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EUROPE'S ENERGY TRANSITION WILL DISARM PUTIN

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Russia's invasion of Ukraine is a watershed moment for Europe's energy policy. Prior to the invasion, Russia was Europe's biggest energy supplier. The EU buys from Russia some 45% of its imported gas, around a third of its oil and nearly half of its coal. Europe's energy reliance on Russia dates back at least five decades, to the early 1970s, when the first East-West gas pipelines were laid from the Soviet Union to Western Europe. In German political elites, there was a strong belief that this *Ostpolitik*, fostering economic interdependence across the Iron Curtain, was a contributing factor to the peaceful end of the Cold War. That perspective is now completely in tatters.

Berlin finally placed the contentious Nord Stream 2 gas pipeline on ice. Even though the EU has (so far) refrained from imposing any sanctions or ban on Russian oil or gas, it has announced that it wants to become independent from Russian fossil fuels well before 2030. It wants to move especially fast for gas, aiming for a two-thirds reduction in Russian gas exports before the end of the year. In the coming months and years, we will witness a great energy decoupling between Russia and Europe. This process could very well mean the end of Russia as an energy superpower and give a shot in the arm to the energy transition across Europe. The task for Europe is to look beyond fuel diversification

(say, replacing Russian gas with US LNG), but to accelerate the drive to energy efficiency, electrification and renewables.

More than one crisis

The 1973 oil crisis triggered a major energy shift. An oil embargo and high oil prices saw the ideas on abundant oil supplies change overnight. At that time, a decision was made to become less reliant on Middle Eastern oil sources. In response, we diversified our sources of oil (e.g. Russia and Norway) and diversified our energy mix by increasing nuclear and coal capacity. The 1973 crisis also saw the first calls for energy conservation (e.g. the introduction of car-free Sundays), energy efficiency, and increased research into renewables. These measures had a massive impact on our energy use and subsequently the emissions associated with this burning of fossil fuels.

Recent crises, related to Russia, have not had the same impact. In the winters of 2006 and 2009, Russia temporarily halted gas flows to Europe due to disputes with transit country Ukraine. The 2014 Crimea annexation, the downing of flight MH-17 and continued Russian support for Ukrainian separatists were further causes for concern. Although the EU sought to diversify gas suppliers by promoting the construction of LNG terminals and gas pipelines (for example, the Southern

Gas Corridor), these diversification efforts had little impact on the share of Russian gas in Europe. Instead, the share of Russian gas increased from 30% in 2014 to 40% in 2021.

The 2015 Paris Agreement aims to limit global warming to 1.5 degree Celsius. In order to reach that goal, we need to stop burning fossil fuels (oil, gas and coal), as they are responsible for 80% of all the CO2 emissions. This entails that the majority of fossil fuels should be kept in the ground. The urgency of the climate crisis has since become more readily apparent, as extreme weather events become more frequent in Europe and impact Europeans. The 2021 heat waves in the south of Europe have cost lives, and last year's floods in Germany, Belgium and the Netherlands resulted in the loss of life and billions of damages.

The COVID-19 pandemic provided green growth opportunities with the economic downturn and decrease on fossil fuel consumption, but instead economic recovery continued with the use of fossil fuels. The COVID recovery led to high gas and power prices in the months preceding the invasion of Ukraine. This pushed even more European households into energy poverty (in 2021 31 million European lived in energy poverty).

A challenging break-up

Since the start of the war, the International Energy Agency (IEA) has introduced a 10-point plan to reduce European dependency on Russian gas. Additionally, the IEA suggested that an extension of the operation of coal power plants or reopening recently closed coal power plant could also contribute.¹ The high gas prices and tight energy market have made coal an interesting alternative and substituting gas with coal would be a quickly band-aid for our gas dependency on Russia. Just months earlier, a new commitment was made to phase out coal power. This resurgence of coal is bad news for our climate ambitions and our energy independence. Coal is the most polluting fossil fuels and increased use of coal could lead to more emissions. Additionally, most of

our coal imports comes from Russia, so our energy dependency would not change.

There have also been calls to delay the phase-out of nuclear power plants in Germany and Belgium. Germany, which plans to close all of its nuclear power plants by the end of the year, has indicated that regulatory issues prevent it from extending the operational stage of these power plants. In Belgium, a decision was made to delay the phase-out of two of its seven reactors, although many issues remain.

As announced in the REPowerEU plan,² the European Union is counting on LNG and non-Russian piped gas to reduce Russian gas imports into the EU with two-thirds by the end of the year, but this might not be the best solution. Berlin has announced the construction of two LNG terminals, has engaged in negotiations with the emir of Qatar to secure LNG imports and signed contracts for blue hydrogen (hydrogen produced from gas). There are many problems with this European plan.³ Filling up gas storage will provide security against Russian gas deliveries, but the current high gas prices do not make a commercially sound case to do so. Excess LNG capacity is located in Spain and infrastructure to transport gas from Spain to gas markets such as Germany is limited. LNG provides less dependency on a single supplier than pipelines, but brings with it its own set of problems. Europe would have to compete with other LNG consumers for gas supplies. This would imply that these higher gas prices are here to stay and the risk of gas price fluctuations are taken for granted.

