

# FROM THE GREEN DEAL TO REPOWER EU

WHAT ABOUT THE EU'S SOUTHERN FOSSIL GAS SUPPLIERS?

#### **ABSTRACT**

The external dimension of the European Green Deal, published at the start of 2021, focuses on a just green transition, calls for the phasing out of harmful fossil fuel subsidies and discourages further investments into fossil fuel-based energy infrastructure projects in third countries. However, since the 2022 Russian invasion of Ukraine, the European Union has been faced with a pressing need to find alternatives for Russian gas. The attention of EU member states and of the European Commission turned towards fossil fuel exporters in its southern neighbourhood - namely, Algeria and Egypt, with energy diplomacy doing overtime. The focus of the EU has been on concluding middle-to-long-term fossil gas contracts with partners and importing green hydrogen. The shift towards middle-to-longterm fossil gas contracts coincides with a crucial moment, the COP27 in Egypt, which has been a disappointment to many. The EU's actorness, including in its neighbourhood is vital to achieving its claimed climate leadership. Nevertheless, the focus on green hydrogen could jeopardise the EU's trustworthiness. Prioritizing the export of green hydrogen to fulfil the EU's needs without considering those of its Southern Neighbourhood partners seems like a repetition of the mistakes the EU made during the 2000s. The EU had been previously accused by its Southern Neighbourhood of green colonialism when investing in renewable energy projects with the aim to export to EU countries, such as Desertec. Instead, the EU should focus on 'no-regret' options such as investing in an enabling framework that meets the needs of its partners for more energy efficiency, renewable energy, and technical assistance to tackle methane leaks and to address venting and flaring. This paradigm change could liberate more fossil gas for export in the shorter term, and prevent fossil fuel lock-in for its partners while being in line with the EU's climate leadership aspirations.



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#### Introduction

The Euro-Mediterranean Partnership, launched in 1995, aimed at strengthening relations between the EU and Southern Mediterranean countries. Despite the Barcelona Process' mixed results and priorities, the European Green Deal, put forward by the von der Leyen Commission, marks a renewed focus on this relationship. The Commission added an external dimension to the Deal through the Joint Communication: 'Renewed partnership with the Southern Neighbourhood'. In a similar vein, EU Member States put emphasis on this dimension with the Council conclusions on 'Climate and Energy Diplomacy - Delivering on the external dimension of the European Green Deal'. Issued at the beginning of 2021, these publications focus on a just green transition, call for the phasing out of harmful fossil fuel subsidies and discourage further investments into fossil fuel-based energy infrastructure projects in third countries. However, since the 2022 Russian invasion of Ukraine, the European Union has been faced with a pressing need to find alternatives for Russian gas. The attention of EU member states and of the European Commission turned towards fossil fuel exporters in its southern neighbourhood - namely, Algeria and Egypt, with energy diplomacy doing overtime.



Since the 2022 Russian invasion of Ukraine, the European Union has been faced with a pressing need to find alternatives for Russian gas.



The focus of the EU has been on concluding middle-to-long-term fossil gas contracts with partners and importing green hydrogen. The shift towards middle-to-long-term fossil gas contracts coincides with a crucial moment, the COP27 in Egypt, which has been a disappointment to many. The EU's actorness, including in its neighbourhood is vital to achieving its claimed climate leadership and convincing others to follow.

# The external dimension of the Green Deal: including fossil fuel-exporting countries

The von der Leyen Commission entered its term in 2019 and aligned its internal and external decarbonisation goals in 2021 with the publications of the Joint Communication: 'Renewed partnership with the Southern Neighbourhood' and the Council Conclusions on 'Climate and Energy Diplomacy - Delivering on the external dimension of the European Green Deal'. In these publications the Commission and Council called to:

- 1) Discourage further investments into fossil fuel-based energy infrastructure projects in third countries, and take action to reduce methane emissions;
- 2) Strengthen its international cooperation on green hydrogen.

The Commission proposed to use 'Green Deal Diplomacy' to achieve this, including- amongst others- the respect of the Paris Agreement as an essential element for all future comprehensive trade agreements.

However, the 2022 Russian invasion of Ukraine profoundly changed the political and economic landscape for the EU. As a result, the EU also changed its energy policy priorities, including

towards its Southern Mediterranean fossil fuel partners which are seen as part of the solution.

