



# **REPower Security: Rethinking European energy relations in times of crisis**

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## Abstract

The energy crisis has sparked a rethink of how Europe defines and prioritises its energy security. The strategic importance of energy and its interconnected nature at physical, political and trade levels makes the interaction between energy security, security and foreign policy inevitable. Russia using energy as a weapon and the repositioning of Europe in a world of great power competition, where climate impacts increasingly hit, has changed energy interests and how they relate to security.

A topic that has not yet received much attention is the problem that new fossil exporters can equally pressure the European Union and that their overreliance on revenues from fossil extraction can be a security risk in itself, particularly in undemocratic, authoritarian petrostates.

High fossil energy prices have led to protests and rising tensions in the past and today, and petrostates may try to maximise power whilst still having insecurity over their (future) income sources, making them unstable too. For Europe to reduce security risks related to dependencies on fossil energy, it is necessary to switch more rapidly from oil and gas to renewable energy sources (RES) and higher electrification levels. Moreover, managing

the external energy relationships carefully is imperative when dependencies still exist. At the same time, if the EU is serious about its green leader role, for which Brussels has advocated for decades, supporting decarbonisation in third countries, especially those heavily dependent on fossil fuels, should be at the core of a different and more elaborate energy diplomacy. In this context, this report aims at bridging considerations on petrostate dependencies, sketching out the key risks these imply, and post-fossil alliances, with a focus on how low-carbon energy relations could help overcoming such risks.

This paper suggests that the ongoing global energy shift creates momentum for the EU to become a driver of change within the new, multilayered energy security concept. By developing long-term strategies targeting third countries and moving from a fossil-interdependent and risky paradigm, the EU can use its foreign policy instruments to become an exporter of technological, normative, and standard models of the new concept of energy security. However, for this to happen, the EU needs to be proactive regarding shifting energy relations to include a sustainability dimension that enhances third countries' decarbonisation ability.

## Introduction: New understanding of energy security

The disruption in fossil fuel imports from Russia and the acceleration of the renewable transition to meet the 2050 climate neutrality objectives have fundamentally changed the European understanding of energy security. The new energy context has revealed how prioritising the supply of cheap Russian fossil fuels is no longer an effective way to ensure energy security.<sup>1</sup> The overall paradigm has shifted to issues of security of supply, not only around fossil fuels but also on critical raw materials necessary for the green transitions. In official documents, attention is still paid to the green transition, with increased RES targets as an indicative example. Yet, this focus is secondary, limited in scope and “auto-referential”, as the paper will show in the following sections.

Moreover, the understanding that energy creates mutual dependencies and fosters cooperation between producing and consuming countries was turned upside down by the Russian invasion of Ukraine in 2022. In the case of Russia, energy trade has long been an essential economic component of the EU relationship with Moscow. Before 2022, the EU-Russia energy trade has continued without major disruptions, despite Moscow’s aggressive foreign policy, including the annexation of Crimea in 2014 and the Russian-Ukrainian gas transit crisis in 2006 and 2009.<sup>2</sup> What has now changed in Europe is the fundamental understanding that energy can no longer be considered a mere commodity in complex, strategic relations where mutual interdependence plays an essential role. It is clear that such interdependence, working both ways, can be exploited by any party to exert power and increase pressure. Indeed, Brussels has realised that energy is part of its geopolitical and foreign policy strategies and actions.

Russian energy coercion has undermined gas availability in Europe and was one of the reasons why energy prices skyrocketed in 2022. In addition to supply insecurity and price volatility, a more general realisation of the risks associated with resource dependencies is emerging, particularly when the EU depends on non-democratic countries.

Less attention is being paid to ongoing and increasing fossil dependencies on undemocratic countries moving beyond Russia. Have recent geopolitical events and climate objectives reshaped the EU energy diplomacy? How will future energy relations look? What are the opportunities for the EU in relation to its energy partners? This report will discuss the inherent risks of fossil fuel dependency on petrostates and the impact on Europe’s energy and wider security. Moreover, it will analyse how the EU can position itself to better negotiate its future energy relations, including with fossil fuel producers, focusing on hydrogen and renewables.

## Fossil energy dependency as an inherent risk to EU energy and wider security

Recently, the security problems related to fossil energy production and consumption have become more visible and policy-relevant. Yet, policy discourse in EU circles is still primarily focused on reducing Russian fossil dependencies. Russia’s weaponisation of energy supply raised the alarm level in Europe; however, it is not the only security risk associated with Russian fossil fuel dependencies. Apart from Russia, the EU imports oil and gas from other suppliers, including petrostates, countries which heavily depend on the rent generated by the oil or gas industry.<sup>3</sup> Table 1 provides an overview of the EU’s main natural gas, oil, and coal suppliers.<sup>4</sup>

1 E3G (2022), “How to navigate the new energy security world”, <https://www.e3g.org/news/how-to-navigate-the-new-energy-security-world/>

2 Siddi, M. (2017), “EU-Russia Energy Relations: From a Liberal to a Realist Paradigm?”, *Russian Politics* 2, no. 3, 364–81

