



Background Paper

Energy Security in SE Europe in View of Rising Geopolitical Tensions



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BACKGROUND PAPER

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Introduction

Europe's energy security remains a key concern despite the progress the region has made in weaning itself off Russia's gas imports. Throughout 2022 and 2023, European countries have significantly increased their reliance on alternative energy sources, reducing their dependence on Russian natural gas and swiftly replenishing their gas storage levels.

At the same time, relatively mild weather last winter meant demand for fossil fuels remained low, helping with the energy transition efforts in many countries. However, pressing questions remain on whether all these preparations will be sufficient to face the coming months and the next years. Will Europe be able to tackle the potential challenges that the energy market could pose in 2024 and beyond? After fears that Europe could run out of gas in 2022 after Russia cut gas exports following the start of the Ukraine conflict, its energy position has been looking much more stable. Norway has partly replaced Russia as the largest gas supplier, while a combination of mild winter temperatures, lower energy prices and the boost of liquified natural gas (LNG) imports from international suppliers ensured Europe survived the past winter and could plan ahead.

By and large, this year the EU is better prepared — but now a second war also threatens to roil its energy markets. The conflict between Israel and Hamas threatens to disrupt Europe's relationships with the Middle East, or even draw Iran into direct confrontation with Israel and its Western partners. While markets are relatively calm for now, either of those scenarios could cause chaos. Nevertheless, Europe is "equipped to face oil and diesel global market tightness," Energy Commissioner Kadri Simson recently told. Officials have learned lessons from Russia's war on Ukraine, and are working to build "a good understanding of all our vulnerabilities to best address them and how we can be prepared for any incidents or emergencies". [\(1\)](#)

The current Background will attempt to shed light on energy security in (SE) Europe and highlight the vital role that the south-eastern part of Europe can play as a regional energy hub in the coming years in the midst of a geopolitically fragmented world, where two wars are now underway, raising wider issues of security of energy supply.

Amid Russia's ongoing war on Ukraine, Hamas's terrorist attack on Israel and Israel's military response in Gaza has significant and challenging repercussions for both countries and for US support for Ukraine's defense. Both Ukraine and Russia are seeking political and diplomatic support from the international community, which is watching closely to see who supports

and who condemns Hamas and Israeli actions. At the same time, the war in Gaza threatens to take global attention and resources away from Ukraine’s efforts to defend itself. This change in focus could lead to a diminution of economic and military assistance for that embattled country.

1. Energy Security in Europe

EU officials have held a slew of meetings with oil-producing nations in recent weeks, both old friends like Norway and emerging partners, such as Algeria and Nigeria, to get ahead of any potential disruptions, Kadri Simson said. “After the Gaza crisis unfolded, we are faced with two conflicts in the European neighborhood. The Eastern Mediterranean is an important theater for European energy security, as Europe’s energy transition is still entangled in geopolitical uncertainties”, she said, attributing the lack of drama in the markets to “the preparedness and crisis management that the EU put in place to respond to Russia’s energy blackmail”.

Figure 1: ICE Brent Crude Oil Front Month Price (\$/barrel) over the Last 6 Months



Sources: ICE, Financial Times

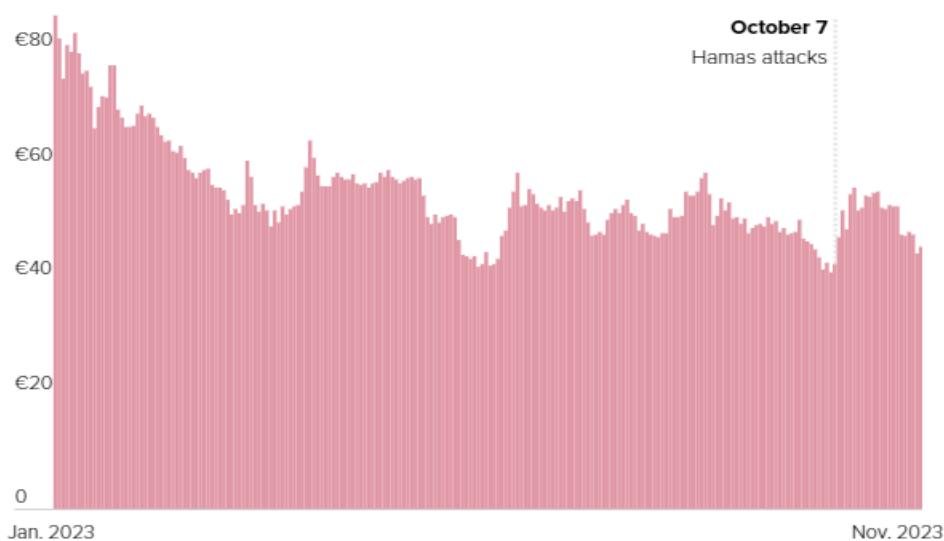
Fighting in Gaza and, to a lesser extent, along Israel’s northern border with Lebanon has had only a limited impact on oil and gas markets. Prices initially rose on the news of the attack by Hamas militants on October 7 and Israel’s massive response, but key crude benchmark Brent dropped back by 4.2% that week to around \$81 per barrel, around the levels seen before the start of the violence. Markets have avoided a repeat of 1973, when the Yom Kippur War