In the REPowerEU Communication of 8 March 2022, it became clear that the EU was grappling to respond to the new energy situation. In the following months, at the EU level, short-term measures are adopted, despite their inconsistency with the Green Deal and the aim of a just transition. However, the REPower EU Plan, published on the 18th of May claims that within the context of this new reality, "the EU's gas consumption will reduce at a faster pace. limiting the role of gas as a transitional fuel". Further, the REPower EU Plan focuses on the import of Green Hydrogen from its Southern Neighbourhood as part of the solution and puts forward concrete targets by 2030. This will certainly have consequences for its close fossil fuel exporting neighbours such as Algeria, which is reliant for more than 80% on the EU for its fossil fuel export.1

The following section is divided into two parts focusing on the EU's claimed goals of; 1) discouraging further investments into fossil fuel-based energy infrastructure projects in third countries; 2) Investments in Green Hydrogen. Both claimed goals are analysed and put next to the reality since the invasion of Ukraine. The focus is on the fossil fuel exporting countries in the EU's Southern Neighbourhood, Algeria and Egypt. The policy brief ends with some concluding remarks and recommendations.

## A faster phase-out of the EU's fossil gas needs

While the publication of the 'Renewed partnership with the Southern Neighbourhood' put forward 'Green Deal Diplomacy', this changed towards 'Joined-up Diplomacy' in the REPower EU plan. With rising fossil gas prices, the aim was to use market power to achieve better deals for its short-term gas supply needs. While a short-term rush for gas and coal might make sense, the EU Member States quickly excelled by acting alone , promising new middle to long-term investments in its neighbours' fossil gas infrastructure.

#### **Algeria**

For decades, Algeria has been a fossil fuel supplier to the EU, delivering around 11% of the EU's fossil gas. Before the Russian invasion of Ukraine, it was the third largest fossil gas supplier after Russia and Norway. With its strategic location, neighbouring the EU, it was an obvious option to look at as possibly able to replace Russian gas. In April 2022 the CEO of Eni accompanied by Italian Prime Minister Mario Draghi signed an agreement with the national oil company Sonatrach (Société Nationale pour la Recherche, la Production, le Transport, la Transformation, et la Commercialisation des Hydrocarbures) that permits the transport capacities of Gazoduc (Transmed)<sup>2</sup> to be exploited to increase gas flows. Sonatrach is expected to supply progressively higher volumes of gas from 2022, increasing to 9 billion cubic metres of gas per year in 2023-24.3

In July 2022, Algeria's Sonatrach, Italy's Eni, the US' Occidental and France's Total signed an oil and gas "production sharing" contract of approximately 4 billion euros for a 25-year exploitation of oil and gas. France has been more active in Algeria since August 2022. There have been talks about an increase of gas deliveries by 50% although the CEO of Engie claimed that gas increases will only come in the middle to long term.<sup>4</sup> The last member state, up to now, agreeing on a gas contract to raise imports from Algeria has been Slovenia. In November 2022, negotiations ended with a contract for about 300 million cubic meters of gas per year although Slovenia aims for a longer-term agree-

ment and higher quantities. The Memorandum of Understanding (MoU), soon to be signed, will also define strategic cooperation in renewable energy and the exchange of digital competencies.

After the summer of 2022, the European Commission leaders also started their diplomatic efforts in Algeria. The President of the European Council Charles Michel visited Algeria on the 5th of September 2022 and stated that "we see Algeria as a reliable, loyal, and committed partner in the field of energy cooperation". On October 11<sup>th</sup> 2022, the EU's energy Commissioner Simson Kadri also applauded Algeria for being the EU's reliable supplier.

However, the words of the European Leaders seem to be lacking a sense of reality or blind shielding. Algeria has several similarities with Russia. The Freedom House Index labels the autocratic regime of Algeria as 'not free' on political and civil rights,<sup>5</sup> placing it in the company of states such as Zimbabwe and Iraq. Further, it has used its energy as a political weapon against Morocco, the same way Russia has used it in the past against Ukraine. 6 Meanwhile, Algeria has as well been using its gas as a political weapon against Spain by recalling its ambassador from Madrid and threatening to raise the gas price and cut supply, since Spain backed Morocco's autonomy plan for Western Sahara.7 Besides, Algeria has abstained from the vote in the United Nations General Assembly on a resolution condemning the Russian invasion on 2 March 2022. On April 7<sup>th</sup> 2022, Algeria voted against the resolution to suspend Russia from the Human Rights Council. This placed Algeria in the voting company of Belarus, North Korea and Syria. Figures from 2020 show that about three-quarters of Algeria's arms are purchased from Moscow.8 In November 2022, joint military exercises on Algerian soil confirmed its close ties with Russia.9

