

The Future of Eastern Mediterranean Energy and Climate Collaboration

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ABSTRACT *Over the last few years, the Eastern Mediterranean region has been struggling to capitalize on its natural gas resources due to several technical and financial obstacles and concerns over long-term access to markets in light of European decarbonization plans. These obstacles have been compounded by rising tensions and existing disputes between regional countries. The Russia-Ukraine war and the urgent European need to find alternative gas suppliers to reduce dependence on Russia have created a window of opportunity for regional producers to find short-term collaboration arrangements to export gas to Europe. However, this rush for market access has the potential to disrupt the region's own energy transition to the new global economy. Alignment to grand strategies by global powers also risks undermining the regional collaboration required for climate action. Instead of prioritizing short-term gains, successful regional collaboration must focus on coordinating national energy and climate plans and developing regionally appropriate policies and solutions.*

Keywords: East Mediterranean, Natural Gas, Climate Policy, Energy Transition, Grand Strategy

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Introducing the Eastern Mediterranean Energy Landscape

The Eastern Mediterranean region is a fragmented and heterogeneous collection of countries shaped by central geography, a shared history, conflicts, and overlapping geopolitical ambitions. The region (which comprises Greece, Türkiye, Syria, Lebanon, Cyprus, Israel, Palestine, Jordan, and Egypt) is both separated and connected by the Mediterranean Sea, around which civilizations emerged and across which they traded. The region largely shares a common climate and faces similar climate change challenges.

In the last two decades, the discovery of offshore natural gas deposits meant that the Eastern Mediterranean was brought together further by the prospect of becoming an energy powerhouse. Such transformation in the region's energy landscape from an importer to an exporter also has the potential to disrupt its geopolitical landscape.

The shift started with the discovery of natural gas deposits in the Israeli Exclusive Economic Zone (EEZ). The Tamar gas field was first discovered in 2009, with estimated reserves of 307 billion cubic meters (bcm),¹ followed a year later by the discovery of the larger Leviathan gas field with estimated reserves of 620 bcm.² The combined reserves far exceed domestic demand –representing 82 years of Israeli current³ natural gas consumption.⁴

In 2011, the Aphrodite gas field was discovered by the Republic of Cyprus, with estimated reserves of 200 bcm.⁵ However, Aphrodite has been mired in a dispute between the Republic of Cyprus and Israel since its discovery due to the fact that seven to nine percent of the gas field lies within Israel's EEZ. In recent years Calypso and Glaucus –two gas fields of equal size to Aphrodite– have also been discovered to the Southwest of Cyprus. Yet the real shift in the regional energy landscape happened in 2015 when Egypt announced the discovery of the Zohr gas field with estimated reserves of 850 bcm⁶ –a volume approximately equal to 15 years of Egyptian consumption at their rate in 2020.⁷

The Egyptian discovery was a game-changer not only because it was the largest in the region, but the Egyptian gas infrastructure –such as the Liquefied Natural Gas (LNG) liquefaction facilities in Damietta and Idku on the Mediterranean coast and the pipeline to Israel– gave Egypt a natural advantage as a potential hub for exporting the offshore natural gas from other regional exporters like Israel and Cyprus.

Egypt became a net exporter in 2018, and Egyptian exports steadily increased over the last three years. In addition, it agreed with Israel to import 85 bcm of natural gas over 15 years. This excess supply allowed Egypt to increase its LNG exports further. In 2020 Israel started delivering the natural gas using an existing pipeline connecting both countries,⁸ and in 2021 Egyptian LNG exports

reached a ten-year high.⁹ But Israel, Greece, and Cyprus had other plans for exporting their energy resources to Europe without dependence on the relatively expensive LNG process. In 2016, the three countries proposed a subsea pipeline connecting Israeli and Cypriot gas fields with the Greek mainland, via Cyprus and the Greek island of Crete, and from there onto the European markets via a new subsea pipeline between Greece and Italy. The EastMed pipeline project promised to deliver 9-12 bcm to Europe annually.¹⁰ The proposal's timing coincided with heightened concerns within the European Union (EU) over the continent's dependence on Russian natural gas –which represented almost 40 percent of its natural gas imports at the time.¹¹ The pipeline was presented as an opportunity for the EU to diversify its supply.