between Israel and its neighbors prompted the big Arab producers, led by Saudi Arabia, to embargo their exports to Israel's allies. Gulf country relations with Israel have improved markedly in the past 50 years. The UAE and Bahrain recognized its sovereignty under the 2020 Abraham Accords, while Saudi Arabia was, until recently, in negotiations to do the same.

Traders are therefore betting that as long as the conflict doesn't expand, supplies of oil will remain more or less stable, said Viktor Katona, lead crude analyst at energy intelligence firm Kpler. The risk stems more from Iran, he said. In a worst case scenario, an expansion of the conflict could cause Iran to disrupt shipping from Gulf Arab countries through the Strait of Hormuz. Iran's own crude oil, while sanctioned by the West, is exported in large quantities to China. "If Israel starts to strike the Iranian territory and Iran as a consequence needs to export less, then China doesn't have enough crude and needs to buy from somewhere else", sending global prices rocketing, Katona said.

While Iran's theocratic leadership has consistently vowed to destroy the state of Israel and publicly endorsed Hamas' attacks recently, it denies involvement in their planning and execution. The Israel Defense Forces say they have carried out strikes on militant groups in Syria with close links to Iran's Islamic Revolutionary Guard Corps, but have so far stopped short of hitting targets inside Iran itself.

Figure 2: Daily Price (€/MWh) of a Month-Ahead Contract in the Dutch TTF in 2023 as of November 24, 2023



Source: Market Watch

Gas markets felt a more immediate impact from the war. Israel turned off the taps at its Tamar offshore gas field in the hours following Hamas's surprise attack. While Israel produces only relatively small quantities of natural gas — around 21 billion cubic meters last year, compared to Russia's 618 billion — it is a key exporter to neighboring Egypt, and the downtime worsened regular rolling power outages there. The flow has since been resumed, albeit in smaller quantities.

Any escalation with Iran could affect gas as well as oil markets, given a third of the world's LNG and a sixth of its oil is shipped through the Strait of Hormuz. "If things stay as they are there is no problem, but if there is a war where Iran is included and they [block trade through] the Hormuz strait then prices will go up for sure", said one EU diplomat with knowledge of internal energy strategy talks. However, "all the big players want to avoid escalation, Iran wants to avoid this", because of threat of sanctions, the envoy insisted.

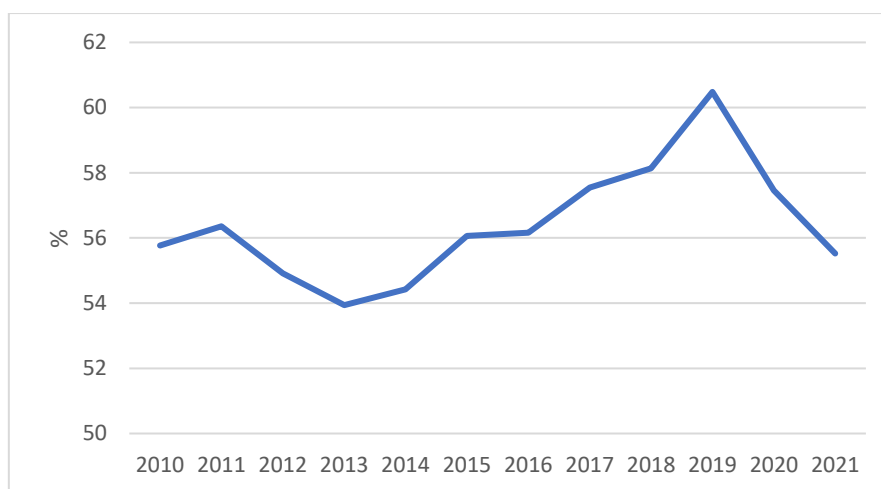
Absent that dire scenario, the impact on EU gas markets is likely to be limited, says Tom Marzec-Manser, head of gas analytics at commodities intelligence company ICIS — but more because of the last conflict than the most recent one. "From a European gas pricing perspective, we are still looking relatively OK and that's been driven largely by weak demand. Many industrial consumers continue to use noticeably less gas than they did prior to the energy crisis last year, so consumption in Europe has remained low", he said.

