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MEDITERRANEAN ENERGY DEVELOPMENTS AMIDST THE WAR IN UKRAINE

ARTICLE

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2022 will be a year to be remembered, not only in Europe but everywhere. The energy history book will record how Europe, until February 2022 dependent on Russian gas by almost 40%, reacted to overcome that dependence.

This article will focus on the European Union (EU) and Mediterranean energy collaboration that was shaped immediately after Russia launched the war against Ukraine in February 2022.

In 2021, EU countries consumed 551 billion cubic meters (bcm) of gas and imported 167 bcm of gas from Russia. Overall, the EU imported 83% of its natural gas, and 40% of its gas consumption was from Russia. Europe used to call it interdependence.

With the beginning of the war, the EU was faced with an existential crisis and had to act – and did so. To the surprise of many who criticized it for being bureaucratic and waiting too long to make decisions, many steps were taken, including the REPowerEU,[1] which was presented as the roadmap to break away from Russian monopoly and accelerate deployment of renewable energies. At the same time, hard targets were set to overcome the energy crisis: cutting Russian gas by two thirds by end of 2022 and ending reliance by 2027 and reducing gas consumption by 15% in 2022. A huge task that led to around 12% of Russian gas flowing into the EU in 2022. That was a great success.

According to an International Energy Agency (IEA) report released in March 2023, natural gas demand in the EU fell by 55 bcm (13%) in 2022.[2] And the report detailed the sectors in which these reductions happened, as shown in the table below:

Sectors	Reduction
Power sector – RE acceleration 50GW and lower electricity demand but gas to power increased	25 bcm
Buildings – heating spaces low degrees/weather helped, behavior and fuel switching – efficiency and heat pumps	28 bcm
Industry	25 bcm

Compiled by the author, based on the report *Europe energy crisis. What factors drove the record fall in natural gas demand in 2022?* International Energy Agency, 14 March 2023

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[1] https://ec.europa.eu/commission/presscorner/detail/en/IP_22_3131

[2] https://www.iea.org/commentaries/europe-s-energy-crisis-what-factors-drove-the-record-fall-in-natural-gas-demand-in-2022

In short, the EU managed to reduce its dependence on Russia gas in 2022, as well as its gas consumption. The question remains as to how sustainable this is.

Recently, there have been many reports and analyses looking at the future of energy demand in the EU. The European Commission (EC) itself expects the EU's demand for gas to be **reduced by 30% by 2030** with a massive speed-up and scale-up in renewable energy. The IEA in its latest World Energy Outlook showed a drop in the EU's gas demand varying from **23% to 70% between 2030 and 2050;** and BP's 2023 Energy Outlook showed a fall in the EU's natural gas demand **by 2030** between **20% and 50%** compared to 2019.

Different scenarios examined by different agencies show that a decline in demand is permanent in the EU. So, what does that mean for gas producers aiming to sell to Europe, and in particular Middle Eastern and North African countries? Mediterranean countries such as Algeria, Libya, Israel, Egypt, Cyprus, even Lebanon, are building high hopes on their potential to export gas to Europe. The EU needs gas until 2030, but after that it is another story. Countries producing gas in the region now will benefit. Other countries might be at risk of depending on finding a European market ready to accept their gas beyond 2030. Planning new gas projects after 2030 should be realistic and not rely too much on the European market.

However, after the large-scale campaign led by the EU to accelerate the energy transition and divert from fossil fuel, the war in Ukraine brought the issue of energy security back to the forefront and there was a rush from European countries and the EC to turn to their neighborhood to ask countries to pump more gas to secure the needs of the EU.

The EU's energy diversification plan in 2022

Part of the EU's plan to break the dependence on Russian gas was to look for other countries and companies to provide the EU market with the quantities of gas needed. So, it turned to its closest neighbors in North Africa and the Middle East (MENA). There were country level actions and others orchestrated by the EU leadership.