Yet the project faced a number of technical and financial challenges that prevented it from moving forward. As one of the world's longest and deepest underwater pipelines, the primary technical challenge it faced was the depth at which some of the subsea pipes will need to be laid, which exceeds three kilometers between Cyprus and Crete.

Securing investment is also another challenge. The EU had agreed to fund a feasibility study as a Project of Common Interest (PCI), an infrastructure project deemed to have an essential impact on the pan-European internal energy market. However, updates of the regulations issued by the Trans-European Network for Energy

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(TEN-E) –an EU agency supporting the development of cross-border energy infrastructure in Europe– explicitly ended support for new natural gas and oil projects and introduced mandatory sustainability criteria for all projects.¹² Additionally, no private sector investors have come forward to fund this complex and expensive project.

The cost of financing the project also remains uncertain, given that fossil fuel funding is dwindling worldwide as lenders shift their attention to renewable energy projects and try to reduce their exposure to fossil fuel projects that risk becoming stranded assets. Major European banks such as the European Bank for Reconstruction and Development (EBRD) and the European Investment Bank (EIB) have both announced that they will no longer finance fossil fuel projects.

Yet technical and financial challenges have not stopped the project's political momentum, with informal government cooperation between the original tripartite of Israel, Cyprus, and Greece, together with Egypt. In

The European commitment to reducing natural gas consumption to meet decarbonization targets has created uncertainty over future demand for natural gas over the project's lifetime

September 2020, this cooperation gained an institutional form with the creation of the East Mediterranean Gas Forum (EMGF), which also included Jordan, Palestine, France, and Italy, as well as the EU and the U.S. as observers. The new intergovernmental body aimed to create a regional gas market, cut infrastructure costs, and offer competitive prices.¹³

But the EMGF was not an inclusive regional organization as it did not include Türkiye, Syria, or Lebanon. Of the regional countries not invited to the EMGF, Türkiye stood out as the most remarkable absence, given its geography and its existing natural gas pipeline infrastructure to Europe. The exclusion of Türkiye was also remarkable, given that one of the most cost-effective ways of transferring Israeli and Cypriot gas to Europe is by connecting it to the Trans Anatolian Pipeline (TANAP) in Türkiye, which already transfers natural gas from Azerbaijan to Europe via the Trans Adriatic Pipeline (TAP).

Türkiye –which over the past three decades has encouraged various

pipelines to cross its territory– unsurprisingly felt that the project had an underlying political agenda related to the strained relations between Türkiye and some regional countries at the time.¹⁴ It also felt that the project sidesteps the unresolved Cyprus issue and does not consider the rights of the Turkish Cypriots.¹⁵

Rising Tensions

The exclusion of Türkiye and its response by commencing exploration for offshore gas in areas also claimed as EEZ by Greece and the Republic of Cyprus raised tensions in the region. It also overlapped with a 12-year rift between Türkiye and Israel and the conflict in Libya, where the side supported by Türkiye was at war with that supported by Egypt, United Arab Emirates, and France.

The result was heightened regional tensions that exacerbated existing regional disagreements and bringing to the fore the dispute between Türkiye, Greece, and Cyprus on the extent of their respective EEZs, the dispute between Türkiye and Greece over the ownership and the territorial waters of certain islands in the Aegean Sea, and the unresolved dispute over the island of Cyprus.

Early steps taken by Lebanon to start explorations off its coast have also revived the decade-long dispute between Israel and Lebanon regarding the demarcation of their respective EEZ. Syria's initiation of explorations for natural gas off its coast also created

a new dispute between Lebanon and Syria, while Palestinians complained that Israel had prevented them from using the gas field off the coast of the Gaza strip, known as Gaza Marine.¹⁶

Inevitably, these tensions and disputes intersected in a way that converged energy policy and geopolitics. To support their EEZ claims in areas where the East Med pipeline route is planned, different parties signed bilateral maritime demarcation agreements. In 2019, Türkiye signed a maritime delineation agreement with its ally in the Libyan conflict –the Government of National Accord. In response, Egypt and Greece signed a partial demarcation agreement months later. The two agreements are mutually exclusive, and parties to each agreement reject the legitimacy of the other.