For years, the horrible living and working conditions for foreigners in Qatar has been highlighted in the run-up to the World Cup,⁴ and not to forget that Qatar is an authoritarian regime. Europe would also become more vulnerable to the geopolitics of the Strait of Hormuz and the bottleneck that is the Suez Canal, as Qatari LNG would have to pass through both. A similar geopolitical concern can be raised for piped gas from Azerbaijan, which has to transit Turkey. Shifting our

energy dependency to these countries would not be an improvement.

Besides human rights and geopolitical considerations, there are also concerns on how this would impact Europe's Green Deal ambitions. The European Green Deal seeks to make Europe the first climate neutral continent by 2050. The building of new LNG terminals and expanding of capacity of pipelines counters this goal and brings risks of carbon lock-in. Carbon lock-in "occurs when fossil fuel-intensive systems perpetuate, delay or prevent the transition to low-carbon alternatives".⁵ Additionally, the production of gas is associated with the releasing of methane, a potent greenhouse gas that contributes 84 times more to global warming than CO₂ in the first twenty years after emission. This means that the continued usage of gas has massive impacts on our climate goals. Our shift from piped gas to LNG will contribute to more emissions, as LNG needs to be cooled to minus 160 degree Celsius. Furthermore, US LNG is produced using fracking, a method that pumps a mixture of water, sand and chemicals into rock formations to release gas. This production method has been criticized for its environmental impact and this has also contributed to the lack of fracking in Europe. Despite the risks of earthquakes, the pressure to increase the production from the Groningen gas has been growing.

A smart and just transition

A green transition can help Europe end its fossil fuel dependency and rid it of all the negative externalities that come with fossil fuels. The high energy prices make renewables, such as solar and wind, attractive and more competitive. Renewable energy has low operating costs, as they do not require the input of costly gas, oil or coal. A renewed focus on a green transition is also evident in many European countries, as a surge of investments in clean energy have been announced. Germany, Italy and the Netherlands have proposed the building of new wind turbine farms. Germany committed 200 billion euros to combat climate change.

Germany has also extended deadline for subsidies for new solar panels and France has cut subsidies for gas heaters in an effort to boost heat pumps.

Generating power from domestic sources will also minimize our vulnerability to global energy geopolitics. Europe would become less dependent on other countries and this would increase Europe's strategic autonomy. Although supply and availability concerns can be raised about the need for rare metals for the production of clean energy technology. Compared to conventional energy sources, clean energy require, for example, more copper and zinc and batteries for electric vehicles or storing electricity need cobalt and lithium.⁶ These sources are mostly found outside of the EU and the green transition will create new trade relations. However, the green transition still leads to a system with a decreased role for geopolitics. A supply disruption will not result in immediate shortages. In the future, green hydrogen (hydrogen produced from renewables) will not create similar dependencies as fossil gas does today since green hydrogen is not an energy source; it is an energy carrier, which many countries will be able to produce (including importers).

While these long-term benefits of a green transition are attractive, they do not help us in the short-term with our dependency. Instead, we should be looking at energy consumption and aim to reduce our energy demand by reassessing our behaviour and through energy efficiency. The IEA introduced a 10-point plan to reduce our oil consumption.⁷ These measures include the promotion of public transport and lowering the speeding limit (as the Netherlands did a few years ago), but also a reintroduction of car-free Sundays. Gas consumption can be reduced by lowering the thermostat and lowering our usage of hot water (e.g. short showers and more efficient use of washing machines). These measures can have an immediate effect on our energy consumption from Russia, but also provide some much needed financial relieve to households.

Admittedly, this green transition will not solve the war in Ukraine, neither will finding new gas suppliers. The decisions and actions taken today will however ensure that Russia's

energy weapon is effectively disarmed while avoiding a future in which Europe remains locked in to a dependence on authoritarian, oppressive regimes.

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- ¹ "A 10-Point Plan to Reduce the European Union's Reliance on Russian Natural Gas," *IEA*, March 2022, <https://www.iea.org/reports/a-10-point-plan-to-reduce-the-european-unions-reliance-on-russian-natural-gas>.
 - ² "REPowerEU: Joint European action for more affordable, secure and sustainable energy," *European Commission*, March 8, 2022, https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1511.
 - ³ Ben McWilliams, Giovanni Sgaravatti, Simone Tagliapietra & Georg Zachmann, "Can Europe survive painlessly without Russian gas?" *Breugel*, January 27, 2022, <https://www.bruegel.org/2022/01/can-europe-survive-painlessly-without-russian-gas/>
 - ⁴ "Qatar World Cup of Shame," *Amnesty International*, 2022, <https://www.amnesty.org/en/latest/campaigns/2016/03/qatar-world-cup-of-shame/>.
 - ⁵ Beth Elliott, Ichiro Sato & Clea Schumer, "What Is Carbon Lock-in and How Can We Avoid It?" *World Resources Institute*, May 25, 2021, <https://www.wri.org/insights/carbon-lock-in-definition>.
 - ⁶ "The Role of Critical Minerals in Clean Energy Transitions," *IEA*, May 2021, <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions>.
 - ⁷ "A 10-Point Plan to Cut Oil Use," *IEA*, March 2022, <https://www.iea.org/reports/a-10-point-plan-to-cut-oil-use>.