3 Ashford, E. (2015), “Petrostates in a Changing World”, <https://www.cato.org/commentary/petrostates-changing-world#>

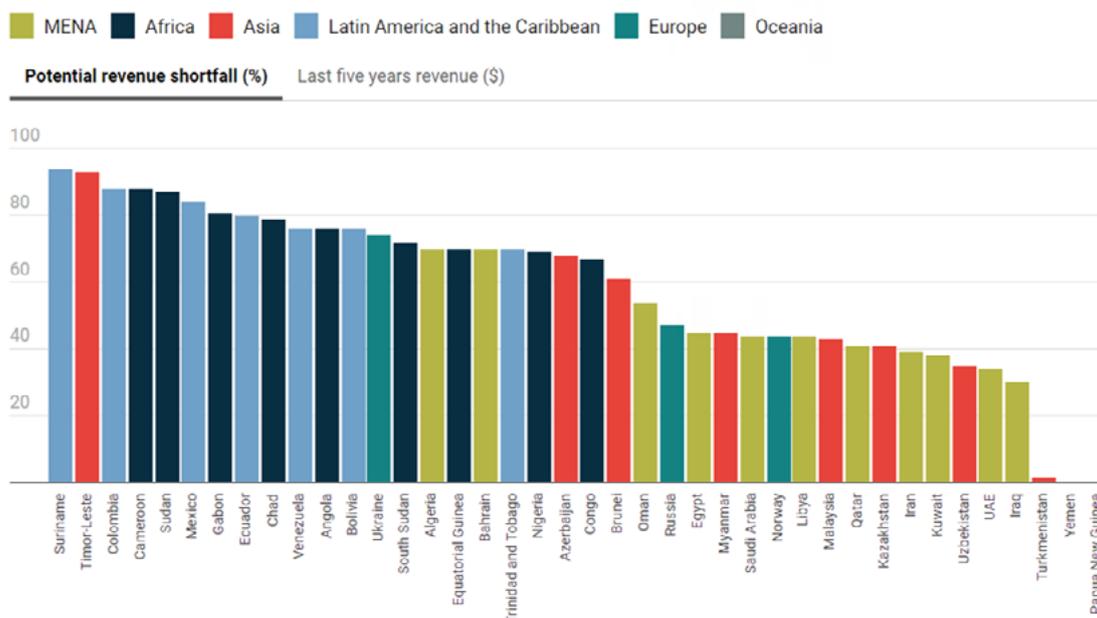
**Table 1. Energy production and imports**

	Hard coal (based on tonnes)										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Russia	22.4	21.9	20.2	23.9	25.1	26.4	28.7	35.4	39.5	43.5	49.1
United States	15.3	16.6	20.7	18.5	17.0	12.4	11.9	14.8	17.3	16.8	15.2
Australia	9.6	8.2	8.0	8.8	7.5	11.1	15.3	10.8	11.0	13.1	13.5
Colombia	15.4	18.6	19.1	16.4	17.0	19.3	18.7	15.9	12.6	7.7	5.4
Canada	1.9	2.3	1.9	2.1	3.1	1.6	2.3	2.4	2.4	2.2	2.3
Kazakhstan	0.2	0.3	0.3	0.3	0.7	0.5	0.6	0.6	0.9	2.1	1.8
South Africa	9.6	8.6	7.4	7.1	9.1	7.7	5.1	4.7	2.7	2.7	1.2
United Kingdom	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9	0.7	1.0	1.1
Mozambique	0.0	0.1	0.0	0.2	0.3	0.5	0.7	1.2	1.6	1.5	0.8
Others	25.5	23.2	22.2	22.6	20.0	20.3	16.7	13.2	11.2	9.5	9.3
	Crude oil (based on tonnes)										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Russia	34.7	35.1	33.9	34.5	31.4	29.7	32.4	30.7	29.6	26.8	25.7
Norway	7.7	7.2	6.8	8.1	9.2	8.4	7.9	7.7	7.2	6.9	8.7
Kazakhstan	5.6	5.9	5.3	6.0	6.7	6.8	7.0	7.6	7.1	7.3	8.4
United States	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.9	2.4	5.2	8.1
Saudi Arabia	6.0	8.3	9.1	8.7	9.0	7.9	7.7	6.5	7.4	7.7	7.8
Nigeria	3.8	5.6	7.2	7.2	8.3	7.7	5.2	5.8	7.0	7.8	7.7
Iraq	3.3	3.7	4.3	3.8	4.8	7.8	8.5	8.4	8.6	8.9	6.6
United Kingdom	5.6	4.5	4.4	4.2	4.2	4.0	4.1	4.1	3.9	4.9	5.6
Azerbaijan	4.5	5.1	4.0	5.0	4.6	5.3	4.6	4.6	4.6	4.5	4.6
Others	28.8	24.5	24.9	22.5	21.8	22.4	22.0	23.6	22.4	20.0	16.7
	Natural and liquefied natural gas (based on terajoule (gross calorific value - GCV))										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Russia	30.6	32.2	31.9	36.6	33.3	33.6	39.6	38.4	37.9	38.0	38.2
Norway	19.3	19.4	21.1	19.0	21.0	20.7	16.3	16.6	16.1	14.7	18.5
Algeria	13.1	12.2	12.1	11.1	10.5	9.5	12.3	10.5	10.8	7.2	7.5
Qatar	5.4	5.1	3.9	3.4	3.0	3.3	3.0	3.8	4.2	5.0	4.2
United States	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.6	2.9	4.0
United Kingdom	3.3	3.6	2.9	2.5	2.7	3.4	2.5	2.3	2.2	2.5	3.4
Nigeria	3.8	3.8	2.9	1.5	1.3	1.8	2.0	2.5	2.6	3.3	3.0
Libya	2.6	0.6	1.7	1.5	1.9	1.9	1.3	1.1	1.1	1.3	1.1
Others	22.0	23.1	23.3	24.4	26.3	25.9	23.0	24.5	24.6	25.1	20.1