With the EastMed pipeline not progressing beyond the establishment of the EMGF and various political statements, and with recently improved relations between Türkiye and its neighbors, tensions around the Eastern Mediterranean appear to have subsided.

Such lack of progress led many observers to question whether this complex and expensive project is likely to ever proceed as envisaged.

The Climate Agenda and the Energy Transition

While the results of the EU-funded feasibility study remain pending,

doubts over the project's commercial viability and over the initial reserve estimates of the gas deposits¹⁷ reduced the attractiveness of the 6 billion euro project to the private sector. More importantly, climate policy played a major role in keeping investors away. The European commitment to reducing natural gas consumption to meet decarbonization targets has created uncertainty over future demand for natural gas over the project's lifetime.

With construction estimated to last as long as ten years,¹⁸ the pipeline project is likely to become operational by the mid-2030s, when demand for natural gas in Europe is planned to be much less than it is today. EU law mandates that by 2030, its carbon emissions should be reduced by a third¹⁹ –by 55 percent compared to 1990– on its way to net-zero carbon by 2050. To achieve this, the European Green Deal proposed a legislation package known as 'Fit for 55,' which aims to reduce the EU's natural gas consumption by 30 percent –equivalent to 100 bcm annually– by 2030.²⁰

Updates of the TEN-E Regulations were also aligned with the European Green Deal. Under the new regulations, natural gas infrastructure projects would no longer be eligible for PCI funding.²¹ Simultaneously, a proposed revision for the EU's Renewable Energy Directive –a legal framework for the development of renewable energy across all sectors of the EU economy– mandates the doubling of the share of renewable sources to 40 percent of all energy consumed by the same year.²²



An employee checks flood gates at Doğançay Hydroelectric Power Plant in Sakarya, Türkiye, on December 14, 2021. According to a recent report by the IEA, Türkiye's renewable energy capacity is predicted to grow by 50 percent from 2021 through to 2026.

CHRIS MCGRATH / Getty Images

Long-term demand from some regional countries also looks uncertain, partially due to climate policy. As an EU member state, Greece is committed to the bloc's carbon reduction targets. It also plans to source 35 percent of consumed energy and 60 percent of electricity from renewable energy sources by 2030.²³

Turkish climate policy is also likely to shape its long-term demand for imported natural gas –alongside the discovery of the offshore Sakarya gas field in the Black Sea. In 2021, Türkiye announced an ambitious target to reach net-zero carbon by 2053, which requires sharp reductions in its rising carbon emissions. In order to reduce those emissions –and also achieve its longstanding goal of energy independence– Türkiye is actively increasing its renewable energy sources, which currently repre-

sent almost 54 percent of electricity generation capacity.²⁴

Israel also plans to reduce its carbon emissions by 85 percent by 2050 and has recently banned all terrestrial oil exploration,²⁵ which is unlikely to affect its offshore natural gas exports or domestic consumption.

Globally the demand for fossil fuel is also expected to fall by the time the EastMed pipeline is complete. In 2021, the International Energy Agency (IEA) concluded that in order to limit global temperature increases to 1.5°C, global natural gas demand must peak by 2025 at 4.3 trillion cubic meters per annum (tcm/yr) and must drop to 1.75 tcm/yr by 2050. It pointed out that no new oil and gas projects should be developed beyond 2025 if the world is to reduce emissions sufficiently to reach net-zero emissions by 2050.²⁶

This climate-driven uncertainty about demand has also affected the degree to which regional reserves are being exploited. With international oil and gas companies trying to address the global transition away from fossil fuel, they have focused on larger, easier-to-develop, and higher profit margin projects rather than taking on new areas. Given the Eastern Mediterranean's dependence on international oil and gas companies, drilling remained limited to areas near existing wells, and no major discoveries have been made in the region since 2019.

