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From the Russian Pact to the Green Deal?

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"We remained attached to bridges that Russia no longer believed in and that our partners had warned us against (...). I believed that Vladimir Putin would not trade the economic, political and moral ruin of his country for the realisation of his imperial dreams. Like others, I was wrong on this point." Frank-Walter Steinmeier, President of the Federal Republic of Germany, [4 April 2022](#)

Russia's invasion of Ukraine has, among other things, caused an energy crisis comparable to the oil crisis of the 1970s, one that goes beyond oil however since Russia is also a major supplier of gas and coal. By 2021, it was the EU's largest supplier of all three fossil fuels. The military hostilities started in a context dominated by price pressures induced by global economic recovery and by an abnormally low level of storage sites in Europe. In this context a policy of diversification as part of [RepowerEU](#) was launched in view – as put forward by the European Commission – to do away with the supply of fossil fuels from Russia by 2030. Beyond the quest for new short-term suppliers, the question of a radical acceleration of the energy transition in Europe in favour of low-carbon energy sources and sobriety is now being asked.

This paper highlights the opportunity for Europeans to break not only with their dependence on Russia but also, and above all, with fossil fuels. It outlines the challenges to be met by underlining the extent to which the current stage of energy decoupling from Russia marks a turning point and closes several decades of close interdependence between Russian deposits and the European economies.

TOWARDS THE END OF A LONG ENERGY INTERDEPENDENCE INITIATED IN THE 1960S

[1] Susanna Twidale and Nora Buli, [Europe would struggle to refill gas storage without Russian supplies](#), *Reuters*, 31 March 2022.

[2] In 1990, the USSR stopped oil and gas exports to the Baltic States to counter their emancipation strategy.

Energy interdependence between Russia and the European Community was developed in stages, starting in the 1960s. As oil and gas pipelines were built, the interdependence between the East and West of the continent grew. In the 1990s and 2000s, the network was significantly strengthened, especially via the

sea (Baltic and Black Seas). A few days before an announced electoral defeat, Gerhard Schröder, then German Chancellor, concluded the construction of [Nord Stream 1](#), labelled a European project, with Vladimir Putin. Then came the [South Stream](#) project dependent on the Russian and Bulgarian coasts, which was ultimately abandoned. After the annexation of Crimea in 2014, Russia's share of European gas imports continued to grow and Nord Stream 2 was approved, this time without European support.

Russian companies have also taken stakes in the downstream sector. Lukoil acquired Bulgaria's only refinery. Rosneft became the second largest oil refiner on the German market through successive purchases. Gazprom acquired a retail distributor in Germany and took control of a third of the country's storage capacity, the largest in Europe[1]. As European companies invested in Russia, Russian state-owned companies gradually accumulated significant assets in several Member States.

Although the USSR proved to be a reliable partner[2], Russia however used gas as a political weapon. In 2009, Gazprom cut off supplies to Ukraine due to payment disputes, depriving several other countries beyond Ukraine of gas. In 2014, the scenario was repeated and since 2015, Ukraine has only obtained its gas (mainly of Russian origin) through contracts signed with its western neighbours.

In 2021, in a context of rising prices, revenues from fossil fuel exports contributed to 36% of the Russian budget. Russian exports reached \$489.8 billion, including \$110.2 billion for oil, \$68.7 billion for derived oil products, 'just' \$61.8 billion for gas, including more

than \$7 billion for liquefied natural gas (LNG). While gas is less financially crucial than oil from Russia's point of view, the European Union has placed itself in a situation of heavy dependence, with several Member States buying more than half of the gas consumed from Russia.

However, it would be excessive to point to a supposed naivety in European energy policy. The rules of competition policy have forced Russian players to abandon certain projects (South Stream) or to review the legal framework of their projects. The implementation of the internal market has been accompanied by interconnections that allow for increased flows between Member States and thus increase their resilience, even in the event of a suspension of Russian supply. Central and Eastern European countries have benefited greatly from the resources devoted to their integration into Western European gas and electricity networks. In the gas sector the rise of [the spot market](#) (ultimately intended to replace long-term contracts) has increased competition in the European market between suppliers, whether they supply the market by pipeline or via LNG terminals (mostly co-financed by the EU). These various measures have in fact helped to keep prices low. The phasing out of long-term contracts has helped European consumers to [save 70 billion €](#) over the last decade.