#### **Egypt**

Egypt also seemed to be an option for the EU's need to diversify in the short term. Egypt and the EU have historically had a good relationship. Although the fossil gas export potential had almost disappeared by 2014 because of rising internal energy demand and depleting gas fields, this changed with the discovery of the gas field Zohr in 2015. The production of the Mediterranean Sea's biggest gas field started in 2017 and made Egypt aim again to become an important gas exporter. However, rising internal consumption prevented Egypt from taking a full export profit.



The EU is once again at risk of creating an unequal relationship of energy dependency with an autocratic regime.



In June 2022, the European Commission closed a MoU with Egypt. This focused on "the possibilities to accelerate export and shipment of natural gas to the EU and encourage the European companies to invest in natural gas exploration and production in Israel and Egypt". Starting new explorations seems to contradict the EU'S aim to be a climate leader. It could use its resources to invest in Egypt's renewable energy capacity and energy efficiency instead. Science indicates that to stay within a 1.5°C carbon budget (50% probability) implies leaving almost 40% of 'developed reserves' of fossil fuels unextracted. 10 While the MoU starts with "recalling the objectives defined under the Paris Agreement" it ends with doing the reverse. Further, it proposes high-level meetings on the MoU and only from "time to time propose a meeting on the renewable energy transition".

Egypt and Algeria in the meantime closed an MoU amongst themselves to work together in the prospection and exploration of new gas fields. Since Egypt began extraction from the enormous Mediterranean natural gas field in 2017, the country has sought to position itself as a major energy hub with its two gas liquefaction export plants, the IDKU Egyptian LNG plant and the Damietta plant. By 2023, it hopes to sell almost € 1 billion worth of fossil gas a month, some its own, some imported and liquefied for re-export. However, doubts exist on whether Egypt can fulfil its promises. In August 2022, it has been closing electricity access for its citizens to cover some of the demands of the EU as well as using more polluting energy sources internally.11

Further, the EU is once again at risk of creating an unequal relationship of energy dependency with an autocratic regime. Abdel Fattah al-Sisi has returned Egypt to autocratic rule after a coup in 2013 with the Freedom House index labelling it 'not free', lacking civil liberties, including press freedom and freedom of assembly. 12 If the EU is closing energy deals with Egypt, the regime would stand stronger against questions related to the respect of human rights.

## Creating a carbon lock-in for its Southern Partners?

The contracts closed between Algeria and EU Member States often aim at long-term gas deals which seem incompatible with the EU's goal to strongly diminish its gas use in the short to medium term. As long-term contracts are needed for fossil fuel companies to make the necessary investments in energy infrastructure, this can cause a lock-in for decades to come or

result in stranded assets, both to the detriment of investments in renewable energy, energy efficiency and the respective fossil fuel exporting country. The European Commission is clearer, at least towards its southern partners, indicating in the MoU with Egypt that it will diminish its gas use after 2030, in line with its decarbonisation targets. Yet, the fact remains that it would be a better option, considering budgetary scarcity, to use the allocated funds for investment in alternative options.

In the short term, the EU mainly needs replacements for Russian gas. In the Commission's Communication 'external energy engagement in a changing world' from May 2022, actions to ensure its energy security include as well diminishing flaring. The aim of the EU is to couple additional gas with technical assistance to tackle methane leaks and to address venting and flaring with the "you collect, we buy" schemes. This would allow the EU to collect more gas at a faster pace than through investment in new extraction facilities. Algeria is currently one of the fossil fuels extracting countries with the highest flaring numbers.14 Focusing on energy efficiency, which is lagging far behind, and recovery rates would result in quick wins. Italy aims to buy an increasing 9 billion cubic metres (bcm) of gas per year in 2023-24.15 This is exactly the known flaring number of Algeria through which it could rapidly provide for the gas needs of Italy. Furthermore, Egypt could deliver more than 3.7 bcm of gas if it halts its flaring according to satellite data from the US National Oceanic and Atmospheric Administration (NOAA).16