In January 2022, the U.S. withdrew its support for the project, highlighting the need to transition away from fossil fuels and recommending that efforts are diverted toward electricity interconnections from Egypt and Israel to Europe instead.

The Ukraine War and Renewed Interest in Eastern Mediterranean Energy

Despite the apparent demise of the EastMed pipeline project and the long-term challenges above, the recent war between Russia and Ukraine provided an unexpected lifeline for regional gas export plans, as Europeans became interested once again in its natural gas resources.²⁷

With energy playing a major role in Western plans to economically sanction Russia, the EU has devised an urgent plan to reduce its energy dependence on Russia, from which it sources 41 percent of the bloc's nat-

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ural gas imports, 47 percent of its coal imports and 27 percent of its oil imports.²⁸ The EU plan known as REPowerEU²⁹ seeks alternative gas suppliers to reduce the 155 bcm of natural gas that the bloc currently imports from Russia yearly.³⁰

Thus the current European demand for natural gas isn't due to an expected increase in consumption but is simply a short-term attempt to replace one source of fossil fuel with another in a way that does not affect medium and long-term decarbonization plans.

Given the urgent nature of the European efforts to replace Russian gas, attention was initially focused on producers with spare capacity. This included countries with pipelines into Europe, such as Norway and Azerbaijan. Significant attention was also given to major LNG producers such as the U.S. and Qatar, with future imports expected to grow by 2026.

In this context, long-term projects such as the EastMed pipeline are

The ability of regional countries to attract significant investments into new production capacity depends on the incentives they can provide to investors, including stability and sound legal and regulatory frameworks

unlikely to meet European needs in time. Yet, given the global scarcity of spare natural gas that can be quickly routed to Europe, the EU appears to have decided against closing the door on the EastMed pipeline project, at least until the results of the feasibility study are published at the end of the year.

The REPowerEU explicitly calls for working with international partners like Egypt and Israel to increase LNG supplies.³¹ In addition, the European Parliament's recent vote to create an exception for EU islands such as Cyprus in seeking PCI funding for natural gas infrastructure projects was understood as a signal of continued support for some form of gas infrastructure in the Eastern Mediterranean.³²

A Rush for Market Access

In the eyes of regional governments, the renewed European interest in the Eastern Mediterranean gas and the resultant increase in natural gas

prices represent an unprecedented opportunity to gain a foothold in the European energy market and replace some of Russia's market share. Regional governments are also aware that the EU's commitment to supporting new gas infrastructure may not last for long, given its divergence from European long-term climate targets, and are engaged in commercial and diplomatic efforts to exploit this narrow window of opportunity.

Egypt is working hard to expand its exports to Europe and to make the most out of the price difference between the rate at which it imports natural gas from Israel and the elevated market rates for LNG. However, this effort is limited by its LNG terminal capacity and the volume of gas it can import from Israel for liquefaction. Türkiye is also engaged in efforts to increase the flow of Azeri gas in its TANAP pipeline.

Conversations between different regional countries have produced a number of longer-term alternative proposals, in addition to the original EastMed pipeline. Broadly speaking, there are two alternative proposals with different proponents, stakeholders, time frames, and technologies.

Alternatives to EastMed Pipeline: The Egyptian Hub vs. the Turkish Hub

The first alternative to EastMed pipeline is to transfer more gas from Israel to Egypt via existing and additional pipelines and to expand the LNG ex-

port capacity in Egypt by adding new liquefaction trains to Idku and Damietta. This alternative only requires two years of construction³³ and is the fastest alternative to increase the regional supply of gas to Europe since most of the required infrastructure already exists.³⁴ This alternative is supported by the EU, which recently signed an agreement with Egypt to expand LNG exports,³⁵ and by the recent agreement between Israel and Egypt to increase imports of Israeli gas for re-export.

The planned construction of a new pipeline from Cyprus to Egypt³⁶ and the planned construction of a re-gasification plant in Greece³⁷ can all be considered part of this alternative.