Source: Eurostat, “Energy production and imports”<sup>5</sup>

Data from Carbon Tracker shows the petrostates’ fiscal dependence on oil and gas revenue. For some of the main fossil suppliers to Europe, such as Saudi Arabia, Libya, and Azerbaijan,

the percentage of oil and gas return in the total government revenue amounts to 69%, 72%, and 64%, respectively.<sup>6</sup>



Source: Petrostate potential oil and gas revenue shortfall in the next two decades in a low-carbon scenario<sup>6</sup>

5 Eurostat, “Energy production and imports”, [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Energy\\_production\\_and\\_imports#The\\_EU\\_and\\_its\\_Member\\_States\\_are\\_all\\_net\\_importers\\_of\\_energy](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Energy_production_and_imports#The_EU_and_its_Member_States_are_all_net_importers_of_energy)

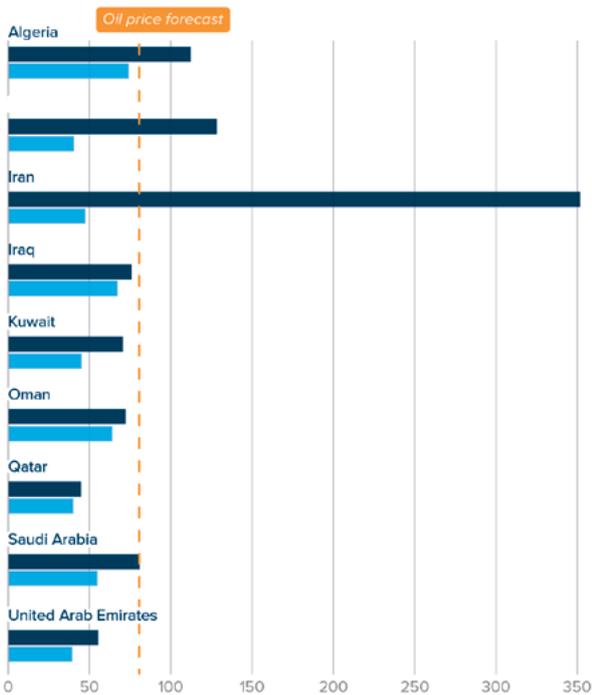
6 Grant, A. (2021), Beyond Petrostates: The burning need to cut oil dependence in the energy transition, Carbon Tracker, <https://carbontracker.org/reports/petrostates-energy-transition-report/>

7 Ibid.

Additionally, petrostates are severely exposed to the impact of volatile global energy prices, as they often have undiversified economies. For example, in recent years, oil prices dropped to historic lows during the COVID-19 pandemic before skyrocketing to unseen highs following the Russian invasion of Ukraine. Brent Crude, the international oil benchmark, reached a low point of 19.3 USD in April 2020 before spiking to 123.5 USD in March 2022.<sup>8</sup> Such income inconsistency can undermine state planning and cause issues in providing basic social services, fueling instability and anger among the local population. An example of social services is the energy subsidy, popular especially in energy-exporting countries as a way to maintain a social security system. In Saudi Arabia, for instance, gasoline is cheaper than bottled water.<sup>9</sup>

#### Iran's budget is more vulnerable to oil prices than its overall fiscal revenue

Fiscal and external account breakeven oil prices, 2023  
(USD per barrel) ■ Fiscal ■ External



Source: Oxford Analytica Brief (May 2023), "Oil reliance will fall in Middle East".<sup>10</sup>

Removing energy subsidies or adopting policies that increase fuel prices, combined with public discontent, can be a cause for social unrest, as in Kazakhstan in 2022, Ecuador in 2019, and France in 2018.<sup>11</sup> Cynically, regions within countries where oil and gas are extracted are often not the regions benefiting the most. In fact, they can even be where power blackouts occur or where energy prices are relatively high for consumers, as in the South of Iraq or Northwest of Kazakhstan. In the Netherlands, people in the province of Groningen felt their complaints over earthquakes related to gas exploration were long ignored. The government also badly handled financial compensation for damaged properties, despite the Groningen gas field leading to more than 360 billion Euros of profit and income for the government.<sup>12</sup>

The risk of EU dependency on petrostates for its energy security is that political, economic or social unrest in exporting countries can cause supply shocks and price escalation for EU consumers. The decoupling of Russia's fossil supplies is the most obvious example of such a (price) shock, but it also happened during the 1970s oil embargo and, for instance, in 2011, following Gaddafi's fall. When Libya halted oil production, Italy was the most hit European country, as one-third of its oil supply came from Libya at the time.<sup>13</sup> Price increases and fuel shortages can, in turn, lead to social turmoil and anti-government sentiments in EU member states. For instance, rising energy prices have caused a spike in protests in Europe in 2022. The largest number of protests over energy and the cost of living occurred in Germany and France, with 395 and 265 protests between September and October 2022, respectively.<sup>14</sup>

Moreover, fossil dependencies are critical vulnerabilities that expose Europe to wider security risks. Energy relations allow countries to infiltrate

<sup>8</sup> Trading Economics (2022), "Brent crude oil", <https://tradingeconomics.com/commodity/brent-crude-oil>

<sup>9</sup> Rubin, M., "What really causes instability in the Middle East", <https://www.washingtoninstitute.org/media/833>

<sup>10</sup> Oxford Analytica Brief (May 2023), "Oil reliance will fall in Middle East and North Africa".