In April 2022, Mario Draghi, Prime Minister of Italy, landed in Algiers to talk about additional gas supplies from the North African gas rich country. Italy used to get 40% of its gas needs from Russia, buying 30 bcm in 2021, so it had to act fast to replace that gas. Algeria provided 22.5 bcm to Italy in 2021. In January 2023, Giorgia Meloni, by then the new Italian Prime Minister, made a state visit to Algeria and Libya to sign energy deals. Algeria sends gas to Italy through what is called the Transmed pipeline, which has a capacity of 33 bcm and started commercial operations in 1983. Italy is connected to Libya through the Greenstream pipeline, which has an annual capacity of 8 bcm and started up in 2004.

The deal between Sonatrach, the Algerian national oil company, and Eni, Italy's number one energy company, came at the right time for Algeria, which was struggling to find new investments for its hydrocarbon sector. This deal came in line with Algeria's 40 billion USD

five-year plan (2023-2027),[3] of which 30 billion USD was allocated to exploration and production activities to increase short- and medium-term production levels and develop new projects, especially gas projects. The two deals between Sonatrach and Eni emphasized increasing the capacity of Algeria to produce gas, especially **liquefied natural gas (LNG), but also to identify activities to reduce greenhouse gas emissions.** Eni and Sonatrach will study ways to increase the transport capacity for existing gas supplies and also work on a new pipeline to **transport hydrogen,** and they will work together on laying an undersea **electrical cable** connecting the two countries. Thus, the deals are a mix of fossil fuel incentives and energy transition and climate change measures. Algeria has also seen interest from Occidental, a US oil company, Eni and Totalenergies, which in June 2022 committed to a 25-year deal of 4 billion USD to develop the oil and gas sector in the country.

At the same time, Eni and the Libyan national oil corporation signed an 8 billion USD deal for over 25 years, which includes investing in the production of new projects, which should start pumping gas by 2026, carbon capture and solar energy.

Over the next three to five years, both Algeria and Libya could potentially make 10 to 15 bcm available for exports through the TransMed and Greenstream. However, any sustained large gas supply expansion from Algeria and Libya to Italy and other parts of Europe will require new long-term international gas development investments.[4]

EU and the Eastern Mediterranean gas

In parallel to the efforts made by countries such as Italy looking for alternatives for Russian gas, the EC also sealed deals. In June 2022, the President of the European Commission Ursula von der Leyen and the European Commissioner for Energy Kadri Simson landed in Cairo to sign a Memorandum of Understanding (M0U) with Israel and Egypt, which will allow for Israel to send its gas to Europe via the Egyptian liquification terminals. There was no clear mention of the amounts that will be sold to the EU, but there were provisions that pushed for the EU to encourage European oil companies to invest in the gas sector in the Eastern Mediterranean, in addition to many provisions related to climate change. Ursula von der Leyen tweeted that this deal will contribute to the energy security of Europe but also noted that there will be infrastructures for renewables, the energy of the future, as she wrote.

The Eastern Mediterranean has the potential to play a role in providing gas to Europe in the short term via Egypt (producing around 67 bcm) and Israel (20 bcm), the only two producers in the region, and perhaps beyond Europe in the medium to long term if we were to believe that gas will remain as a transition fuel for quite some time. The region is composed of seven countries: Egypt-Israel-Lebanon-Syria-Cyprus-Turkey-Greece, with recoverable gas since 1999 around 86 tcf (2,435 bcm), with a potential to go to 282 tcf. Egypt has two liquification terminals that allow for its gas and Israeli gas to flow to Europe Damietta, owned by EGAS and the EGPC (50%) and Eni (50%), has a capacity of 7.5 bcm. Idku, the Egyptian Liquefied Natural Gas

[3] https://a9w7k6q9.stackpathcdn.com/wpcms/wp-content/uploads/2023/03/Italy-and-its-North-African-gas-interconnections.pdf

[4] https://a9w7k6q9.stackpathcdn.com/wpcms/wp-content/uploads/2023/03/Italy-and-its-North-African-gas-interconnections.pdf

Company (ELNG) – a joint venture between EGAS, Shell, Petronas, and Engie – holds ownership of the project and facilities at both trains. Train-1 is owned by EBNGL, while Train-2 is owned by INGL, which includes Shell and Petronas (38% each), along with EGAS and EGPC (12% each), and has a capacity of 9.9 bcm.