To address its dependence on limited LNG capacity and increase the potential export volumes, Egypt proposed new pipelines connecting Israel's Leviathan gas field directly to Egypt and connecting the latter with the Greek island of Crete through the recently demarcated Greek-Egyptian Exclusive Economic Zone boundary. In addition to increasing exports, this proposal also helps bypass Cyprus and most of the EEZ disputes.³⁸

The second alternative is the Türkiye-led proposal to route Israeli and Cypriot gas through Türkiye via a much shorter and shallower pipeline running northwards from Israeli and Cypriot gas fields towards the existing TANAP pipeline. This alternative is a medium-term one requiring approximately four years to construct the subsea pipeline.³⁹

The recent thaw in relations between Türkiye on the one hand and Israel and Egypt on the other has opened the door for discussions on this alternative.⁴⁰ However, the process hinges on the speed at which relations can improve between these countries, and Israeli officials have signaled that energy collaboration is not their first priority.⁴¹ In addition, this alternative is challenged by the fact that the subsea pipeline may have to address the Cyprus dispute if it is to cross the Cypriot EEZ.

At the time of writing, it appears that the Egyptian alternative is more likely to emerge as the primary mechanism for supplying Europe with natural gas. The arrival of a floating LNG platform at the Karish gas field near the disputed Israeli-Lebanese maritime border suggests that floating LNG facilities may play a secondary role.

The ability of regional countries to attract significant investments into new production capacity depends on the incentives they can provide to investors, including stability and sound legal and regulatory frameworks. However, given the fluid state of the regional political landscape and the heightened sense of emergency in Europe, the ability of a group of countries to agree on a project and to successfully deliver natural gas to Europe might ultimately hinge on regional geopolitical considerations and wider political alignments. These include avoiding over-dependence on a single transit route and ensuring a wider alignment of political posi-

tions between project proponents and the EU.

Conversely, the resultant alignment between energy and geopolitical landscapes could pave the way for a new political and security architecture in the Eastern Mediterranean.

Planning for the New Climate Economy

In the short term, natural gas producers in the Eastern Mediterranean to Europe will benefit commercially from increased export revenues. However, taking advantage of this opportunity should not be confused with long-term economic planning. The risks of jumping headlong into exporting contracts should be weighed against their risks.

As the world is set to reduce its dependence on fossil fuels to mitigate climate change, any increased dependence on such exports is not only likely to be short-lived but may also result in long-term economic damage.

Regional gas producers run the risk of shifting towards rentiership, exposing themselves to new carbon tariffs such as the EU Fit for 55's Carbon Border Adjustment Mechanism (CBAM), and ending up with stranded fossil fuel assets. More importantly, they also run the risk of wasting precious time during which they could accelerate their energy transition, advance sustainable development, and take part in shaping

the new global economy currently in the making.

Regional Climate Collaboration and Navigating Grand Strategies

The Eastern Mediterranean also needs a collaboration structure to address common climate challenges. These challenges are not limited to the energy transition but also include climate change adaptation.

With shared climate impacts such as increased temperatures, reduced precipitation, increased droughts and flooding, and sea-level rise, regional countries face similar challenges to their agriculture and tourism sectors. The region also shares similar renewable energy generation potential.

Regional collaboration, such as sharing knowledge and pooling resources, must therefore be driven by regional needs and not by grand strategies of global powers, let alone by short-term energy needs created by the Western alliance against Russia.

The region's most natural partner in climate action is indeed the EU, not least because of its leadership on climate, geographic proximity to the Eastern Mediterranean, and its stake in the region through Greece and the Republic of Cyprus. The EU has also adopted a new platform called the Global Europe Instrument aimed at funding international cooperation, including the EU's Southern Neighborhood, with 30 percent of its re-

gional budget⁴² dedicated to supporting climate objectives.

However, to increase its influence across its Southern Neighborhood, the EU might prefer to integrate such support within the Global Gateway, its new grand strategy focusing on energy, transport, and digital connectivity and widely believed to be a response to China's grand strategy, the Belt and Road Initiative (BRI), which has already made inroads in the region.