According to the European Commission, member states collectively shaved almost 20% from their natural gas use in the run-up to last winter, with industry slowing output and renewable power playing a much larger role in electricity generation. Despite that, consumption actually rose in October for the first time since the start of the war, in an early sign that businesses could be tentatively trying to restore lost productivity (2). It is worth noting that the EU consumed a total of 113.2 bcm gas in Q1 2023, 17.8 bcm more than in Q4 2022, while gas consumption fell by 13% year-on-year, following on a 8% decline year-on-year in the previous quarter. But even though the bloc's gas reserves are more than 99% full ahead of schedule, prices have still remained stubbornly high across the continent compared to other regions. That means Europeans are more at risk of short-term spikes in the cost of energy, with industry potentially having to slow down again if bills become unaffordable. (3)

In 2021, the energy dependence of the EU-27 stood at 55.5%, very close to 2010 levels. As illustrated in Figure 3, the evolution of EU-27 energy dependence has not been constant over 2010-2021; however, it has continuously stood above 54% since 2010. The policy of the

EU is aimed at minimizing its exposure on irregularities in energy supply due to the growing dependence on energy imports of or via politically unstable regions. However, this is not actually happening as the EU continues to be highly dependent on imports from unstable regions or even from countries where foreign affairs relations have not been kept at a healthy level, such as Russia, while, at the same time, economic sanctions against Russia have not been all that effective judging from the continuous growth of the country's economy.

Figure 3: Evolution of the EU Energy Dependence (%) over 2010-2021



Sources: Eurostat, IENE

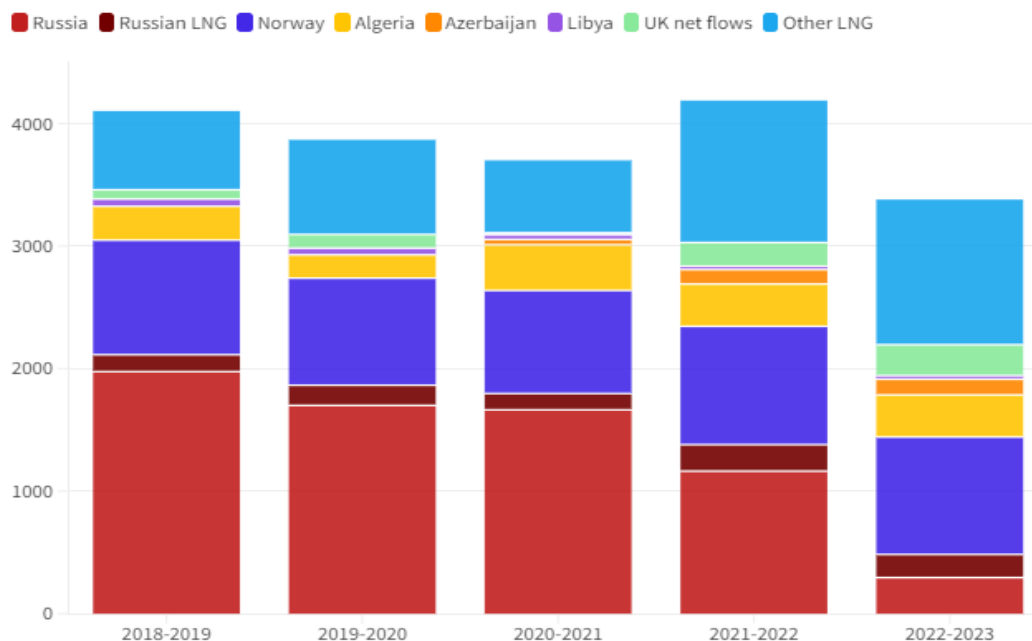
2. How the EU Managed Until Now

The two main elements in the EU's management of the dramatic drop in Russian gas in the last two years are an increase in LNG imports and sustained gas demand reduction. The LNG share of total gas imports doubled, from 20% in 2018-2019 to 40% in the 12 months from August 2022 to July 2023. This was largely driven by imports from the US (LNG imports increased sixfold from 100 TWh to 600 TWh). Russian LNG imports have also increased, but this has nowhere near compensated for the drop in pipeline imports (Figures 4 and 5).

