POLITICAL INTELLIGENCE

Flipping the switch: the EU's response to the energy crisis

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Introduction

Europe appears to have avoided an energy market meltdown this winter. The European Union was plunged into an energy crisis in 2022 after Russia's invasion of Ukraine and reduction in gas exports exacerbated price pressures from the post-pandemic recovery in demand. As with the European debt crisis and Covid, the soaring cost of natural gas has tested the EU's ability to coordinate emergency measures at pace and forced its institutions to make energy a focal point of their policymaking efforts. While gas prices remain uncomfortably high, Europe has managed to stave off energy shortages and blackouts with help from a range of policy responses including rapidly sourcing alternatives to Russian gas, reducing overall demand, turbo-charging the transition to renewable power, and rethinking the structure of the electricity market.

But Europe is not out of the woods. The region has been fortunate to enjoy a warmer-than-expected winter season, allowing natural gas stores to remain higher than usual. But some analysts fear that a cold snap or an increase in demand for natural gas from China as it emerges from its no-Covid policy could tighten supplies and drive up prices. The International Energy Agency and European Commission President Ursula von der Leyen warned in December that the 27-nation bloc could still face gas shortages in 2023 if Europe does not secure further LNG supplies from international producers, including through joint purchasing agreements, and scaling up renewable energy output. "We have come quite a long way. But we know that we are not done with our work until families and businesses in the European Union have access to energy that is affordable, that is secure and that is clean," she said.

With the first anniversary of Russia's invasion approaching, this Dods Political Intelligence report examines the EU's response to the energy crisis, including emergency preparations ahead of the winter and key legislative initiatives such as the REPowerEU plan. The report also explores the mid- and long-term implications of the energy policy shifts and accelerated implementation of the EU's Green Deal net zero strategy.

Preparations ahead of the winter

REPowerEU and Security of Gas Supply

The European Union's policymakers were barely out of Covid emergency mode before the bloc was plunged into an unprecedented energy crisis. Energy prices began to rise sharply in 2021 as the region's economies emerged from their Covid hibernation and stronger demand combined with relatively low levels of stored gas heading into the winter season. Russia, which was responsible for supplying about half of Europe's natural gas, exacerbated the situation by reducing its gas exports to Europe in the latter period of the year. The subsequent Russian invasion of Ukraine drove gas prices to fresh highs, fueling inflation, driving up interest rates, and raising concerns of a protracted economic slowdown and talk of power blackouts across Europe. EU policymakers were rapidly under pressure to find new ways to reduce European demand for energy and find alternatives to Russian gas for power generation, household heating, and industrial processes.

The EU's answer was to do both. Galvanised by the invasion of Ukraine, a country that EU nations had sought to build closer ties with in recent years, the European Commission put forward the the REPowerEU and "Save Gas for a Safe Winter" plans in May 2022 and July respectively. The REPowerEU strategy aimed to reduce Europe's dependence on Russian fossil fuels through energy savings, diversifying supplies, and accelerating the bloc's planed transition to renewable energy (details below). At the same time the plan sought to replicate joint purchasing of Covid vaccines

for energy and seek new gas supplies from the US, while also ramping up renewable power generation and development. European data suggest the REPowerEU strategy has helped reduce Russia's share of European gas market from 50 percent the previous year to around 17 percent in August 2022.

The Save Gas for a Safe Winter plan sought to shield Europe from Russian gas supply cuts and included a range of emergency measures to help reduce electricity prices which apply until the end of 2023. In late September 2022, EU energy ministers agreed a mandatory 5 percent cut in electricity usage at peak times and voluntary 10 percent gross electricity consumption reduction. They also agreed to cap market revenues at 180 euros/MWh of electricity generators, including intermediaries, that use so-called inframarginal technologies to produce electricity, such as renewables, nuclear and lignite – which would last until mid-2023. Member states were given the freedom to decide how to collect and redirect these surplus revenues made by these operators that have enjoyed a windfall from the high energy prices. The ministers also agreed that member states could level a so-called solidarity levy, or windfall tax, on the profits of crude, natural gas, coal, and refinery companies, and use the proceeds to provide support to households and companies hit by the high energy costs.