From China's perspective, the Eastern Mediterranean is a vital geostrategic crossroads to its major markets in Europe and is already at the heart of the BRI, with multiple projects underway and increasing interest in renewable energy.

Additionally, the U.S.-led G7's nascent initiative, Build Back Better World (B3W), is also emerging as a competing grand strategy with interests in the region and addressing climate change. B3W has yet to evolve from a vision for a value-driven, market-led infrastructure partnership into a concrete plan, but when it does, the U.S.' regional alliances and security architecture in the Eastern Mediterranean could make it a serious player in shaping the future of regional infrastructure.

In the emerging multipolar world, regional policymakers are likely to find themselves having to choose sides. Unless the region agrees on a framework for climate action and the energy transition, its countries could

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end up aligning with different powers. This fragmentation not only creates disjointed infrastructure and undermines collaboration but also threatens to create competing regional visions, which could –paradoxically– increase regional tensions.⁴³

This further supports the case of the Eastern Mediterranean developing its own collaboration structure. Yet, for the region to develop its own collaboration structure, it needs to resolve some of its longstanding conflicts and disputes or find ways to sidestep them in the interest of addressing shared challenges.

An Outlook for Regional Collaboration on Sustainable Energy and Climate

The establishment of the EMGF signaled the beginnings of new regional energy collaboration, but such collaboration is limited in scope. It also remains trapped in a worldview that revolves around the extraction and transport of fossil fuels and where energy is not just a commodity but also a tool for gaining a geopolitical ad-

U.S. President Biden (C), flanked by President of the European Commission Leyen (L) and British Prime Minister Johnson (R), speaks during a meeting as part of the World Leaders' Summit of the COP26 in Glasgow, Scotland, on November 2, 2021.

BRENDAN SMIALOWSKI / AFP



vantage. This happens at a time when the world is increasingly shifting towards decarbonization and wider adoption of renewables.

A better regional collaboration structure should instead focus on coordinating national energy and climate plans with policies and solutions that encourage regional collaboration rather than competition, support climate security, and are suitable for the region's conditions, resources, and needs.

This paper recommends that such plans include the following set of measures:

1. Developing a new energy infrastructure that focuses on the use of renewable energy in electricity generation. An electricity-based infrastructure would require large-

scale electrification of most sectors, including a transition towards electric mobility. It would also require rapidly increasing regional renewable energy capacity and the installation of large-scale energy storage. The dramatic fall in the cost of solar photovoltaic, wind power, and battery storage are enablers for the fast deployment of such infrastructure.

2. Encouraging grid interconnections between expanded national grids for better grid management, especially in supporting peak shifting.

This approach is supported by the fact that existing regional problems such as the maritime boundary dispute between Türkiye and Greece and the Cyprus Dispute do not seem to adversely affect it. There are already existing electric-

ity interconnections between Türkiye and Greece and between the Republic of Cyprus and the Turkish Republic of Northern Cyprus. Planned electricity interconnectors between Israel, Cyprus, and Greece (Euro-Asia connector) and between Egypt, Cyprus, and Greece (Euro-Africa connector) could also play a role in this.

3. Introducing a more decentralized approach to electricity generation in remote locations in order to reduce distribution and transmission costs.
4. Developing a hydrogen infrastructure as an alternative clean source of energy for sectors that are difficult to electrify, such as high-temperature industries, freight, and shipping. This includes hydrogen produced through electrolysis powered by renewable energy (green hydrogen) and produced from natural gas, where carbon is captured and sequestered (blue hydrogen).

Regional natural gas resources could play a role in the development of hydrogen infrastructure by using it to produce blue hydrogen in the medium term. Natural gas infrastructure can also be reused for the transportation of hydrogen, which could unlock some EU funding for dual-use infrastructure.

5. Capitalizing on the emerging demand for hydrogen exports to accelerate the development of domestic hydrogen infrastructure.

The EU plans to import 10 million tons of green hydrogen annually by 2030 have led to discussions with both Egypt and Türkiye regarding the development of a Mediterranean Green Hydrogen Partnership.