So, we see two major events happening at the same time. First, a clear differentiation of imports in terms of origin and secondly, a sharp drop in demand. Gas demand, meanwhile, was 12% lower in 2022 than the 2019-2021 average, driven by falling industrial and household gas demand. In 2023, the greater availability of alternative power generation facilitated significant gas demand reduction also in the power sector. In the second quarter

of 2023, gas demand was 19% below the 2019-2021 average, with gas demand for power generation 17% down.

Figure 4: EU-27 Natural Gas Imports by Source (TWh), August 2022 – July 2023

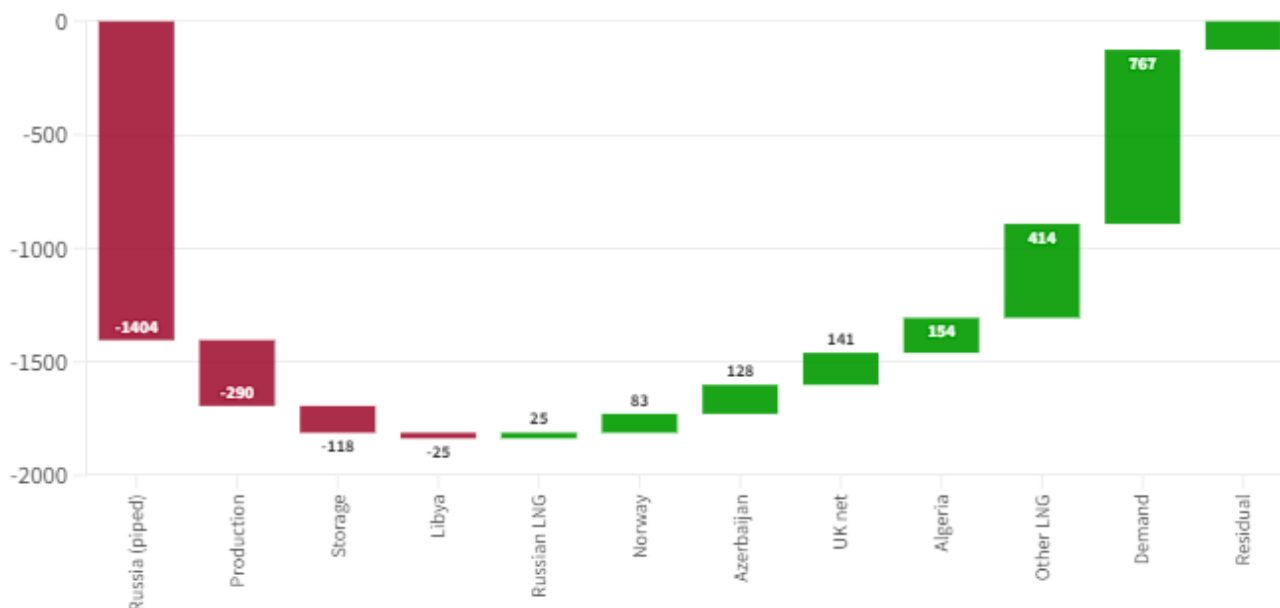


Source: Bruegel

A relatively warm winter helped reduce household gas demand. It is very difficult to isolate and attribute demand reductions to temperature because of the range of unusual circumstances occurring at the same time. However, using linear regression analysis, Bruegel links 35% of the EU reduction in gas demand during winter 2022-2023 to warmer weather. There is significant variation by country, with about 20% of the reduction in Germany driven by weather, and about 60% in France. Global warming of course increases the likelihood that each winter is now warmer than the previous ten-year average.

Figure 5 compares the components of the EU gas balance (supply minus demand) during the 12 months from August 2022 to July 2023 with a non-crisis period (three years earlier, 2019-2020). Gas demand dropped by 767 TWh, almost twice the increase in imported LNG.

Figure 5: EU Gas Balances with Component Change (August 2019-July 2020 vs August 2022-July 2023, in TWh)



Source: Bruegel

3. How Well Prepared is the EU for the Coming Winter?

If the EU ends the winter with at least 30% of gas still in storage, it can be considered as ending the winter without serious security of supply threats. Two main risks to the EU gas balance can be evaluated. The first is an immediate end to all remaining Russian gas imports (LNG and pipeline) as of 1 October 2024, and the second is a scenario in which this happens alongside a particularly cold winter (equivalent to the coldest winter in Europe in the last ten years), which increases demand by 12% (estimated using a linear regression on historic daily data).