The crisis triggered by Russia's invasion of Ukraine, however, has exposed vulnerabilities. The idea that Russia would make political use of gas not only with regard to its neighbours but also with regard to the whole of the European Union seemed improbable. The reduction of Russian supplies to the spot market from the beginning of the second half of 2021 was of little concern to European countries, with Gazprom arguing that the commitments made through long-term contracts (which the European Commission proposes to abolish by 2049) were being met. Compared to the last quarter of 2020, Gazprom nevertheless reduced its exports by 25% in the last quarter of 2021 while at the same time increasing its deliveries to China. In February 2022, the storage sites owned by the company in Europe were only 16% full compared to 44% for the other storage sites. However, among these acquisitions on European soil, Gazprom has been able to acquire 10% of European storage capacity over the past decades.

If technical or commercial explanations have been put forward to explain the slowdown in Russian supplies in the second half of 2021, the link between gas and geopolitics was finally confirmed in January 2022 by the [IEA](#). The European Commission's proposal to increase storage volumes in the run-up to each winter and to subject storage site owners to a certification process seems in this context as legitimate as it is overdue.

More broadly, the unspoken pact established since the 1960s - the USSR (mainly Russia) supplying Western and Central Europe with hydrocarbons in exchange for consumer goods and technology - now seems to have been broken. The balance of terror - the EU not imagining Russia sacrificing nearly 40% of its tax revenues; Russia not imagining the EU depriving itself of nearly half its energy supply - is now a thing of the past. Decoupling is underway despite the undeniable economic logic that the strong energy interdependence between the West and East of the European continent has represented in recent years. Several Central European countries took the lead, especially on the Baltic-Black Sea corridor.

The Baltic countries have invested in underground storage (Inčukalns, Latvia), in the construction of an LNG terminal (Klaipėda, Lithuania). Their connection with their Scandinavian neighbours has been completed thanks to the bi-directional gas pipeline [Balticconnector](#) between Ingå (Finland) and Paldiski (Estonia). Another pipeline will connect Lithuania and Poland in 2022. Finally, the synchronisation of the Baltic electricity network with the continental European network (UCTE), "*the final stage of Lithuania's integration into the Western democratic world*[3]", will be completed by 2025, just like many projects co-financed by the European Union.

Announced shortly after the start of the Russian invasion, Ukraine's connection to the European electricity grid had been in the pipeline for several months. Different options are possible in the medium term. The connection to the European grid alone would contribute to strengthening the resilience of the Ukrainian network without requiring significant changes to its organisation. A back-to-back (B2B) synchronisation would allow greater flows between Ukraine and the European network without this leading to structural changes. Full synchronisation, based on the

[3] Statement by Lithuanian Energy Minister Dainius Kreivys to AFP on 13 May 2021. In: [Le Monde de l'énergie](#).

Baltic model, would significantly strengthen the Ukrainian network but this would require major reforms in Ukraine itself[4].

Ultimately, the IPS/UPS electricity grid, a legacy of the Soviet Union, is set to shrink significantly in favour of a European network that includes a large part of its former sphere of influence. In the gas sector, the Russian regime argues that a pivot to the East ('*povorot na vostok*') would spare it the consequences of diversification by European buyers. However, the benefits of this pivot remain uncertain for the time being.

ON THE RUSSIAN SIDE, THE ILLUSION OF A PIVOT TO THE EAST?

Although the effect of the sanctions adopted against Russia is expected to be gradual (most energy transactions predate the launch of the invasion on 24 February 2022), economic actors' expectations have rapidly led to a deterioration of Russian exports during the first quarter of 2022. Can Asia replace the European market?

In terms of oil, Russia has become China's second largest supplier (it provides 17% of its imports). Shortly before the start of the invasion, Rosneft and China National Petroleum Corporation (CNPC) signed a ten-year oil supply contract renewing one that was to expire in 2023[5]. India appears to be another outlet (the Russian foreign minister was sent there in March 2022), but the potential appears limited in the short term. The country is in fact linked to suppliers in the Middle East with attractive prices and although the country has been able to help Iran get around the sanctions, Russia is penalised by its distance.