Egypt is expected to play a major role in this new export-oriented hydrogen partnership, given its spare electricity generation capacity, abundance of natural gas resources, growing renewable energy generation, and location vis-a-vis maritime trade routes between Asia and Europe. It has the flexibility to dedicate existing renewable energy generation to producing green hydrogen while making up for it using natural gas generation. Egypt can also use its own natural gas to produce blue hydrogen.

Egypt has already attracted investors to build green hydrogen and green ammonia plant within the Suez Canal Economic Zone, with a capacity of 1 million tons annually. It also has several other projects in the pipeline. Egypt also signed an agreement with shipping company Maersk to produce green hydrogen that can be used to fuel ships.

Türkiye is also well placed to play a significant role, given its renewable energy capacity and its ability to export hydrogen to Europe alongside natural gas via the existing TANAP pipeline.

6. Continuing to use regional offshore natural gas resources in the

short to medium term as a transition fuel, especially in countries such as Greece, Türkiye, and Israel, which are trying to phase out their use of coal.

7. Introducing energy efficiency measures and coordinated Demand Side Management in mobility, industry, and the built environment.
8. Phased removal of fossil fuel and electricity subsidies that distort market conditions and impede energy transition and improved energy efficiency. ■

Endnotes

1. Equal to 10.8 trillion cubic feet (tcf).

2. Equal to 22 tcf.

3. 2020 estimates.

4. "Israel Natural Gas: Consumption," *CEIC*, retrieved April 20, 2022, from <https://www.ceic-data.com/en/indicator/israel/natural-gas-consumption>.

5. Equal to 7 tcf.

6. Equal to 30 tcf.

7. "Egypt Natural Gas: Consumption," *CEIC*, retrieved April 20, 2022, from <https://www.ceic-data.com/en/indicator/egypt/natural-gas-consumption>.

8. Aidan Lewis and Ari Rabinovitch, "Israel Starts Exporting Natural Gas to Egypt under Landmark Deal," (January 15, 2020), *Reuters*, retrieved April 20, 2022, from <https://www.reuters.com/article/israel-egypt-natgas-idUSL8N29K1R8>.

9. Paul Stevenson, "Egypt Posts 10-Year High LNG Exports of 6.8mn Tons for 2021," *MEES*, (January 14, 2022), retrieved April 20, 2022, from <https://www.mees.com/2022/1/14/oil-gas/egypt-posts-10-year-high-lng-exports-of-68mn-tons-for-2021/25999600-7543-11ec-a555-a73a6ee2710b>.

10. Ron Bousso, "Israel Expects Decision on East Med Gas Pipeline to Europe in 2019," *Yahoo Finance*, (March 8, 2018), retrieved April 20, 2022,

from <https://finance.yahoo.com/news/israel-expects-decision-east-med-183657203.html>.

11. "Share of Extra-EU Natural Gas Imports from Russia from 2010 to 1st Half 2021," *Statista*, retrieved April 20, 2022, from <https://www.statista.com/statistics/1021735/share-russian-gas-imports-eu/>.

12. "TEN-E: Council and Parliament Reach Provisional Agreement on New Rules for Cross-Border Energy Projects," *European Council: Council of the European Union*, (December 22, 2021), retrieved April 20, 2022, from <https://www.consilium.europa.eu/en/press/press-releases/2021/12/22/ten-e-council-and-parliament-reach-provisional-agreement-on-new-rules-for-cross-border-energy-projects/>.

13. "Offshore Disputes and Weaker Demand Shake East Mediterranean Gas Prospects," *Oil and Energy Trends*, Vol. 45, No. 11 (November 2020).

14. Nick Theodoulou, "EastMed a Response to Turkish Behaviour Says Anastasiades," *Cyprus Mail*, (January 3, 2020), retrieved April 20, 2022, from <https://cyprus-mail.com/2020/01/03/eastmed-a-response-to-turkish-behaviour-says-anastasiades/>.