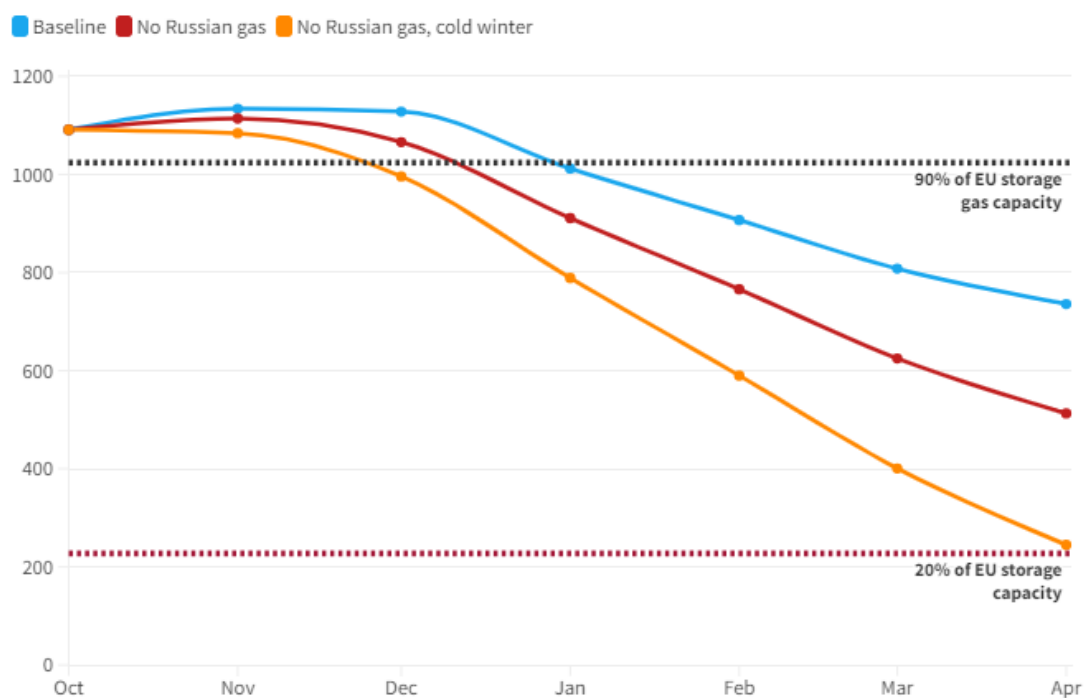
Figure 6 shows that current storage levels put the EU in a safe position. In the worst-case scenario, the EU would end up with storage sites at above 20% of capacity by 1 April 2024, while in the eventuality of no Russian imports and gas demand similar to that in 2022, the EU would be well above 40% of storage capacity. These estimates are conservative as they do not account for a price-induced readjustment of supply and demand, i.e. if prices are higher than last winter, the EU will attract more LNG and/or reduce demand.

Other factors suggest the potential for gas demand to be structurally lower than last year. The return of several French nuclear plants after an extraordinary period of maintenance, and the increased deployment of solar, wind and heat pumps will reduce gas demand for

power generation. The record number of heat pumps installed by households in 2022 will reduce gas demand for heating. Bruegel estimates that the combination of these elements will result in a 3.3% reduction compared to last year's winter demand, equivalent to 74 TWh.

Though the EU is not likely to face substantial supply risks this winter, the ongoing impacts of gas disruption will continue to be felt through higher prices. While wholesale gas prices have decreased substantially, the prices that households and many businesses actually pay remain elevated because of a time lag in adjustment of retail contracts to wholesale prices. The consequence is that demand reduction will be encouraged, but households and businesses will continue to face elevated prices.