<sup>11</sup> Kasturi, C. (2022), "Kazakhstan unrest highlights tricky terrain of fuel subsidy cuts", Al Jazeera

<sup>12</sup> New York Times, "Dutch state earned €363.7 billion through Groningen gas extraction", <https://nltimes.nl/2022/09/06/dutch-state-earned-eu3637-billion-groningen-gas-extraction>

<sup>13</sup> Faris S. (2011), "Italy's Bad Romance: How Berlusconi Went Gaga for Gaddafi", TIME, <https://content.time.com/time/world/article/0,8599,2053363,00.html>

<sup>14</sup> Savage, S. (2022), "Protests over food and fuel surged in 2022", <https://www.politico.eu/article/energy-crisis-food-and-fuel-protests-surged-in-2022-the-biggest-were-in-europe/>

**The ongoing global energy shift creates momentum for the EU to become a driver of change within the new, multilayered energy security concept.**

EU member states' political and economic circles. In Russia's case, this occurred through companies such as Rosneft, Lukoil, and Gazprom, owning shares in European distribution and storage. Close cooperation between the Netherlands and Russia in the energy sector has left the door open for infiltration and espionage, essentially allowing Russia to influence Dutch gas distribution.<sup>15</sup>

The countries in the Central and Eastern European (CEE) region took different approaches to unbundling electricity and gas companies. If in electricity ownership, unbundling was a rather popular approach, only Lithuania has taken the strongest option of unbundling in the gas sector. The existence of a single (or dominant) supplier, which in many cases had some shares in the national companies, did not allow governments from the CEE region to choose a more stringent option. Ownership unbundling has significantly increased gas prices for consumers in Lithuania. First, Gazprom's reaction to what it deemed as inflexible behaviour on the Lithuanian government's part left the country with the highest prices in the region. Second, unbundling and creating new companies, coupled with the reduced gas demand, increased transmission and distribution tariffs by 13% and 30%, respectively.<sup>16</sup> Nevertheless, unbundling ensures that a single company does not have the incentives and ability to obstruct competitors' access to infrastructure, thus reducing the risk of developing the above-

mentioned vulnerabilities. In fact, the unbundling is also proposed as a default model for the future hydrogen market.

Another risk is related to the fact that energy and its ecosystem – critical energy infrastructure, for instance – can become a target of hybrid attacks. The sabotage of Nord Stream is a clear example. The higher the external dependencies, the more exposed the EU is to such attacks. This has clear implications for security and external policy priorities, proven by the launch of a new NATO-EU Task Force on Resilience of Critical Infrastructure<sup>17</sup> and the EU-US Task Force on Energy Security.<sup>18</sup>

The weakening of the EU's political bargaining positioning in the geopolitics of great power competition is another risk. While European countries were turning to Doha to urgently secure alternatives to Russian gas, the European Parliament was caught in a corruption scandal known as 'Qatargate'. Following the announcement of a ban on Qatari representatives from the institution, a diplomat from Qatar threatened the European Parliament, saying it "will negatively affect ongoing discussions around global energy poverty and security".<sup>19</sup> These actions and rhetoric undermine the trust between partners and the broader long-term cooperation potential.

## **Towards new energy relations and foreign policy priorities**

The EU needs to rethink its approach to energy security, a process that must be informed by three key points that are also relevant to Brussels' foreign and security policy:

15 NRC (2023), "Het falende Ruslandbeleid is een les voor de rauwe wereld van morgen", <https://www.nrc.nl/nieuws/2023/05/06/het-falende-ruslandbeleid-is-een-les-voor-de-rauwe-wereld-van-morgen-a4163916>

16 Jankauskas, V., "Implementation of different unbundling options in electricity and gas sectors of the CEE EU member states", <https://www.lmaleidykla.lt/ojs/index.php/energetika/article/view/2872/1700>

17 NATO and European Union launch task force on resilience of critical infrastructure", [https://www.nato.int/cps/en/natohq/news\\_212874.htm](https://www.nato.int/cps/en/natohq/news_212874.htm)

18 European Commission, "United States of America", [https://energy.ec.europa.eu/topics/international-cooperation/key-partner-countries-and-regions/united-states-america\\_en](https://energy.ec.europa.eu/topics/international-cooperation/key-partner-countries-and-regions/united-states-america_en)

19 Jack, V. (2022), "Qatar Slams EU Corruption Accusations, Puts Energy Cooperation in Doubt", POLITICO, <https://www.politico.eu/article/qatar-corruption-accusations-european-union-qatargate/>

- The previously widespread belief that trade and economic interdependence of strategic/critical commodities would enhance cooperation has not worked out. On the contrary, dependencies on non-reliable suppliers and vulnerabilities increased.
- Energy security cannot be taken for granted. The EU has relied on cheap Russian fossil fuels for years to meet the bloc's energy needs. The old paradigm is now shifting, with active discussions on energy security being part of the broader EU security sector and demanding unified action. This has affected both external and internal policy dynamics, with the introduction, for instance, of the EU Energy Platform aiming at coordinating the Union's negotiations and purchases of gas, LNG, and hydrogen.
- Energy and climate policy need to synchronise and complement each other, with a consequent adaptation of the scope and activity of the EU green energy diplomacy.

These realisations fortify the belief that accelerating the energy transition is the best way to simultaneously increase energy security and advance green targets in the EU. As a significant fossil-fuel importer with the inherent risks this status implies, it has become clear that the EU would find itself in a more advantageous geopolitical position in a clean energy order rather than in the hydrocarbon-based energy system.

