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The end of European dependence on Russian fossil fuels

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The Russian war in Ukraine is entering its eighth month. As winter approaches, the question of energy and Europe's dependence on Russian hydrocarbons, which has dominated European debate since the invasion began on 24 February, is turning into a major challenge for the 27 Member States. The latter must strike a delicate balance between reducing consumption, relieving pressure on consumers and making a genuine transition to deal with climate change.

AN UNPRECEDENTED INCREASE IN PRICES

At European level, gas prices increased by 150 % between July 2021 and July 2022. Electricity prices are following the same trend, rising by 281 % in the first quarter of 2022 in comparison with the previous year. Energy is now the main component of the euro zone's inflation rate (9.1%), totalling an annual 38.3%, in August.

While the price increase is affecting all Member States, there are disparities between the 27: in Germany, gas prices increased by an average of 162% in July 2022 compared to the previous year and electricity prices are five times higher than the average of the last five years; in France, gas prices increased by 105% compared to 1 October 2021 and the wholesale price increased from €50/MWh at the beginning of the year to €700/MWh during the summer; in Spain, the gas price increased from €44.43/MWh to €161.98/MWh between August 2021 and August 2022; in Italy, at the end of August it was close to €300/MWh, an increase of almost 1000% compared to 2021.

The causes of this extraordinary price increase are economic, geopolitical and environmental. First, at global level, the post-Covid economic recovery has led to particularly high demand on gas markets, especially in Asia. In Europe, the supply crisis has been aggravated by the Kremlin's instrumentalisation of gas: well before the invasion of Ukraine, Russia had reduced its gas deliveries to Europe and Gazprom-managed storage facilities had not been filled for the winter of 2021/2022. Since the beginning of the Russian aggression, and following European sanctions against Moscow, Russian gas exports are now at their lowest level, representing 9% of European energy imports compared to 40% at the beginning of the year. Of the four pipelines that carry gas to Europe, Yamal-Europe and Nord Stream 1 have both been shut down, the former since May, the latter since 2 September, when Vladimir Putin confirmed that flows would not resume as long as European sanctions remained in place.

This has been compounded by a slowdown in nuclear power generation in France, caused by the shutdown of twenty-six of fifty-six nuclear reactors, due to corrosion problems and a maintenance backlog. The exceptional heat waves that hit Europe this summer had an effect on demand through increased consumption of electricity for air-conditioning, but also on supply, as the drought affected hydroelectric and also nuclear production.

EUROPEAN STRATEGY SINCE 24 FEBRUARY

The energy mix of the Member States is still dominated by fossil fuels: 38% of energy consumption comes from oil, 23% from natural gas and 13% from coal. In 2020, renewable energy accounted for 22.1% of total Member State consumption and nuclear energy for 12.7%. The EU is 58% dependent on imports for its total energy consumption: in 2021, 40% of imported gas came from Russia, which also provided 27% of oil and 45% of coal. Significant disparities exist between Member States, both in terms of energy mix and sources of supply: while Sweden's energy mix is dominated by renewable energy (56% of consumption), in Poland, coal provides 80% of total electricity production.

Drawn up along the lines of the Green Deal for Europe, the European strategy REPowerEU to end dependence on Russian hydrocarbons is structured around three pillars, which have guided European action in recent months: saving energy, both in terms of gas and electricity, speeding up the deployment of renewable energy and diversifying sources of supply. The additional investment needed to meet these targets is estimated at €210bn by 2027.

More specifically, partnership agreements to increase European gas imports have been signed since May with Egypt, Israel and Azerbaijan. The EU has agreed with Norway "*to deepen their partnership in order to increase gas supplies in the short and long term*".

Member States have committed to a 15% reduction in gas consumption by March 2023 (regulation (EU) 2022/1369)[1]. On 27 June, an agreement was reached on filling storage facilities to 80% of their capacity by November 2022 and to 90% in subsequent years. To date, 84.49% of storage facilities in Europe have been filled. Thirteen Member States have already reached the 80% target: Belgium, Croatia, Czech Republic, Denmark, France, Germany, Italy, Netherlands, Poland, Portugal, Slovakia, Spain and Sweden.

Regarding medium and long-term measures, on 14 September the European Parliament approved the proposal to increase the target in the *Renewable Energy Directive* from 40% to 45% by 2030. The Commission also proposes to increase the binding target in the Energy Efficiency Directive to 13%. If this target is accepted, Member States will for the first time be obliged to reduce their energy consumption. The commission is proposing, among other things, to double installed photovoltaic capacity by 2025, speed up the deployment of hydrogen infrastructure, step up the use of biomethane, and ease permit procedures for building clean energy infrastructures.

