

# Europe's Energy Crisis and the Opportunity for an EU-Algeria Renewable Energy Cooperation

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**BUILDING RESILIENCE IN THE SOUTH SERIES** – POLICY BRIEF

*By Yasmine Akrimi – North Africa Research Analyst*

## INTRODUCTION

Europe is witnessing an unprecedented energy crisis with gas prices up by eight times their ten-year average. As of August 2022, EU countries have spent 281 billion euros to curb the impact of the crisis on households and businesses. A significant portion of the crisis is due to Europe's overreliance on Russian hydrocarbons, specifically following the Russian Gazprom's indefinite suspension of its pipeline flow to Europe, a way to leverage European sanctions following the invasion of Ukraine. As the International Energy Agency (IEA) noted "In 2021, the European Union imported 155 billion cubic meters of natural gas from Russia, accounting for around 45% of EU gas imports and close to 40% of its total gas consumption."<sup>1</sup>

Amongst the potential winners of the geopolitical confrontation between Russia and the West is Algeria. As the third largest supplier of natural gas to Europe after Russia and Norway, Algeria is positioning itself as an increasingly credible alternative to Russian gas. European Council president Charles Michel recently praised the north-African country as a "reliable" energy partner. Yet, while the EU

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<sup>1</sup> <https://www.iea.org/news/how-europe-can-cut-natural-gas-imports-from-russia-significantly-within-a-year>

plans to switch to renewable energies long-term, Algeria is torn between the need to diversify its economy and cut its reliance on energy exports, and the availability of hydrocarbon revenues. This paper suggests a future cooperation prioritizing renewable energies could benefit both partners.

## **THE CURRENT LIMITS OF THE ALGERIA-EU COOPERATION IN HYDROCARBONS**

Algeria is the largest African gas exporter to Europe with nearly 19 billion cubic meters of exported natural gas in 2021, compared to an average of 15 billion cubic meters between 2015 and 2018.<sup>2</sup> With Italy being the main European client, Algeria and Italy have signed a contract in July 2022 to increase Algerian gas pipeline exports to Europe. Worth an estimated 4 billion dollars, the contract allows for the development of a site situated in the Berkine basin and should generate more than a billion barrels of hydrocarbons.

Yet, existing shortcomings could halt the cooperation between the north African country and Europe. Algeria is witnessing a reduction in natural gas production on the supply side. Following the rapid growth of the late 1990s, marketed production decreased and remained stagnant since the 2000s.

A 2019 report by the Oxford Institute for Energy Studies (OIES) highlights the main factors behind this decline:

- The maturing of old fields that have been in production for several decades, especially Algeria's largest gas field, Hassi R'Mel. [...]
- Lack of or insufficient investments in secondary and tertiary recovery technologies to improve current low recovery rates.
- Poor rate of new discoveries and proving up of new gas reserves due mainly to an unfavourable climate for international investments in upstream developments.
- Bureaucratic problems resulting in long delays in project development and implementation."

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<sup>2</sup> <https://www.statista.com/statistics/1292911/annual-import-volume-of-natural-gas-from-algeria-to-eu/#:~:text=From%20January%20to%20November%202021,of%20natural%20gas%20from%20Algeria.>  
Europe's Energy Crisis and the Opportunity for an EU-Algeria Renewable Energies' Cooperation |  
Yasmine Akrimi

The report expresses doubts regarding the country's "ability to maintain its current gas export commitments and potentially develop new export opportunities".

Meanwhile, Algeria's domestic consumption has increased by around 10% between 2013 and 2018 and is anticipated to climb by another 50% by 2028, according to the projections of the Commission de Régulation de l'Électricité et du Gaz (CREG), Algeria's electricity and gas utility regulator. The share of the domestic gas market increased by 70% in a decade (2008 and 2018) at an average annual growth rate of over 5%.<sup>3</sup>

Relying on hydrocarbons only, Algeria is hence likely to struggle to meet EU import demands. Even in the scenario of a boost in gas production, competition from American and Qatari hydrocarbon supplies in a European gas market transitioning towards renewable energies will likely be problematic for the North African giant.

## **THE POTENTIAL FOR RENEWABLE ENERGY COOPERATION BETWEEN ALGERIA AND THE EU**

As a rentier economy, Algeria is dependent on ever-fluctuating energy prices. State revenues dramatically decreased when hydrocarbon prices fell between 2014 and 2021, depriving the Algerian government from resources it traditionally relies on to ensure social peace and maintain the state's preponderant role in the Algerian economy. The Ukrainian war has resulted in skyrocketing oil and gas prices, allowing for the revival of hydrocarbon revenues for resource-rich countries.

A threefold increase in oil prices year-on-year means Algeria is projected to rake in 55.6 billion euros in hydrocarbon revenues in 2022, up from 32.7 billion euros last year, according to the International Monetary Fund (IMF). But even as buyer countries are accelerating efforts to wean their economies off oil and gas, Algeria has done little to reduce its dependence on hydrocarbons – leaving it dangerously exposed to global price shocks. Hydrocarbons still account for 95% of the country's exports and more than 50% of the state's budget.