Figure 6: Scenario Analysis for EU Gas Storage, October 2023 - April 2024 (TWh)



Source: Bruegel

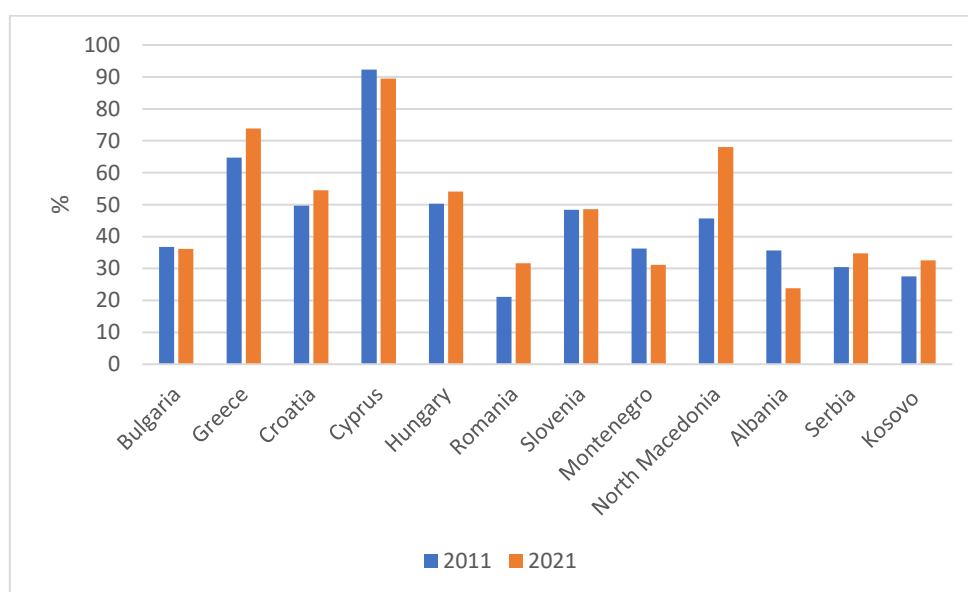
4. Energy Security in SE Europe

In terms of security of energy supply, the SEE region as a whole appears more vulnerable than the rest of Europe (mainly Western European countries). This is due to the as yet limited import options, mainly for gas, the difficult morphology of the various countries, and the region's reliance, with the exception of Turkey which is well supplied from 7 different entry points, on a small number of oil and gas suppliers. Energy security in SEE can be strengthened by implementing a broad plan (already in progress) for improving

interconnectivity for both electricity and gas across the region and also by diversifying further the energy mix of the various countries. Lately, and on account of latest experience, the list of energy security risks in SEE has been broadened to include physical hazards (i.e. earthquakes, floods, storms) as well as terrorist threats. (4)

Regarding SEE countries, the overall energy dependence also varies significantly and averaged at 46.6% in 2021, taking into account the countries shown in Figure 7. These figures are issued by Eurostat, along with the publication of the detailed 2021 annual results on energy supply, transformation and consumption in the EU.

Figure 7: Energy Dependence (%) in SE Europe, 2011 and 2021



Sources: Eurostat, IENE

Special reference should also be made to LNG because of its growing importance for the secure operation of various SEE countries' gas networks and because of its potentially crucial role in market development and competition. In this context, all ongoing or planned gas interconnection projects are examined together with the major cross-country gas pipelines currently under construction or in a development phase. In view of several new projects under development in the region, a redefinition of the Southern Gas Corridor is necessary by mapping all new potential gas supply sources and routes. A process which IENE is currently pursuing.

Therefore, the concept of an Expanded South Corridor is introduced and defined as such, to include all major gas trunk pipelines, gas interconnections, LNG regasification terminals and

underground gas storage facilities, which will ensure that gas is fed into the system with some of them being re-directed towards the main European gas markets. This Expanded South Corridor, with its multiple gas entry points and linked underground gas storage and LNG facilities, will provide the necessary background for the operation of all regional gas trading hubs.

Map: The Expanded South Corridor



Note: The TANAP, TAP, IGB and Turk Stream have been completed, while BRUA is still under construction. The IAP, the IGI Poseidon in connection with East Med pipeline and the Vertical Corridor and the IGNM are still in the study phase. Blue Stream and Trans Balkan are existing pipelines.

Sources: Eurostat, IENE

The Revival of the East Med Gas Pipeline

A market test for the East Med gas pipeline, planned to transport natural gas from fields in the eastern Mediterranean to Italy and central Europe via Greece, will be held in the first quarter of 2024. Market players are already expressing interest in the project ahead of the anticipated market test, expected to take about one month to complete. Both producers and suppliers interested in utilizing the prospective pipeline to transport gas quantities from the east Mediterranean to European markets via Greece are expected to submit offers to the market test.