The Council of the EU has also agreed on a range of measures to reduce demand for gas as well as the Gas Storage proposal in June that required EU countries to fill their storage facilities to at least 80 percent capacity by November. In July, member states agreed on a voluntary gas demand cut by 15 percent between 1 August 2022 and 31 March 2023 as well as on an option for the Council to declare a 'Union Alert' on supply and impose a mandatory gas demand reduction on all EU countries.

In October, Commission President Ursula von der Leyen presented a roadmap outlining planned actions on various fronts of energy policy, including joint gas purchases and rapid renewables deployment as well as strengthening solidarity and improving the functioning of energy markets. On 20 October, the European Council endorsed this agenda.

The Commission followed up by presenting new proposals for extraordinary and temporary measures. The first was a Council regulation on acceleration of renewables permitting, while the second aimed to set up the so-called market correction mechanism, also known as the gas price cap proposal. Views on the latter diverged and many member states linked the adoption of the proposals on gas purchasing and renewables permitting with the market correction mechanism.

The Commission's view was that the market correction mechanism should address excessively high gas prices which are not justified by market fundamentals. It is not meant to structurally lower gas prices to pre-war levels, as that can only be achieved by lowering gas demand and/or increasing the share of renewables that can substitute the gas supplies. Structural parameters target sustained price increases that do not reflect global market fundamentals. This is essential to not discourage LNG gas supplies from the global market to come in.

Member states have agreed to coordinate joint purchases of gas. A process will be launched to get a part of the EU energy demand through the Energy Platform, which was set up in April 2022 to play a key role in pooling demand, coordinating infrastructure use, negotiate with international partners, and prepare for joint gas and hydrogen purchases. Member states will also facilitate the process on the market. The aim is to secure LNG volumes for the year ahead to add around 15 percent to gas storages.

At a Transport,Telecommunications and Energy Council (TTE) on 19 December, an agreement was reached on joint purchasing and the market correction mechanism (MCM). The market correction mechanism will be automatically activated if the month-ahead price on the Title Transfer Facility (TTF) exceeds €180/MWh for three working days, and the month-ahead TTF price is €35 higher than a reference price for LNG on global markets for the same three working days.

The mechanism will apply as of 15 February 2023. The Agency for the Cooperation of Energy Regulators (ACER), which helps ensure the single European market for gas and electricity functions properly, will be responsible for monitoring the markets. If it observes that a market correction event has occurred, it will publish a 'market correction notice' on its website. The regulation includes a suspension mechanism if risks to security of energy supply, financial stability, intra-EU flows of gas, or risks of increased gas demand are identified.

While the mechanism is active, transactions concerning the natural gas futures that are within the scope of the MCM above a so-called 'dynamic bidding limit' will not be allowed to take place. The Commission plans to carry out a review of the regulation by 1 November this year which will inform a decision on whether to extend its validity.

In partnership with the Paris-based European Securities and Markets Authority (ESMA), the Commission plans to develop circuit breakers to avoid excessive volatility and utility stress and improve how they support each other in case of a supply disruption. They also have solutions for security emergencies. In these situations, member states can rely on clear and easy rules to protect consumers. They are aimed at households and apply to gas power plants. ACER also plans to develop a new energy benchmark that will be complementary, to be ready by the end of March. It aims to be more transparent and representative of the current situation.

In practice, the recent reality on the gas market has made both the gas price cap and the new energy benchmark look redundant. In January, due in part to the strong performance of the wind power sector and a drop in overall demand, the TTF has not exceeded 75 € /MWh, well below the 180€/MWh limit set by the gas price cap and at similar levels to prices in late 2021.

