisis-as-russia-cuts-gas-heres-why>

³ <https://www.weforum.org/agenda/2022/10/solar-power-europe-energy-transition/>

considering that 18 European countries set their own records for the amount of solar electricity they generated.⁴ This is important because European countries using more solar power from their own countries makes them less reliant on Russia for energy. With this said, relying on solar power will not work as a stand-alone solution. As of right now, many European countries have barriers to building more solar plants.⁵ And even if there were more solar plants most of Europe is not sunny in the winter which makes it hard to solely rely on solar power. Despite this, it is likely that Europe will invest more money and time into solar energy as it is can be produced in Europe which will lessen their need for Russian energy.

Nuclear Energy

Nuclear energy is also an energy source that may be more used in Europe to avoid reliance on Russian energy. Already in 2019, around 26% of European electricity came from nuclear energy. France by far is the European country most reliant on nuclear energy with 70% of their electricity coming from nuclear energy.⁶ Nuclear energy is a promising solution to the reliance on Russian energy because there are many nuclear power plants in Europe, and they could build more. However, there are many critiques of nuclear power in Europe. Austria has threatened to bring legal action to the European Union if they choose to include nuclear energy in their plan to meet their sustainable energy goals. Austria has brought up concerns over nuclear energy being slow to produce as well as there being no good way of disposing of nuclear waste.⁷ Austria is just one example, but there are many other countries and organizations that disapprove of using nuclear energy as a long-term energy solution in Europe. And countries that do support nuclear energy like France have issues with nuclear energy as well. Although France has many nuclear reactors, many of them are not working due to a variety of technical, maintenance, and corrosion issues. In fact,

⁴ <https://www.weforum.org/agenda/2022/10/solar-power-europe-energy-transition/>

⁵ <https://www.weforum.org/agenda/2022/10/solar-power-europe-energy-transition/>

⁶ <https://www.ans.org/news/article-4041/latest-stats-on-nuclear-energy-in-europe-released-by-nucleareurope/>

⁷ <https://www.euronews.com/my-europe/2022/10/10/austria-launches-legal-challenge-over-eus-greenwashing-of-nuclear-and-gas>

their current power output is at a 30-year low.⁸ Even if European countries come to support nuclear energy more widely, it will do them no good if the plants are not reliable. Despite the concerns and issues with nuclear power, investing in it will make Europe less reliant on Russian energy, so it is likely that at least some European countries will turn to it more in the future.



Wind farm in the ocean, near Kent, England. Photo Credit – The Guardian

Wind Energy

Historically, wind energy has been one of Europe's most common green energy sources. In 2019 wind power made up more than a third of Europe's total electricity generated from renewable sources.⁹ And considering Europe's current energy crisis their reliance on wind energy will only grow. Investment in wind energy is a smart move for European countries because many of them have ocean borders which are good for wind farms. This has not gone unnoticed by Europe as today

⁸ <https://www.cnbc.com/2022/10/05/frances-nuclear-heavy-energy-strategy-faces-big-problems-this-winter.html>

⁹ [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Renewable energy statistics#Wind and water provide most renewable electricity.3B solar is the fastest-growing energy source](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Renewable_energy_statistics#Wind_and_water_provide_most_renewable_electricity.3B_solar_is_the_fastest-growing_energy_source)

there are over 100 wind farms off the coast of 13 European countries.¹⁰ This is good for Europe because they control the wind farms that provide them energy, however, there needs to be more investment in wind energy if it is to make a dent in Europe's reliance on Russian energy. In some places, there are plans to do this. For example, there are plans to develop Dogger Farm which sits on the coast of the UK and is run by a British, an Italian, and a Norwegian energy company into the largest wind farm in the world.¹¹ Investments like this are important in increasing the output capabilities of European wind farms and in the long-term make Europe less reliant on Russian energy.



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Algerian Gas

Another solution to stop Europe's reliance on Russian gas is turning to gas from other sources such as Algeria or Qatar. Before Russia's cut off its gas supply to Europe, Algeria was already a top supplier of gas to Europe. Between 2020 and 2021 Algeria supplied around 10% of

¹⁰ <https://www.siliconvalley.com/2022/10/10/floating-wind-turbines-off-california-coast-soon-could-boost-power-grid/>

¹¹ <https://electrek.co/2022/10/07/worlds-largest-offshore-wind-farm-3/>

gas to Europe making it their third largest supplier.¹² This partnership has already seen an increase with Italy and Algeria making a deal in July to pump billions of cubic meters more gas into Italy.¹³ Algeria seems happy to supply more gas to other parts of Europe, however, there is doubt over their reliability in the short-term. There is also concern about getting into a long-term gas reliance with Algeria, as Europe is seeing first-hand the risks of reliance on outside countries for energy. However, as gas is still much more readily available than other green energy alternatives, Europe may have no choice but to rely more heavily on Algeria for gas.

Conclusion

The current gas crisis in Europe has shown Europe that they need to come up with long-term innovations to decrease their reliance on Russian energy. Unfortunately for Europe, there is not one clear energy solution that they should develop. All the solutions discussed above have both pros and cons. Because of this Europe needs to research and invest in the development of all the listed energy solutions and more. This will be a slow process for Europe, however, in the long-term it will give Europe more control of its energy because most of the energy solutions would be generated in Europe. Finally, this diversification of energy sources would also have the secondary benefit of diversifying energy sources, so if in the future one becomes unreliable, Europe will be able to recover by relying more heavily on the other diverse sources.

Sources

<https://www.pbs.org/newshour/world/europe-is-facing-an-energy-crisis-as-russia-cuts-gas-heres-why>

<https://www.weforum.org/agenda/2022/10/solar-power-europe-energy-transition/>

<https://www.ans.org/news/article-4041/latest-stats-on-nuclear-energy-in-europe-released-by-nucleareurope/>

<https://www.euronews.com/my-europe/2022/10/10/austria-launches-legal-challenge-over-eus-greenwashing-of-nuclear-and-gas>

¹² <https://euobserver.com/world/156263>

¹³ <https://www.barrons.com/news/eu-energy-chief-praises-algeria-partnership-01665501908>

<https://www.cnbc.com/2022/10/05/frances-nuclear-heavy-energy-strategy-faces-big-problems-this-winter.html>

[https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Renewable energy statistics#Wind and water provide most renewable electricity.3B solar is the fastest-growing energy source](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Renewable_energy_statistics#Wind_and_water_provide_most_renewable_electricity.3B_solar_is_the_fastest-growing_energy_source)

<https://www.siliconvalley.com/2022/10/10/floating-wind-turbines-off-california-coast-soon-could-boost-power-grid/>

<https://electrek.co/2022/10/07/worlds-largest-offshore-wind-farm-3/>

<https://euobserver.com/world/156263>

<https://www.barrons.com/news/eu-energy-chief-praises-algeria-partnership-01665501908>