Though the test's initial round will be non-binding, its outcome will help shape the project's developments prospects, which have fluctuated for a number of years. Competent sources

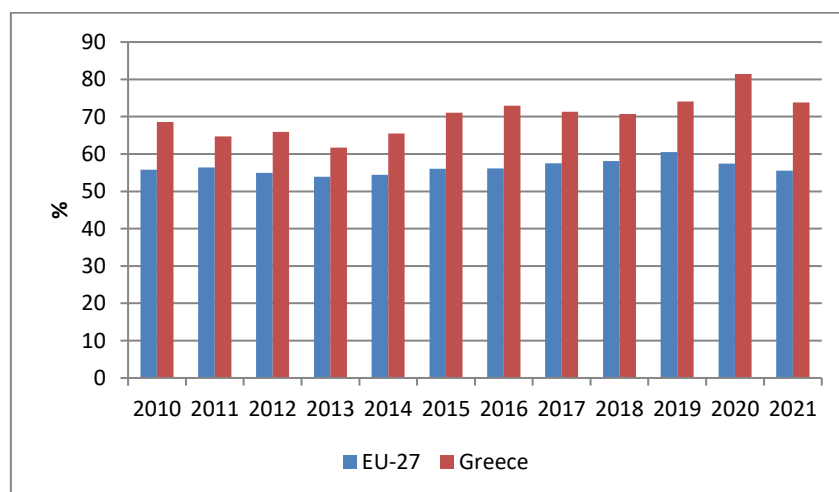
note that the technical feasibility of the pipeline – to offer an annual 21 bcm capacity and cover 2,000 kilometers, of which over 1,400 kilometers will run underwater – has been proven and clarified through a number of studies, while reputable companies have certified the accuracy of the study.

However, questions linger over the project’s cost. Its budget, estimated at €6.1 billion, is likely to increase as development costs have risen considerably since the previous evaluation. Discussions on East Med gas pipeline date back nearly fifteen years. The project has been on the EU’s PCI list since 2013, a status it is expected to retain when the new and revised list is soon officially presented, most probably within 2023.

The Case of Greece

Greece, because of its geographical position and its existing and planned energy infrastructure, can play an important role in improving European energy security. At present and in the medium term, as a result of a cluster of major infrastructure projects in gas and electricity, currently under development, Greece could help achieve energy route diversification and market integration. These are two basic parameters in advancing energy security in the region.

Figure 8: Energy Dependence (%) in the EU-27 and Greece, 2010-2021



Sources: Eurostat, IENE

On a longer-term basis (i.e. by 2030), Greece could provide EU with sizeable indigenous oil and gas resources, which could augment the continent’s limited production base, and thus help reduce European energy dependence. However, Greece needs to carry out a lot more exploration work inland and offshore in its EEZ in order to discover and verify commercially

exploitable hydrocarbon resources. Overall, Greece's contribution in enhancing European energy security could become increasingly important in view of continuing regional instability. (5)

It is worth noting that IENE highlighted the issue of energy security in Greece and made recommendations of how to enhance it, in a special study for the country's Ministry of Environment and Energy prepared in November 2018. Although the reduction of energy dependence should have been a constant and non-negotiable target of energy policy, there is no mention at all of this dire situation in most policy papers (most notably in the country's recently submitted to the European Commission in Brussels of its National Energy and Climate Plan (NECP)), nor is this reflected in official government policy. IENE had suggested as a prime target of Greece's energy policy the gradual reduction of the country's current energy dependence from the present high number to the average EU dependency (6). In 2021, the energy dependence in Greece stood at 73.8%, very close to 2019 levels, but significantly higher than the EU-27 average at 55.5%, as shown in Figure 8.

In order to achieve lower energy dependence, new policy priorities should be put in place which should aim at:

- the reduction of the imported energy flows in parallel with
- an increase of the indigenous energy sources, with emphasis on renewables, hydrocarbons (and gas in particular) and an improvement in energy efficiency, mainly in transport and residential sectors and
- the stabilization, if not slight increase, of the current share of lignite in the country's energy mix
- the diversification of gas supply routes

5. What's Next for European Energy Security Policy

The acute energy crisis that hit Europe in 2022 seems to have partially subsided. Gas and electricity prices remain high by historical standards, but relative to 2022, they are far subdued. This moment of respite offers an opportunity to reflect on what has happened, and to plan for the year and years ahead.

The basic facts are familiar. Gas prices, which neared €350/MWh at TTF in August 2022, are now between €40/MWh and €60/MWh (still much higher than Q1 2021). This year, EU-wide gas storage facilities were filled to 100% by 1 November 2023, exceeding the target of 90%,

versus 37% last year (and a 53% average for the last decade) (7). LNG imports have remained strong and a combination of forces, including warm weather, have led to a sharp decline in gas demand. The threat of a system-wide physical shortage in Europe seems difficult to occur over this winter.