Accelerating deployment of renewables

The disruption in supply of natural gas from Russia has lit a fire under the EU's efforts to encourage growth in the use of renewable energy in power generation, industry, buildings, and transport. As part of REPowerEU and a revision of the Renewable Energy Directive (RED), the Commission has set out plans to increase the headline 2030 target for renewable energy to 45 percent of the total mix from 40 percent. That increased ambition will create the framework for other initiatives, including:

- A dedicated EU Solar Strategy to double solar photovoltaic capacity by 2025 and install 600GW by 2030.
- A Solar Rooftop Initiative with a phased-in legal obligation to install solar panels on new public and commercial buildings and new residential buildings.
- Doubling of the rate of deployment of heat pumps as well as measures to integrate geothermal and solar thermal energy in modernised district and communal heating systems.

- A Commission Recommendation to tackle slow and complex permitting for major renewable projects as well as a targeted amendment to the RED to recognise renewable energy as an overriding public interest. Dedicated 'go-to' areas for renewables should be put in place by member states with shortened and simplified permitting processes in areas with lower environmental risks.

- Setting a target of 10 million tonnes of domestic renewable hydrogen production and 10 million tonnes of imports by 2030 to replace natural gas, coal, and oil in hard-to-decarbonise industries and transport sectors. To accelerate the hydrogen market, increased sub-targets for specific sectors would need to be agreed by the co-legislators. The Commission is also publishing two Delegated Acts on the definition and production of renewable hydrogen to ensure that production leads to net decarbonisation.

- A Biomethane Action Plan sets out tools including a new biomethane industrial partnership and financial incentives to increase production to 35bcm by 2030, including through the Common Agricultural Policy (CAP).

On 19 December, EU energy ministers agreed on the content of a Council regulation laying down a temporary framework to accelerate the permitting and the deployment of renewables projects. It aimed to simplify the rollout of new renewable energy production while the more comprehensive RED is being negotiated. Ministers also added a provision to fast-track and simplify the roll out of grids. The Council regulation is tied to the moment when an agreement on the RED is reached and member states' transposition following that.

The ministers also discussed the progress report on the revision of the gas package, which included a proposal for a directive and a proposal for a regulation on common internal market rules for renewables, natural gases and hydrogen. The proposals seek to facilitate the introduction of renewable and low-carbon gases into the energy system, enabling a shift away from natural gas and to allow for these new gases to contribute to the goal of reaching net zero by 2050. Trilogue negotiations on numerous Commission proposals forming the Fit for 55 package resulted in preliminary agreements on a revision of the Emissions Trading System (including the market stability reserve), the Carbon Border Adjustment Mechanism, the Effort Sharing Regulation, and the Social Climate Fund. An agreement has also been reached on the Batteries Regulation. The agreements will need to be confirmed by European Parliament committees and the plenary as well as the Council before entering into force. Work on the RED, Energy Performance of Buildings directive and the Energy Efficiency Directive proposals will continue under the Swedish presidency. The increased ambition in these sectors could lead to vital savings that can ensure a more secure supply of energy and lower prices for citizens and businesses.

Reform of electricity market

Spikes in EU electricity costs during 2022 raised questions about the structure of the market, in particular the link between electricity prices and the marginal cost of gas. Several countries, including France and Spain, called for market reforms and structural solutions to decouple the gas and electricity markets. Although the Commission initially argued that the market design was functioning properly, von der Leyen conceded in June that the EU's electricity market "doesn't work anymore" and needed to be adapted to the "new realities of dominant renewables," a reform she acknowledged was huge and would take time.

The Commission has since said it will put forward a plan for a targeted redesign of the electricity markets directive by the end of March, 2023. The Commission's key objectives will include taking

into account the higher availability of renewable sources, which will also require further investment in energy grids and energy storage, and improving affordability and implementation time. Christian Zinglersen, the Director of ACER, has said that the overall goal of the long-term market design is to focus on having signals to drive investment at the pace and scale that is needed and to have risk liquidation instruments available. He has supported a partial reform, noting that a comprehensive one would take much longer.