The REPowerEU package is a testament to the EU's determination to seize the critical historical moment to advance dual goals of eliminating its reliance on Russian hydrocarbons while fostering progress towards green targets. Announced after the Russian invasion of Ukraine as a plan to rapidly reduce dependence on Russian fossil fuels and fast forward the green transition, from an external policy perspective, it aims at concluding new

contracts with energy producers to build long-term partnerships that include cooperation on hydrogen or other green technologies.<sup>20</sup>

The external dimension of the package is developed in the 'EU External Energy Engagement Strategy in a Changing World' presented on 18 May 2022. **The new Strategy clearly links a multidimensional industrial policy with diplomatic tools to shape energy partnerships in a sustainable direction.** One of the strategy's main goals and the energy partnerships it envisions is indeed to advance the global green and just energy transition.<sup>21</sup> Yet, what prevails is the short-to-medium-term objective of reducing Russian fossil fuel dependency, which involves new investments in gas infrastructures as well as new gas and oil agreements.

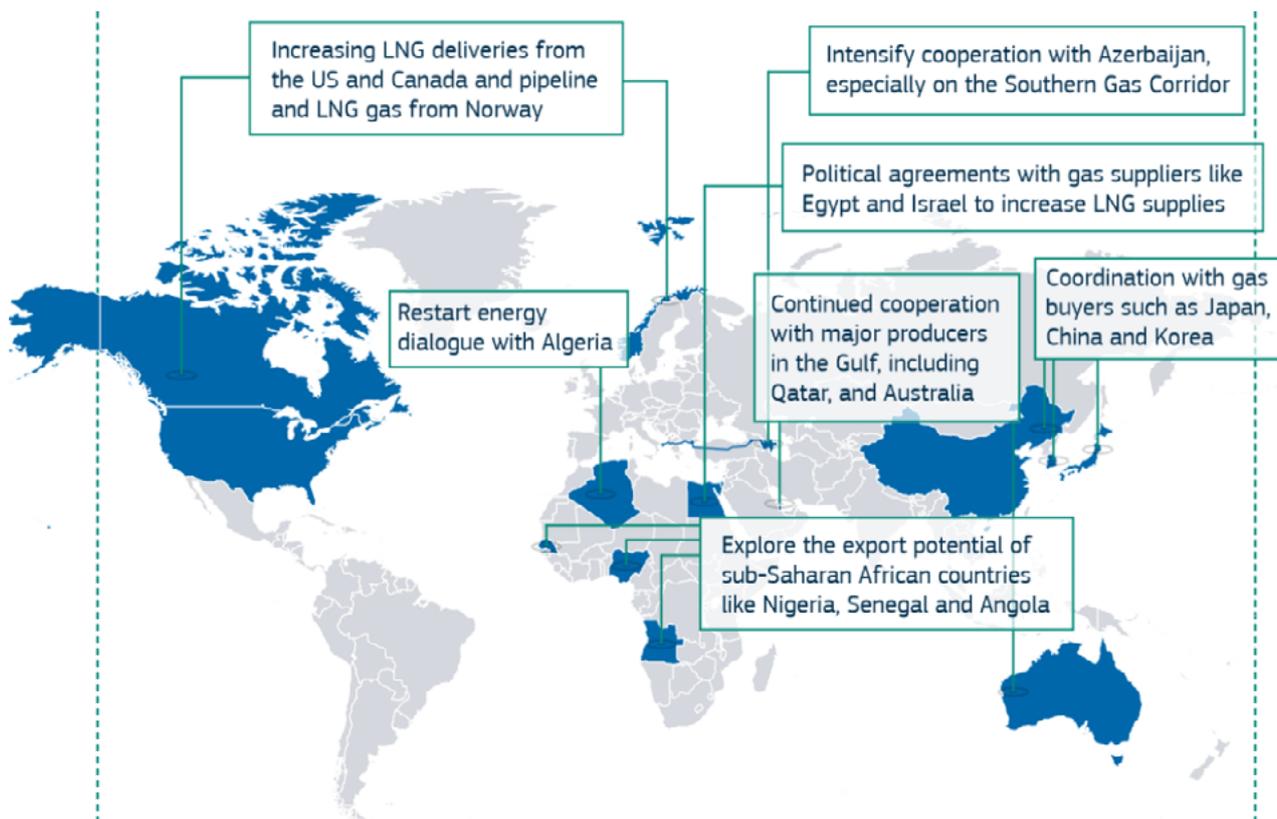
Although the Strategy envisions key pillars to enhance the EU's climate policies and REPowerEU targets - from the support of sustainable and resilient supply chains to the joint development of renewables production - it also supports gas explorations in African countries like Nigeria, Senegal, and Angola which risk locking in new fossil dependencies. This opens new potential risks for Europe and demands a reflection on Brussels' ability to hedge these risks. Since February 2022, the EU has concluded eleven energy deals following the key geographical vectors indicated in the External Engagement Strategy (see Fig. 1). Of these agreements, ten include what has been advertised as a sustainability dimension. In reality, this dimension comes down to enhancing the EU's ability to advance net-zero goals by 2050 rather than supporting third parties, usually fossil fuel producers, in decarbonising their economy and society. In the agreements concluded with Israel, Egypt, and Azerbaijan, the priority is natural gas exploration and production, which is necessary for the EU to diversify its supplies and use this energy source to balance renewables.

20 European Commission, "REPowerEU", [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_22\\_3131](https://ec.europa.eu/commission/presscorner/detail/en/IP_22_3131)

21 European Commission "REPowerEU", [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_22\\_3131](https://ec.europa.eu/commission/presscorner/detail/en/IP_22_3131)

22 European Commission, "Strategy for an EU external energy engagement", [https://energy.ec.europa.eu/topics/energy-strategy/strategy-eu-external-energy-engagement\\_en](https://energy.ec.europa.eu/topics/energy-strategy/strategy-eu-external-energy-engagement_en)

**Fig. 1: Key geographical vectors in the EU External Energy Engagement Strategy**



Source: Factsheet on the International Energy Strategy<sup>23</sup>

The deals with Kazakhstan, Egypt, Namibia, and Algeria aim to cooperate on green hydrogen production to foster these countries’ “green energy export” potential. Clearly, the agreements need a comprehensive, long-term strategy for the low-carbon developments of the third parties involved. Rather, they show an auto-referential character not in line with the EU’s green leadership ambitions.