This turn is welcome. But we cannot ignore the damage already caused. The European Union spent €316 billion to buy gas in 2022 (8) and about €38 billion in Q1 2023 (9), based on European Commission's data – far more than the annual total of €70 or €80 billion in previous years. Bruegel estimates that governments in Europe have allocated more than €800 billion to support households and business – even if this is not all disbursed, and even if some of this money comes from taxing excess profits in the energy sector (as in Greece) and thus is less of a burden for government finances (10). The broader damage – in reduced business activity and heightened energy poverty – will show up in official statistics only in time.

At the start of 2023, the policy focus has shifted from the immediate need to offset the loss of Russian gas to the more strategic imperative of ensuring that energy is affordable, and that Europe can remain competitive relative to its economic peers. In practice, this means advancing the conversation on three parallel fronts. First, the European Union created the Energy Platform to leverage the collective buying power of the EU in securing gas supplies and to prevent intra-European competition from pushing up prices for cargoes that would come to Europe anyway. The absence of Russian gas creates a big hole in Europe's long-term balances. In 2022, the EU secured this gas from the spot market for LNG – and paid dearly for it. Finding a way to secure this gas on a long-term basis and at a reasonable price is a paramount priority.

Second, the price of gas may have fallen, but it remains high – relative to the past and relative to other regions. In the medium to long term, the solution is to accelerate the energy transition. But in the short term, we must lower gas prices and sever the link between gas and electricity prices. Even at this gas price level, electricity prices are still high. Designing an electricity system that can mute the impact of high gas prices on the electricity price is a major focus area and a big challenge for electricity market planners (see European electricity market reform) (11).

Third, Europe is at a competitive disadvantage, one that has become more acute due to the US Inflation Reduction Act that will prompt a re-apportioning of capital for the energy

transition. Europe has a firm footing in sectors like wind, electric vehicles, heat pumps and electrolyzers. But in the global race to build a low-carbon economy, it is important to keep moving and innovating. For that to happen, Europe needs a coordinated approach to allow companies to invest in the energy transition and create Europe-wide supply chains. Finding the right formula to accomplish this task is no easy matter. But it must happen. In the end, Europe proved its resilience in 2022, absorbing an unprecedented economic shock triggered by Russia's decision to cut gas supplies to Europe. As that acute pressure subsides, there is much still to do to secure Europe's economic competitiveness and deliver affordable energy to its citizens and businesses.

Discussion

Policymakers, particularly in Europe, have for decades enjoyed a very benign environment: relatively robust economic growth, low inflation, low interest rates, globalized supply chains and abundant and relatively low-cost energy, including pipeline gas. As a result, energy security and affordability fell down the policy agenda, while sustainability and climate action to achieve net zero targets rose.

One of the major impacts of the Russia-Ukraine war but more generally the rise in global geopolitical tensions has been the reordering of priorities. Affordability and security of supply are now dominant. With this reprioritization, important dimensions have come into focus. These include the trade-offs involved in achieving multiple energy policy objectives; the role of governments versus markets; the role of hydrocarbons in the future energy mix; the provision of finance to enable the transition especially for developing economies; the rise of industrial policy and its links with green policies; and coordination and cooperation on climate action in a geopolitically fragmented world.

As we are approaching the end of the year, the market outlook for the upcoming winter season in the EU looks positive. The steps taken to diversify gas imports, expand LNG regassification capacity and deploy renewable energy put the EU in a much better position to navigate shocks in the gas market than in 2021 and last year. However, maintaining current gas demand reduction remains critical. Governments should stand ready to act if there are reversals in consumption trends (and policies that increase gas demand, such as subsidies, should be avoided).

Europe's energy security during the winter also hinges on the integrity of its pipeline and LNG infrastructure. Sabotage or disruptions could have severe consequences. It is hence

crucial to maintain a high level of alertness and security to safeguard these critical supply routes. Lastly, the impact of soaring gas and electricity prices on various industries calls for a careful and considered response.

Following the two wars (i.e. Russia's invasion of Ukraine and the Hamas-Israel conflict in Middle East) still in progress, the energy security emerges as an issue of vital importance for (SE) Europe. Greece, through various energy infrastructure projects that are now under construction or at a planning stage, will strengthen its strategic role as an energy hub for SE Europe and will offer alternative sources and gas supply routes to the region, enhancing energy security of supply and energy autonomy, during challenging times.

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