Questions have been raised about how effective the planned market reform could be, given that the previous long-term reform launched in 2019 has yet to be fully implemented at member state level and the current crisis market conditions may not be representative of the long-term functioning of the market. The market design was generally seen to be functioning well before the COVID-19 crisis and the first supply shocks in late 2021. The "Save gas for a safe winter" plan and other emergency measures have also yielded a positive result that makes the reform appear less necessary.

Longer-term impact on EU energy policy

Nuclear energy

There are signs the high energy prices have fueled renewed interest in nuclear power in some member states. After a contentious debate in the governing coalition, Germany postponed turning off its remaining three nuclear power plants until April, but has said it is not planning to continue operating them beyond then. Poland has begun plans to construct a new nuclear power plant of Korean design and possibly a second, US-built one. Discussions about investing in new reactors have also increased in Italy and Romania.

However, several member states have run into problems in their efforts to operate or develop nuclear power plants. The French nuclear fleet has faced delays to return to service following years of poor maintenance. Belgium has switched off one of its remaining aging reactors at Doel. Finland's Olkiluoto plant continues to delay its full entry into operation, as does Slovakia's new Mochovce reactor. Several nuclear plants in Central and Eastern Europe have Russian designs and rely on Russia's Rosatom for supplies of fuel rods. Hungary is continuing construction of Rosatom-designed reactors at Paks despite Austrian legal challenges and political dismay across Europe.

Analysts describe the trends in nuclear energy in Europe as more of a change of tide than a renaissance. New nuclear projects take decades to come to fruition so they will not help resolve the current energy crisis. The lack of new projects in recent years also means the necessary skilled workforce, materials and expertise are in short supply, making investment less cost-effective, especially when compared to renewables that have been rapidly coming down in price. Nevertheless, nuclear energy remains an important asset for generating dependable power to consistently meet demand and the diversification of low-carbon electricity supply for many member states.

Gas pipeline discussions and transition to hydrogen

The energy crisis has also triggered discussions about improving energy connections across the EU to improve member states' ability to manage regional variations in demand and supply. In early 2022, there was talk of construction of the so-called MidCat pipeline between Spain and France, crossing the Pyrenees in Catalonia, to allow member states to connect to the Iberian Peninsula's plentiful LNG terminals. France's reluctance to agree to that project, which Paris

deemed unnecessary, led to discussions on an alternative pipeline through Italy. There is already a gas pipeline connection between France and Spain at Larrau/Biriatou in the Basque Country.

Eventually, an agreement was reached between Spain, France, and Portugal to construct the so-called BarMar pipeline that could also be used at a later stage for transporting green hydrogen, produced using power from renewable sources, between Barcelona and Marseille. However, France has since been reportedly upset by arguments that hydrogen produced with nuclear power cannot be qualified as green hydrogen. Germany has also lost some interest in MidCat since its own LNG terminals entered into operation, the first one being in Wilhelmshaven. Germany is also banking on a partnership with Norway to construct a 750 km hydrogen pipeline between the two countries while also massively ramping-up its national pipeline network.

The European hydrogen market faces a chicken and egg dilemma, with suppliers lamenting insufficient demand whereas consumers complain about a lack of supply. Through the proposed EU Hydrogen Bank, the Commission will attempt to de-risk and boost the market from both supply and demand sides to accelerate the shift away from natural gas and other fossil fuels. However, there have been criticisms and even reports about a lack of unity in the institutions, with support from some high-profile politicians contrasting with technical questions about the practicalities of producing and transporting hydrogen. Hydrogen has also yet to prove its competitiveness against other technologies. Questions also remain about the use of green hydrogen, the definition of which remains controversial, and the fact it creates extra demand for already scarce supplies of renewable or low-carbon energy.

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