Further, the EU's rising demand for Algerian gas has altered some of the tax reforms just launched in Algeria. By mid-February, Algeria's green transition tax and subsidy reforms were cancelled causing its energy efficiency stimulus to be withdrawn. To fulfil new gas contracts with EU Member States, former Algerian energy min-

ister, Abdemajid Attar, claimed that Algeria now needs to invest more in shale gas.<sup>17</sup> Such investments have strongly been opposed by local citizens for their environmental damage. These investments take time, divert funding away from other renewable technologies, and could derail Algeria's own transition. Egypt has also been focusing on more polluting internal energy sources to liberate gas for exportation. The EU could prevent this by investing in 1) technologies to diminish flaring and use the "you collect we buy scheme", 2) energy efficiency measures, as well as 3) through investing in other cleaner energy resources.

Hydrogen, a silver bullet?

Renewable hydrogen will be key to replacing natural gas, coal and oil in hard-to-decarbonise industries and transport. The Commission aims to combine gas cooperation with long-term energy cooperation on hydrogen, renewable gases (including biomethane) and other green energy sources to avoid stranded assets in its new fossil gas infrastructure and ensure the green transition. The Plan sets the target of 10 million tonnes of domestic renewable hydrogen production and 10 million tonnes of renewable hydrogen imports by 2030. In order to facilitate imports of 10 million tonnes of green hydrogen into the EU, the Commission will focus on three major hydrogen corridors, the Mediterranean, the North Sea area, and as soon as conditions allow Ukraine. The European Commission concluded in June 2022 its first hydrogen partnership with Egypt. It will promote investments in renewable electricity generation including the production of low-carbon hydrogen, 18 and the construction of storage, transport and distribution infrastructure.19 In Algeria as well, green hydrogen agreements are being closed. Eni, being the first one, concluded an agreement to make a technical and economic evaluation for a green hydrogen pilot project. Moreover, the Netherlands and Germany showed potential interest in this sector.



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However, shipping green hydrogen is currently not yet economically viable. Hydrogen requires three times more energy than liquid natural gas to cool enough and only 27% of the energy can be carried in an equal-volume ship. Furthermore, transforming existing natural gas transmission pipelines to carry hydrogen, as the EU proposes, poses other problems. Transmission of hydrogen severely shortens the lifespan of the pipelines leading to leakages and the compressor stations would have to be replaced. Next to the economic cost and the technical difficulties this can as well cause carbon lock-in. Building new infrastructure to transport 'temporarily' fossil gas can lock it in for longer than expected. Once the fossil gas infrastructure is in place, it is much cheaper to export the fossil gas than transform it into green hydrogen.

Further, to produce 10 million tons of green hydrogen per year we would need approximately 440 000 TWh of green electricity.<sup>20</sup> Currently, the green electricity in Morocco, Egypt and Algeria combined is 18,1 TWh.<sup>21</sup> Even if a boom in renewable energy capacity is materializing in Northern Africa, the electricity produced should be first used in those countries. For example, in Algeria currently, only 1% of the electricity production comes from renewable energy sources. The EU institutions have to avoid using renew-

able energy resources from its neighbourhood as long as the neighbourhoods' own renewable energy needs are not fulfilled (SDG 7 'access to clean energy sources for all'). Along with the ethics behind it, it is also more efficient to use the available renewable energy resources while exporting the remaining fossil gas.



The EU Member States were accused of green colonialism as the local needs of the Northern African partners were not dully considered.



Lastly, it seems the European Commission isn't learning from past mistakes. The Mediterranean Solar Plan was presented in 2008, followed one year later by DESERTEC, intending to connect the PV installations in the desert of the Southern Mediterranean to the electricity grid of the Northern Mediterranean had a difficult start. The EU Member States were accused of green colonialism as the local needs of the Northern African partners were not dully considered.