Besides, there are other discoveries in the Eastern Mediterranean that have not been exploited. See table below:

Cyprus

Field name	Capacity and year of discovery	Ownership
Aphrodite	4.5 tcf in 2011	Chevron, NewMed and Shell
Cronos 1	2.5 tcf in 2022	Eni and Total block 6
Calypso	3 tcf in 2018	Total and Eni block 6
Glaucus	5 to 8 tcf in 2022	Exxon Mobil and QE block 10

Israel

Field name	Capacity and year of discovery	Ownership
Karish North	1.14 tcf in 2020	Energean
Athena	0.2 tcf (8 bcm) in 2022	Energean
Hermes	0.5 tcf (7 to 15 bcm) in 2022	Energean
Zeus	0.4 tcf in 2022	Energean

Compiled by the author.

The only current route to transport Eastern Mediterranean gas to Europe is through the Egyptian LNG export terminals, and there are pipelines that link Israel to Jordan and Egypt. The Arab gas pipeline is being used between Egypt and Jordan only, but it was rehabilitated from the Syrian and Lebanese side in 2021 and 2022.

Other potential routes are a pipeline through Turkey via onshore or offshore pipelines for Turkish and European markets, the EastMed pipeline via Israel to Cyprus and Greece, and floating LNGs. All have political, technical and financial problems that would make all these routes impossible to build, at least in the short term.

Opportunities amidst the crisis

The Russian war on Ukraine and the need of Europe and other countries for new sourced gas facilitated a deal between rival countries Lebanon and Israel. For more than a decade, both countries were in dispute over 860 skm of maritime borders that were thought to contain gas. The energy crisis gave the nudge for both sides to be flexible and reach a deal that was sponsored by the United States. The deal was signed in October 2022, and made it possible for the UK-Greek company Energean to start producing gas from the Karish field, and for Lebanon to resume hydrocarbon activities and start exploration drilling in block 9 near the newly agreed maritime border. Both Israel and Lebanon hope to be among the countries that will provide Europe with the gas that it needs.

Turkey as an energy hub for Russian gas

However, not only the EU had an eye on the Eastern Mediterranean. The President of Russia Vladimir Putin expressed the idea that he would like to see Turkey becoming a gas hub by expanding the Turkstream capacities under the Black Sea, to be added to the Azeri gas that is flowing to Europe via Turkey and expand its flows after the MoU that was signed between the EC and Azerbaijan in July 2022. Two active natural gas pipeline systems carry gas from Russia to Turkey. Turkstream is designed to carry 31.5 bcm per year and supplies gas to both Europe and Turkey via two pipelines, while the BlueStream has an annual capacity of 16 bcm and covers Turkey's domestic gas demand.

Mediterranean gas and energy security

Countries in Europe and the EC reached out to the southern neighbors to find alternatives to Russian gas. Energy security prevailed for the moment. However, the MENA region is known for its political tensions that could impact the notion of energy security that Europe is looking for. Political tensions between Turkey and its neighbors in the East Med have an impact on cooperation and development related to the energy sector in the region. The ongoing political stalemate and instability in Libya raises questions around reliability and sustainability and whether Libya be able to provide gas to Italy as envisaged without interruptions. Moreover, the rivalry between Morocco and Algeria and reactions from the EU may put the new deals at risk. Does Europe have the appetite and ability to play the role of peacemaker in the region in the name of energy security? Most probably the answer is negative. The EU wants the gas now, but is more than ever convinced that the energy transition path is an energy independence path.