Faced with new geopolitical challenges, the EU started to rethink its energy relations, focusing more on fostering its internal advancement towards climate neutrality. The EU energy diplomacy seems to evolve to include a sustainability angle in new energy deals. However, at a closer look, the sustainability angle is far from a strong element within climate diplomacy. A view on how to support countries in lowering their own dependency on fossil energy is still lacking.

## Post-fossil Alliances. Hydrogen and Nuclear

The External Energy Strategy also substantiates the increased green hydrogen supply target set in REPowerEU, which has to quadruple by using renewable energy. This will require policymakers and stakeholders to carefully plan new energy installations along the following axes: i) the Mediterranean corridor, aimed at harnessing the enormous green energy production potential of North African countries; ii) the North Sea area and Ukraine (the latter though will depend heavily on the evolution of the conflict).

To reach the new goal of 20 million tonnes of green hydrogen in the EU (half produced internally and half imported), substantial investments in infrastructure will also be necessary. Constructing pipelines capable of carrying hydrogen will require a significant overhaul of existing infrastructure,

23 European Commission, “Strategy for an EU external energy engagement”, [https://energy.ec.europa.eu/topics/energy-strategy/strategy-eu-external-energy-engagement\\_en](https://energy.ec.europa.eu/topics/energy-strategy/strategy-eu-external-energy-engagement_en)

with estimated costs averaging between 28 and 38 billion euros for EU gas pipelines and another 6-11 billion euros for storage systems. An example is H2MED, the hydrogen corridor that will transport renewable hydrogen via two new pipelines in Portugal, Spain, France and Germany. Originally planned to transport natural gas from North Africa (previously called MidCat), it will become an important green energy corridor for Europe.<sup>24</sup>

As part of EU green energy diplomacy, the European Commission has secured four key strategic partnerships for hydrogen with, Ukraine, Kazakhstan, and Namibia.<sup>25</sup> The aim is to advance trade and investments to develop CRM mining and renewable hydrogen value chains. Such projects are supposed to become “one of the key flagships of the Global Gateway strategy”.<sup>26</sup> Yet, targeted Team Europe Initiatives in the above-mentioned countries are still missing. A positive development following up from the strategic partnership is the deal between Hyphen Hydrogen Energy and the government of Namibia for a \$10 billion green hydrogen project that will export to Europe once completed.<sup>27</sup>

Another initiative is the European Hydrogen Bank (EHB), launched in March 2023. The EHB initiative offers a new platform to connect users with producers and generate private sector interest in the fledgling green and low-carbon hydrogen technologies. The platform aims to scale up a hydrogen market from niche to scale by bringing together demand and supply and bridging the cost gap between clean hydrogen and current hydrogen production based on carbon-emitting fossil fuels.<sup>28</sup>

The ‘bank’ is looking to support two types of projects: those inside the EU and those outside that supply the EU. Nevertheless, when developing strategies, decision-makers must factor in know-how in hydrogen and energy exports as well

**The EU needs to be proactive regarding shifting energy relations to include a sustainability dimension that enhances third countries’ decarbonisation ability.**

as existing capacities, while imports must be diversified, regardless of who the exporters are. Aside from clear conflicts and instabilities that inhibit hydrogen imports, import strategies should consider the reliability of countries and trade corridors as an endogenous outcome achieved through active and costly management. Overall, predictability and stability may not coincide with the EU’s preferred regime type or fundamental values.

The EU will need hydrogen imports from numerous sources. Canada and Norway are natural choices. The US bears similar potential but requires more nuanced considerations due to uncertainties regarding its domestic hydrogen demand, shifting political priorities, and role as a technological-industrial competitor to the EU. The GCC states (especially Oman, Saudi Arabia, and the UAE) aim to position themselves as first movers—some also align with a value-based approach to trade—but importers should proactively navigate latent uncertainties in hydrogen transport options. Egypt is geographically close to the EU and endowed with infrastructure, but it poses a heightened financial risk. Pipeline imports from the Maghreb are a strong but distant prospect contingent on continuous regional conflict management. Eastern Europe and Central Asia are potent producers, but the security situation and a complex geopolitical landscape for new pipelines postpone the possibility of trade. Imports from Australia cannot be realised in the short term. Latin America can potentially become an

24 Iden, M. (2022), “MidCat Pipeline To Be Replaced By New Green Energy Corridor”, <https://www.pipeline-journal.net/news/midcat-pipeline-be-replaced-new-green-energy-corridor>

25 European Commission, “COP27: European Union concludes a strategic partnership with Namibia on sustainable raw materials and renewable hydrogen”, [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_22\\_6683](https://ec.europa.eu/commission/presscorner/detail/en/ip_22_6683)

26 Ibid.

27 Euractiv (2023), “Namibia moves ahead on green hydrogen project, with German investors”, <https://www.euractiv.com/section/energy-environment/news/namibia-moves-ahead-on-green-hydrogen-project-with-german-investors/>

28 Day, P. (2023), “European Hydrogen Bank strategy to be tested at autumn auction”, Reuters, <https://www.reuters.com/business/energy/european-hydrogen-bank-strategy-be-tested-autumn-auction-2023-04-27/>

important player in the global hydrogen trade, but its various stakeholders will need to be convinced. Brazil has the strongest potential to be a first mover in the region, in part due to its petrochemical industry. Relying on (low-income) countries that do not have prerequisites for a swift ramp-up of exports can hamper the hydrogen transition and, thus, EU climate targets.