#### **Conclusions and way forward**

With the 2022 Russian invasion of Ukraine, the crisis mode has been turned on for the EU Member States and the European Commission. This resulted in inward-looking actions neglecting the wider implications for its Southern Neighbours. While the Commission declared in its RE-PowerEU plan that it enters a fast path towards the diminished use of fossil gas, its Member States rushed towards Algeria to negotiate mid-

dle to long-term agreements that would fulfil its gas needs. This shift could jeopardize the urgently needed decarbonisation shift and cause a lock-in for the concerned fossil fuel exporting countries. Although the European Commission and the EU member states are also interested in investing in the Green Hydrogen sector in North Africa, attention should be paid in order not to make the same mistakes from the past. It is therefore essential to first fulfil the clean energy needs of partners and to avoid neglecting the needs of the population in the South.

The EU should invest in innovative clean energy technology solutions and 'you collect we buy schemes' while providing the needed financial guarantees for its partners. If the Green Deal is successful, a massive drop in fossil fuel consumption will restructure the EU's relationship with mostly Algeria, but also Egypt. The end of the EU's fossil fuel dependency would adversely affect their economies if they are not well prepared. The EU should accelerate working with its neighbouring oil and gas exporting countries towards economic diversification, including in renewable energy. If it fails to do so, these countries can turn into turmoil or others countries will step in such as China.

#### **Key Recommendations:**

- The EU should avoid jeopardizing the trustworthiness of the EU's claimed climate leadership at a crucial time by taking short-term measures without considering the long-term consequences.
- The EU should invest in more optimal solutions than new fossil gas extraction, delivering faster, more in line with its climate objectives and avoiding lock-in or stranded assets in partner countries. Renewable energy, energy efficiency investments as well as 'we

buy, you collect schemes' are no-regret solutions. This could liberate more fossil gas for export while preventing a carbon lock-in.

- The EU should share its knowledge, creating an enabling framework for the energy efficiency and renewable energy sector with its southern neighbourhood partners including through education and re-skilling. The EU external green deal communication urges Member States to anticipate geopolitical and security challenges, by promoting as well as supporting the development of socially just economic and energy diversification plans, and providing, where necessary, targeted support to the most affected in order to support the transformation of their economies. It seems to be the right moment to fulfil these objectives in the EU's neighbourhood while taking into account partners' needs and not locking them in a dirty future.
- Access to capital while ensuring the right investment framework is essential to achieve a clean just transition in the EU's Southern neighbourhood. As the recent UNEP report (October 2022) explained, the capital cost for the global South is still far higher for renewable energy than it is in the North. Although the EU claimed that it is willing to take up guarantees, the numbers don't show the results yet.
- The EU should take into account the needs of its Southern Partners in its engagement, avoiding a one-way approach. With the EU's new hydrogen strategy, EU institutions should avoid using renewable energy resources from the Southern neighbourhood as long as the South's own renewable energy needs are not fulfilled (SDG 7 'access to clean energy sources for all').
- The EU should be careful not to become too

dependent on autocratic states and be consistent in both its rhetoric and actions. The EU should promote political reforms aiming at fundamental rights protection in its cooperation with the Southern Neighbourhood.