In addition to these initiatives, Member States have made announcements: Belgium has postponed its nuclear phase-out by ten years to 2035; Germany will keep two nuclear power plants in reserve until spring 2023, after they were due to be shut down at the end of the year. Several LNG terminals are under construction, for example in Germany at Brunsbüttel and Wilhelmshaven and in Greece at Alexandroupolis. Berlin and Madrid also support the construction of the MidCat pipeline through France, which would allow the transport of LNG - the largest number of LNG terminals in the EU are located on the Iberian Peninsula - and natural gas from Algeria to Central Europe.

EUROPEAN GOVERNMENTS FACE PRICE INCREASES

Member States have introduced measures to protect households and businesses from rising prices. The Foundation offers its readers a table of the measures taken and will update it regularly.

In most countries, the spending promised exceeds 1% of GDP: for example, it totals 3.7% in Greece. Much of this spending is on transfers to low-income households, VAT reductions, retail price regulations or taxes on windfall profits of energy companies.

Several Member States, including France, Spain, Italy and Germany, have announced fairly similar measures to reduce consumption: switching off lighting in public buildings at night, compulsory closing of doors in air-conditioned public buildings, switching off the lighting of illuminated advertisements, illuminated signs and non-residential buildings at night between 10 p.m. and 6 a.m., and limiting heating to 19°C in public buildings and businesses. In about 30 municipalities, gas-heated swimming pools are currently closed.

THE STRUCTURE OF THE EUROPEAN ELECTRICITY MARKET IN QUESTION

The European electricity market is structured around a pricing system based on marginal prices: the last power plant needed to meet consumer demand, often a gas-fired plant, sets the overall price of electricity. Calls for a review of this system have been growing in recent months, as noted by the Agency for the Cooperation of Energy Regulators (ACER), in its report delivered in April 2022: "*Although the current circumstances affecting the EU's energy system are far from normal, the current design of the electricity market is not to blame and should be retained*".

[1] This is a non-binding commitment.

While the Commission's proposals in this area were eagerly awaited, on 14 September it finally put forward time limited emergency measures, regarding:

- an obligation to reduce electricity consumption by at least 5% during certain peak hours;
- a temporary revenue cap for sub-marginal electricity producers at €180/MWh;
- a temporary solidarity contribution on excess profits generated by activities in the oil, gas, coal and refining sectors;
- new energy pricing instruments available to consumers".

However, European Commission President Ursula von der Leyen said in her State of the Union speech on 14 September: "*The current pecking order design of the electricity market is no longer fair to customers. They should reap the benefits of low-cost renewable energy. Electricity prices must therefore be decoupled from the dominant influence of gas. This is why we will undertake a complete and thorough reform of the electricity market[2].*"

Several proposals have been put forward, notably by Greece which, in July, argued for a separation of the electricity market into two baskets: one for low-cost sources, renewables and nuclear power, and a second for fossil fuels. For its part, Spain wants to extend the "*Iberian exception*" at European level: an effective decoupling of gas prices from those of electricity.

Other measures are currently under discussion, notably a cap on the price of Russian gas, which has led to a warning from Vladimir Putin: any such measure would lead to a complete halt in deliveries.

EUROPEAN COORDINATION WILL BE ESSENTIAL IN THE COMING MONTHS

So far, the EU has compensated for Russian gas imports by increasing those from Norway, which has become Europe's largest supplier of natural gas and which, according to the Norwegian Energy Minister, is expected to deliver 122 billion cubic metres of gas to Europe this year[3] –, a significant increase in LNG imports and a decrease in consumption. Furthermore, according to the data analysed by Paweł Czyżak, electricity generation from solar energy increased by 28% from May to August compared to 2021.

In the coming months, the challenge for Member States is to organise the coordination of measures at European level to ensure security of supply, to ease the pressure on the most vulnerable households in a context in which prices will remain high, and to ensure the necessary incentives for the deployment of renewable energy. Several measures could be adopted, such as coordinated reductions in electricity consumption and joint purchasing of gas on international markets. Energy ministers met on 9 September to discuss the issue and will meet again on 30 September.

In the longer term, the construction of new fossil infrastructures should also be coordinated at EU level so as not to jeopardise climate commitments. Finally, in the context of the electrification of Europe's energy systems, Europe cannot do without an in-depth reflection concerning the reform of the electricity markets.

[2] Op.cit.

[3] To give an order of magnitude, the European Union imported 155 billion m3 of gas from Russia in 2021.

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