This is why establishing a multilateral agreement between EU hydrogen importers and major exporters (a “Hydrogen Alliance”) is geopolitically, economically, and technologically beneficial, as it would decrease market power imbalances and bilateral dependencies.<sup>29</sup>

Accelerating the transition is key for reaching independence from Russia, increasing energy security, and for the EU to be a geopolitical actor, technological leader, and a standard-setter for the global energy transition. However, as shown previously, EU external energy deals and initiatives over the past year do not show an ability and will to cultivate partnerships aimed at decarbonisation and socio-economic development in both the EU and partner countries. They instead signal a focus on supplying resources for advancing the sustainable transition in Europe itself.

Therefore, creating and promoting a sustainable industrial value chain is needed to boost clean hydrogen production. At the internal level of the EU, besides the crucial role of promoting research and innovation in clean hydrogen technologies, clean hydrogen still needs a supportive framework, well-functioning markets, and clear rules, as well as dedicated infrastructure and a logistical network.<sup>30</sup> Developers also need clarity over what timescale the €3bn investment will be deployed. Simultaneously, on the external level, Europe must continue securing cooperation opportunities with neighbouring countries and regions of the EU to establish a global hydrogen market. Efforts by proactive member states such as Germany need to

be well aligned with common European efforts led by the European Commission or European Carbon Bank.

It is not yet clear if all EU countries will have sufficient low-carbon energy resources to achieve the objective of climate neutrality by 2050 and intermediate targets on the way towards the coming years. This could open a path for a renewal of nuclear energy. Despite this being a bone of contention in Franco-German relations, the European Commission has warned that the goal of climate neutrality will be made more difficult by an anticipated significant increase in electricity demand through 2050, including for power, transport and heating. On this basis, the Commission predicts that new nuclear power investments will be necessary in Europe for the next 25 years.<sup>31</sup> Based on this insight, it may also be more difficult for the EU to disallow hydrogen produced by nuclear and their imports.

That being said, such calculations are based on assumptions, and if more investments are made in alternatives to nuclear, including renewable electricity imported from abroad, the situation may change. The recent record of Europe’s nuclear industry is not encouraging either: new power reactor projects in France and Finland carried out over the last 15 years experienced significant delays and cost overruns. Moreover, technological challenges are not less important; only France has a turnkey nuclear vendor company, which can build a working nuclear plant from scratch, but it also has significant capacity challenges, which will require a massive investment to fulfil France’s demand for nuclear power plants into the 2040s.

Nevertheless, a significant technological breakthrough could profoundly impact any country’s overall energy supply-demand balance, and new technologies that increase electricity demand could favour nuclear power generation, especially if fossil fuel substitutes such as hydrogen

29 Pepe, J. (2023), “Toward a hydrogen import strategy for Germany and the EU”, [https://www.swp-berlin.org/publications/products/arbeitspapiere/Ansari\\_Pepe\\_2023\\_Hydrogen\\_Import\\_Strategy\\_WP.pdf](https://www.swp-berlin.org/publications/products/arbeitspapiere/Ansari_Pepe_2023_Hydrogen_Import_Strategy_WP.pdf)

30 H2GreenTECH, “A hydrogen strategy for a climate-neutral Europe”, <https://www.h2greentech.eu/a-hydrogen-strategy-for-a-climate-neutral-europe/>

31 Oxford Analytica Daily Brief (April 2023), “Germany’s long term nuclear position is uncertain”.

are not taken up at scale. This would increase the need for additional electricity generation. The US Inflation Reduction Act and the EU's Green Deal could also create new opportunities for transatlantic cooperation in nuclear energy.<sup>32</sup> There is high potential and need for EU-US collaboration in this area, especially on Small Modular Reactors and for the benefit of the CEE region.

## Building new alliances versus consolidating old ones

Accelerating the transition is critical not only for reaching independence from Russia and increasing energy security but also for the EU to be a geopolitical actor, a technological leader and a standard-setter for the global energy transition.

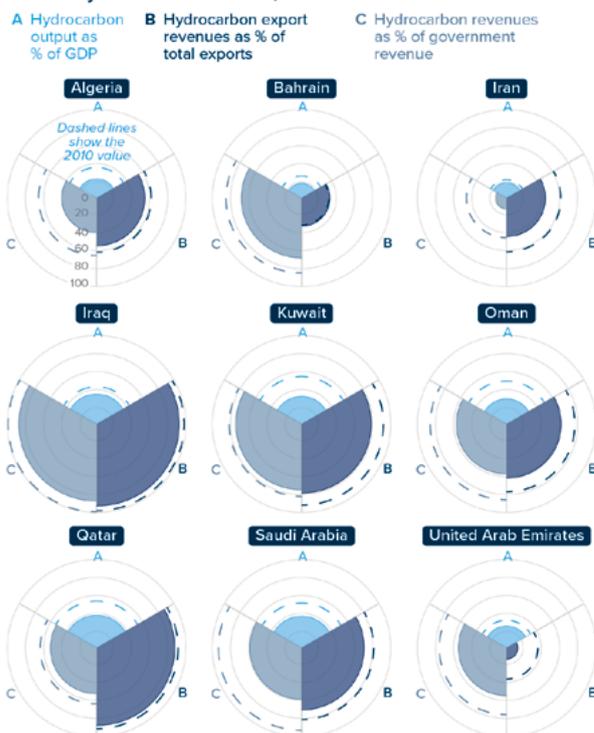
EU countries need to rethink their relations with fossil fuel producers that will face the challenge of a decline in revenue and leverage. Simultaneously, there is a need to consider the degree to which infrastructural, administrative and economic bottlenecks are slowing down the redirection of oil and gas exports from petrostates to new markets such as China and India.