Russia is China's third largest supplier of gas (15% of its imports). Gazprom and CNPC supplemented an existing 38 billion cubic metres (bcm) agreement in 2021 with an additional 10 bcm (by comparison, in 2021 Gazprom delivered 168 bcm to the EU). Relations with Beijing have steadily strengthened in recent years, as relations with European partners have become more strained. A 4,000 km long gas pipeline has been built ([Power of Siberia](#)) but its capacity is still limited (18 bcm compared with 55 bcm

for Nord Stream 1 alone) and it only supplies the Chinese market from the fields in Eastern Siberia. Nevertheless, the Russian network is due to be more widely connected to the Russian market with the commissioning of Power of Siberia 2, a project for which studies have begun.

In the immediate future, however, Russia's partial suspension from the SWIFT system is complicating transactions and the Chinese CIPS system has been slow to take off. Above all, Chinese companies may be reluctant to bypass the sanctions and thus lose other more lucrative markets. In the longer term, it is the risk of an unequal relationship that Russia will have to manage. It may have to sell off assets, as it did in 2014 following international sanctions after the annexation of Crimea. A rise in the power of Chinese players cannot be ruled out, as a substitute for Western capital and technology. The risk would be for Russia to be in a face-to-face situation with a Chinese client that has other options.

Beyond China, however, Russia is targeting other markets thanks to existing and planned LNG terminals. On the Pacific rim, the terminal [Sakhalin-2](#) supplies several Asian markets. On the Arctic coast, the [Yamal project](#) has seen the construction (with the help of European and Chinese capital) of a complex combining fields, pipelines and an LNG terminal, soon to be completed by a second. These are part of a strategy that has been pursued for several years and aims to compete with Australia, the United States and Qatar on the global LNG market.

However, transport requires suitable vessels, which are currently supplied mainly by South Korean yards, which has to comply with sanctions[6]. In short, few alternatives offer Russia the same advantages as the European market in terms of volumes and solvency. A similar observation can be made about coal, a quarter of which is extracted for the European market and exported mainly via the Baltic and Black Sea coasts. Massive exports to Asia to compensate for the embargo decided by the European Union on 7 April 2022 would require that the two railway axes - Trans-Siberian and Baikal-Amur-Magistral (BAM) - offer the required capacities. The pivot to the East is underway, but it will take time. What are the alternatives for Europe?

[4] L. Feldhaus, K. Westphal, G. Zachmann, [Die Anbindung der Ukraine an Europas Stromsystem: zwischen technischen Details und harter Geopolitik](#), SWP-Aktuell, 72/2021.

[5] Michal Meidan, [The Russian invasion of Ukraine and China's energy markets](#), *Oxford Energy Studies*, March 2022.

[6] C. Davies, S. Jung-a, H. Dempsey, « [Russia's Arctic gas ambitions at risk as sanctions imperil LNG icebreakers](#) », *Financial Times*, 28 March 2022.

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THE EUROPEAN GREEN DEAL REQUIRES A PARADIGM SHIFT

The diversification of supplies is currently serving the US coal, oil and LNG industry, for which liquefaction terminals are being built in the Gulf of Mexico. In his [speech on 26 March 2022](#) in Warsaw, the American president summed up: *"First, Europe must end its dependence on Russian fossil fuels. And we, the United States, will help"*. Here, Joe Biden was following in the footsteps of previous American presidents who have denounced, if necessary, with sanctions, the various gas projects linking Russia to Europe.

If the momentary revival of coal and the recourse to LNG imports are inevitable in the short term, the main issue concerns the long-term and relates to the capacity of Europeans to find an alternative to the Russian Pact established in the 1960s.

Energy sobriety, the marginalisation of fossil fuels, the development of renewable energies, the rise of storage technologies, the development of nuclear technology for certain countries: the solutions are known. The discussions initiated in the Council and the European Parliament on the various directives put forward by the European Commission under the ["Fit for 55"](#) programme will allow us to measure the effect of the Ukrainian crisis. The texts adopted under the [Green Deal](#) specifying targets for 2030 have indeed been overtaken by the upward revision of European ambitions to achieve climate neutrality by 2050.