The share of renewable energy in Algeria's overall energy mix remains low. In 2021, 99% of electricity production was gas-based. The country aims to increase

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<sup>3</sup> <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2019/10/Algerian-Gas-in-Transition-NG-151.pdf>

the share of renewable energy to 27% by 2035, compared to less than 2% currently. As part of the Paris Agreement on climate change, Algeria is committed to reducing greenhouse gas emissions between 7% to 22% over the decade 2020-2030.

To do so, Algeria has various income diversification possibilities, including natural resources, abundant sunshine, and hydrocarbon energy capable of boosting the country's reindustrialization.<sup>4</sup> According to a 2005 study by the German Aerospace Center (DLR), Algeria has the highest concentrated solar power (CSP) production potential in the world, as well as significant photovoltaic (PV) and wind energy capacities. To diversify its energy mix dominated by gas and oil, Algeria aims to reach 15,000 MW of solar energy by 2035. The country has also signed a partnership with Germany whose objective is to produce, and eventually export green hydrogen via the pipelines connecting it to Europe.

In parallel, the EU's Green Deal is aiming for climate neutrality by 2050 and a cut in Europe's greenhouse-gas emissions by at least 55% by 2030.<sup>5</sup> The Fit for 55 package, a set of proposals by the Commission to revise and update EU legislation, suggests initiatives to increase the current EU-level target of at least 32% of renewable energy sources in the overall energy mix to a minimum of 40% by 2030. In parallel, the REPowerEU Plan, a set of financial and legal measures in response to the global energy market disruption, aims to accelerate the EU's green energy transition with investment in clean energy production, energy efficiency projects as well as through the diversification of Europe's energy suppliers.<sup>6</sup>

A long-term cooperation on renewable energies seems to be on both parties' interests, although the pressing issue of Europe's energy security and the possibility to increase Algeria's gas export to the EU remain a priority. A declaration made by the EU's Commissioner for Energy, Kadri Simson, in Algiers last Tuesday 11 October confirms the Union's intention to expand the nature of its partnership with Algeria on the long term:

*'We are offering Algeria a long-term strategic partnership, which should not be limited to natural gas alone. The EU wants, for instance, to help Algeria reduce*

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<sup>4</sup> <https://www.bruegel.org/blog-post/reinvigorating-eu-algeria-energy-cooperation>

<sup>5</sup> <https://www.consilium.europa.eu/en/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/>

<sup>6</sup> [https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/repowereu-affordable-secure-and-sustainable-energy-europe\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/repowereu-affordable-secure-and-sustainable-energy-europe_en)

Europe's Energy Crisis and the Opportunity for an EU-Algeria Renewable Energies' Cooperation |

Yasmine Akrimi

*its methane emissions and increase its electricity production from renewable energy.'*

In conclusion, while Algeria has little spare capacity to increase its hydrocarbon exports in the short term, it holds far more promise for Europe as a long-term partner in renewable energy. The EU will increasingly invest in countries that prioritize renewable energy projects in order both to decouple its energy sector from Russian hydrocarbons and fit its long-term climate action objectives. In tandem, investing in renewable energy sources could translate into considerable socioeconomic benefits for Algeria by freeing up large volumes of natural gas, currently used for domestic electricity generation, for additional exports to the EU.

## Recommendations

- The EU should continue supporting Algeria in the creation of favorable investment conditions as to allow for both countries' transition towards renewable energies. One way could be a joint cooperation to improve Algeria's investment climate by aligning the terms of public tenders and power purchase agreements with international best practice.
- Algeria and the EU should work on an agreement entailing the necessity to install renewable energy production capacities equivalent to the volumes of fossil fuels supplied to Europe. Such initiatives could involve the construction of solar and wind installations – and perhaps even concentrated solar power stations, whose cost might be balanced by their capacity to provide power for several hours after sunset.
- Renewable energies require high technological capacities and high investment costs. Through the European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD), the EU should boost Algerian investment in thermal power plants, considering the price of the solar kilowatt-hour is lower than the price of energy production from fossil fuels. One avenue could be a partnership through technology transfer to train local researchers in the fields of new energy technologies in exchange for an Algerian engagement to use part of the dividends from hydrocarbon exports to finance the energy transition. Europe could also accompany Algeria in creating opportunities for pilot projects involving green hydrogen through exploring ways to exploit low-cost energy in industrial activities.

## About the BIC

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## Author

Yasmine Akrimi | North Africa Research Analyst



 @BICBrussels  @bicrhr  BIC

 [www.bic-rhr.com](http://www.bic-rhr.com)  [info@bic-rhr.com](mailto:info@bic-rhr.com)

 Avenue Louise, 89 1050, Brussels, Belgium  Tel: +32 027258466