The EU's energy diplomacy should be oriented towards using its technological, economic and standard-setting capabilities for the global energy transition while addressing the need to diversify economies in petrostates. This dimension is overshadowed in current agreements where the focus is on fostering clean energy imports into the EU to support its own energy transition, as shown in previous sections. Elites in petrostates seem to realise the need to diversify regional hydrocarbon-dependent economies. Average GDP hydrocarbon dependency has fallen to 27.7% (as of 2021) from 39.9% in 2010. Economic diversification will boost attempts to reduce hydrocarbon export dependency. However, progress has been slow in Algeria, Bahrain, Iraq and Qatar. Some fossil

producers in the Gulf have published strategies to reduce their dependency on fossil fuels. Such is the case of Saudi Arabia's Vision 2030. But more can be done, especially for the middle-income fossil producers whose economies will be most impacted by the transition. The EU should actively support those economies by enhancing their ability, know-how, and resilience to decarbonise.

**Iraq is the most reliant of the hydrocarbon-rich states on oil and gas revenues; Iran is the least**

**MENA hydrocarbon reliance, 2021**



Source: Oxford Analytica Brief (May 2023), "Oil reliance will fall in Middle East"<sup>33</sup>

Most countries will have to widen and deepen their tax bases to reduce their fiscal dependence on hydrocarbon revenues. A fall in the annual average oil price to under USD70 per barrel would result in most of these countries ending up with a budget deficit in 2023. Economic and fiscal diversification will face challenges from interest groups that benefit from the present hydrocarbon economies. While increasing personal and corporate taxes will undermine a key advantage in attracting business investment in the Gulf states, long-term declining hydrocarbon demand is likely to result in oil-

<sup>32</sup> Ibid.

<sup>33</sup> Oxford Analytica Brief (May 2023), "Oil reliance will fall in Middle East and North Africa".

exporting countries moving towards green energy production.<sup>34</sup>

Europe is refocusing its energy trade ties with African countries, including Algeria, Nigeria and Namibia, towards green hydrogen and 'power-to-X' technologies, which use clean electricity to make synthetic natural gas, liquid fuels or carbon neutral chemicals. This creates an opportunity for the EU to become an important player in exporting technological, normative and standard models of the new concept of energy security.<sup>35</sup> The new EU energy diplomacy should develop towards this direction.

## Conclusion and policy recommendations

The EU's effort to accelerate its sustainable transition is a big win for energy security, but it comes with problems. The transition phase is more volatile, and the EU needs to strengthen the resilience of its energy system by investing in energy storage, green hydrogen and low-carbon sources. At the same time, from an external relations point of view, the EU should actively support the decarbonisation of third countries, especially fossil fuel producers. Besides being crucial to achieving net-zero targets by 2050, such a task is essential for the EU to reduce the risks of dependency on petrostates, first and foremost, the supply shocks and price escalations that might stem from their internal turmoil. The risk of them becoming unstable as such is a foreign and security concern that must be taken into account in risk analysis and early warning.

If the EU wants to act geopolitically to advance the global energy transition and help build resilience to shocks, the recent efforts in mainstreaming climate considerations into new energy deals are not enough. Brussels has to comprehensively rethink its relations with petrostates and use the lesson learned from the Russia experience as an impetus.

Below are some key recommendations for the EU to advance these goals:

- The path towards net zero will change the relation with petrostates. The EU needs to technically assist petrostates offering foreign investments and technical expertise both in the energy sector and also in other sectors (e.g. manufacturing) to diversify their economy. This implies expanding the scope and depth of the EU energy and green diplomacy, which needs to become two faces of the same coin.
- The EU should switch from a reactive emergency to a strategic, long-term approach to strengthen its resilience. The EU should include a security assessment in every new energy deal concluded with energy producers. Such assessment should consist of (risk) scenarios and options for tackling each risk scenario that may unfold.
- More capacity and budget are needed for green energy diplomacy. More diplomats with energy expertise in the EU delegations could facilitate dialogue on carbon pricing and energy transition cooperation. Moreover, the EU needs to shift the budget to support the energy transition, including in middle-income countries, in the mid-term review of the EU financial instrument Neighbourhood, Development and International Cooperation Instrument (NDICI – Global Europe). More investments in green energy infrastructure as part of the Global Gateway are also needed.
- Solidarity among EU member states and a close international dialogue on energy markets and security will be crucial to minimise the call on less desirable ways of balancing the market, such as price spikes, industrial demand destruction, increased generation from coal-fired plants, or fierce international competition for LNG cargoes.

34 Oxford Analytica (May 2023) "Oil reliance will fall in Middle East and North Africa"

35 Nature (2022), "Energy crisis: five questions that must be answered in 2023", <https://www.nature.com/articles/d41586-022-04467-w>

- Creating and promoting a sustainable industrial value chain is needed to boost clean hydrogen production. At the internal level of the EU, besides the crucial role of promoting research and innovation in clean hydrogen technologies, clean hydrogen still needs a supportive framework, well-functioning markets, and clear rules, as well as a dedicated infrastructure. Simultaneously, on the external level, the EU should continue securing cooperation opportunities with neighbouring countries and international allies to establish a global hydrogen market.
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