#### **Endnotes**

- 1 "Algeria, Natural gas exports". EIA website, 25 March 2019, https://www.eia.gov/international/analysis/country/DZA, last consulted on 25 December 2022.
- 2 "Mario Draghi: Signature d'un accord entre Sonatrach et Eni pour approvisionner l'Italie en gaz." Algerie Eco, 11 April 2022, https://www.algerie-eco.com/2022/04/11/mario-draghi-signature-dun-accord-entre-sonatrach-et-eni-pour-approvisionner-litalie-en-gaz/, last consulted on 25 November 2022.
- 3 "Le premier ministre Mario Draghi obtient un accord de l'Algérie pour plus de gaz à l'Italie." Sud-Ouest International, 11 April 2022, https://www.sudouest.fr/international/afrique/algerie/le-premier-ministre-italien-a-alger-pour-solliciter-plus-de-gaz-10566371.php, last consulted on 25 Novembre 2022.
- 4 Aydin,C.(2022) "Algeria And France Talk Gas." *MEES*, 65/35, 2 September, https://www.mees.com/2022/9/2/news-in-brief/algeria-and-france-talk-gas/a3444190-2ab5-11ed-a675-59c7ec4c9da2, last consulted on 22 December 2022.
- 5 Freedom House Index, Algeria, 2022, https://freedomhouse.org/country/algeria, last consulted on 25 November 2022.
- 6 Boucakert, R., Dupont, C., (2022) "Turning to Algeria to replace Russian gas: a false solution". Policy and Research Report, 02/2022, Ghent University Ghent, https://www.ugent.be/eb/publiek-management/en/news-events/bijlagen/policybriefturning, last consulted on 25 November 2022.
- 7 "Algeria threatens to cut gas contract with Spain". Euractiv Website, 28 April 2022, https://www.euractiv.com/section/globaleurope/news/algeria-threatens-to-cut-gas-contract-with-spain/, last consulted on 25 November 2022.
- 8 "Distribution of arms imports into Algeria between 2017 and 2021, by country of origin". Statista Website, https://www.statista.com/statistics/1244018/distribution-of-arms-imports-into-algeria-by-country-of-origin/, last consulted 25 November 2022.
- 9 Karam, S. (2022) "Military Drills in Gas-Rich Algeria Put Focus on Russian Ties". *Bloomberg*, 17 November, https://www.bloomberg.com/news/articles/2022-11-17/military-drills-in-gas-rich-algeria-put-focus-on-russian-ties?lead-Source=uverify%20wall, last consulted 24 November 2022.
- 10 Trout, K., Muttitt, G., Lafleur, D., et al., (2022), "Existing fossil fuel extraction would warm the world beyond 1.5 °C". *Environmental Research Letters*, 17 (6), 064010. DOI: 10.1088/1748-9326/ac6228
- 11 Stevenson, P., Cockayne, J. (2022) "Egypt: yet more wind & hydrogen deals." *MEES*, 65 / 46, 18 November https://www.mees.com/2022/11/18/economics-finance/egypt-yet-more-wind-hydrogen-deals/43cc81e0-673e-11ed-ae6a-5dd235f6d74, last consulted 25 November 2022.
- 12 Freedom House Index, Egypt, 2022, https://freedomhouse.org/country/egypt last consulted 25 November 2022.
- 13 Dupont, C., and S Oberthür (eds) (2015) Decarbonization in the European Union: Internal Policies and External Strategies, Palgrave Macmillan, p.184.
- 14Ouki, M., (2019) "Algerian Gas in Transition: domestic transformation and changing gas export potential", *The Oxford Institute for Energy Studies*, NG151, p.20, DOI: 10.26889/9781784671457
- 15 "Le premier ministre Mario Draghi obtient un accord de l'Algérie pour plus de gaz à l'Italie. " Sud-Ouest International, 11 April 2022.
- 16 "Egypt Targets Gas Flares to Help Meet Increased Energy Demand" World Bank, 12 February 2018, , https://www.worldbank.org/en/topic/extractiveindustries/brief/egypt-targets-gas-flares-to-help-meet-increased-energy-demand, Last consulted 25 November 2022.
- 17 "Ukraine : l'Algérie prête à fournir plus de gaz à l'Union européenne en cas de difficultés' " Sud-Ouest International, 11 April 2022, https://www.sudouest.fr/international/ukraine-l-algerie-prete-a-fournir-plus-de-gaz-a-l-union-europeenne-en-cas-de-difficultes9419101.ph, last consulted on 25 November 2022.
- 18 Low-carbon hydrogen includes green hydrogen (hydrogen from renewable electricity), blue hydrogen (hydrogen from fossil fuels with CO2 emissions reduced by the use of Carbon Capture Use and Storage) and aqua hydrogen (hydrogen from fossil fuels via the new technology)
- 19 European Commission, 15 June 2022, EU and Egypt step up cooperation on climate, energy and the green transition, https://ec.europa.eu/commission/presscorner/detail/en/IP\_22\_3662
- 20 Kobin, M.k., and Gil, S., 13 June 2022, Green Hydrogen: A key investment for the energy transition, World Bank Blogs, https://blogs.worldbank.org/ppps/green-hydrogen-key-investment-energy-transition, last consulted on 25 No-

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21 "BP Statistical Review of World Energy 2022", (2022). BP Website , https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2022-full-report.pdf

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THE RUSSIA-UKRAINE WAR: AN INFLECTION POINT FOR SUSTAINABLE ENERGY TRANSITIONS

#### SUMMARY





POLICY BRIEF February 2023

SUMMARY



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POLICY BRIEF February 2023



CLIMATE MAINSTREAMING: CLIMATE AND DIGITAL POLICY







AUTHOR

#### TALKING GREEN IN EUROPE