The Russian invasion of Ukraine could have a knock-on effect that neither the IPCC's successive warnings nor Covid's post-pandemic recovery plans have had. Some states have already called for more ambition. The four countries of the [Višegrad Group](#), some of whom presented the Green Deal as the cause of energy price inflation (Hungary and Poland), have revised their rhetoric. Even before the Russian invasion, Germany had raised its targets, notably to reach 80% of renewable energy in the electricity mix by 2030 (it was 42% in 2021). *"We have eight years to reach the same renewable energy production capacity that we have achieved over the last thirty years"*, observed the German Vice-Chancellor, Minister for the Economy and Climate, [Robert Habeck](#).

Replacing the use of gas in heating and industry is nevertheless complicated. A process is underway to gradually replace gas with hydrogen. While a trip to Qatar was necessary to reduce dependence on Russian gas, agreements have been reached over the same period with Norway and Abu Dhabi to import decarbonised hydrogen. Like Germany, the many member states convinced of the virtues of hydrogen will have to invest massively in renewable energies or obtain supplies from countries in Africa, the Middle East and Latin America that are still far from being able to meet their own decarbonised energy needs. Several LNG terminals will be built in the meantime in Europe which, to avoid becoming stranded assets, will in due course have to be adapted to hydrogen imports... unless gas retains a prominent role in the European energy mix.

In terms of renewable energy, only two technologies have significant potential, wind and photovoltaic, as the main hydro sites are already equipped, and large-scale use of biomass seems unlikely.

Regarding wind power, local opposition has in [Germany](#) led to a collapse in capacity (1.5 GW achieved in 2020 against 5 GW in 2017). France was planning to double its wind power capacity by 2030, but in 2022 the target was postponed to 2050. Local opposition is expressed all the more effectively as planning procedures span many years. Spatial planning is more important than funding or land scarcity. Significantly increasing capacity would mean that arguments linked to the protection of biodiversity and nuisance would be taken into account less. Resistant to wind turbines, [Bavaria](#) opposed an overhaul of planning procedures. But that was before the images of the fighting and massacres in Ukraine were broadcast.

There is less resistance to the deployment of photovoltaics, and both France and Germany are planning for more capacity to be installed each year than is planned for wind power. While there is also the challenge of intermittency, the main limitation is the added value in industrial terms of a strong expansion of PV. About 80% of European solar panels are imported from China, while in terms of wind power, the European industry dominates several segments of the value chain. The potential for offshore wind is significant but, to date, three countries in Europe (UK,

Germany, Netherlands) account for 75% of established capacity. Since the Russian invasion of Ukraine, several Member States have increased their targets for offshore wind (Belgium, France, Germany, Netherlands, Portugal) as well as the UK. Planning procedures need to be overhauled to reduce the sometimes-long delays, unless floating wind power, which is further from the coast, takes over.

Russia's invasion of Ukraine has revived the issue of energy security and lent credence to the idea that renewable energy can benefit both climate and security. It has probably condemned the main interdependence between European economies and that of Russia (no European country sends more than 20% of its exports to Russia). Like all the supply crises caused by Russia in recent years, it has already contributed to accelerating European integration in the energy field.

From its inception, the Green Deal has been a challenge for the EU's neighbours insofar as its implementation will inevitably lead to a drastic reduction in hydrocarbon imports and thus in the tax revenues of supplier countries such as Russia and Algeria. If its success seems more likely with the Ukrainian crisis, it implies substantial financial efforts that will have to spare the least well-off households, technological breakthroughs and a renewed balance of power with the opponents of wind energy.

[Assimilating energy transition and independence](#) would also be excessive. An electric car requires six times more metals than a conventional vehicle; a wind turbine nine times more than a gas power station. Yet the geography of production of the metals needed for the transition is more concentrated than that of hydrocarbons. In the case of oil and gas, the three main supplier countries extract less than 50% of world production, while for copper, nickel, cobalt, rare earths and lithium, three countries control between 50 and 90% of world production.

Vulnerability is therefore no less in the case of renewables than in the case of fossil fuels.

The aspirations of the [USA](#) to achieve "true energy independence", the emphasis placed by the Europeans on sovereignty augur for a reshaping of the geography of the world's probably more fragmented energy mix which appears more in line with the scenario of "de-globalisation". If trade is not necessarily a factor of peace, autarky in terms of energy isn't any more so and is illusory. It will therefore be necessary, when the time comes, to rethink our interdependence with our various suppliers, including, if possible, with our Russian neighbour.

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