15. "Statement of the Spokesperson of the Ministry of Foreign Affairs, Mr. Hami Aksoy, in Response to a Question Regarding the Signature of the Agreement on the EastMed Project," *Republic of Türkiye Ministry of Foreign Affairs*, (January 2, 2020), retrieved April 20, 2022, from https://www.mfa.gov.tr/sc_-1_-eastmed-projesine-iliskin-anlasmanin-imzalanmasi-hk-sc.en.mfa.

16. Taehwan Kim and Sang Yoon Shin, "Competition or Cooperation? The Geopolitics of Gas Discovery in the Eastern Mediterranean Sea," *Energy Research and Social Science*, Vol. 74, (April 2021).

17. Galip Dalay, "Turkey, Europe, and the Eastern Mediterranean: Charting a Way Out of the Current Deadlock," *Brookings*, (January 28, 2021), retrieved April 20, 2022, from <https://www.brookings.edu/research/turkey-europe-and-the-eastern-mediterranean-charting-a-way-out-of-the-current-deadlock/>.

18. Menelaos Hadjicostis, "U.S. Diplomat: Mediterranean Gas Pipeline to Europe Not Viable," *Herald Review*, retrieved April 20, 2022, from <https://www.theheraldreview.com/news/article/US-diplomat-Mediterranean-gas-pipeline-to-Europe-17063412.php>.

19. "European Union (27)," *Climate Watch Data*, retrieved April 20, 2022, from <https://www>.

climatewatchdata.org/countries/EUU?end_year=2018&start_year=1990.

20. Kira Taylor, "EU Rolls out Plan to Slash Russian Gas Imports by Two Thirds before Year End," *Euractiv*, (March 9, 2022), retrieved April 20, 2022, from <https://www.euractiv.com/section/energy/news/eu-rolls-out-plan-to-slash-russian-gas-imports-by-two-thirds-before-year-end/>.

21. "Commission Proposes Revised Rules for Cross-Border Energy Infrastructure in Line with the European Green Deal," *European Commission*, (December 15, 2020), retrieved April 20, 2022, from https://ec.europa.eu/commission/presscorner/detail/en/IP_20_2394.

22. "Share of Energy Consumption from Renewable Sources in Europe" *European Environment Agency*, (March 4, 2022), retrieved April 20, 2022, from <https://www.eea.europa.eu/ims/share-of-energy-consumption-from>.

23. "Greece: Country Commercial Guide," *U.S. International Trade Administration*, retrieved April 20, 2022, from <https://www.trade.gov/country-commercial-guides/greece-Senergy#:~:text=As%20reported%20by%20the%20Greek,electricity%20from%20renewable%20energy%20sources>.

24. Karim Elgendy, "Schrödinger's Cat: Turkey's New Climate Policy," *Illuminem*, (January 14, 2022), retrieved April 20, 2022, from <https://illuminem.com/energyvoices/e9423d4f-69c0-44ff-9d8e-d219a64aee17>.

25. "Israel to Issue No Further Permits for Terrestrial Oil Exploration," *Times of Israel*, (August 31, 2021), retrieved April 20, 2022, from <https://www.timesofisrael.com/no-new-permits-to-be-issued-for-terrestrial-oil-exploration-energy-minister/>.

26. "Net Zero by 2050: A Road Map for the Global Energy Sector," *International Energy Agency*, (October 2021), retrieved from <https://www.iea.org/reports/net-zero-by-2050>.

27. Sarantis Michalopoulos, "Ukraine War Revives EastMed Gas Pipe Talks but EU Insists on Feasibility," *Euractiv*, (April 5, 2022), retrieved April 20, 2022, from <https://www.euractiv.com/section/energy/news/ukraine-war-revives-eastmed-gas-pipe-talks-but-eu-insists-on-feasibility/>.

28. "From Where Do We Import Energy?" *Eurostat*, retrieved April 20, 2022, from <https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2c.html#carouselControls?lang=en>.

29. "REPowerEU: Joint European Action for More Affordable, Secure and Sustainable Energy," *Euro-*

pean Commission, (March 8, 2022), retrieved April 20, 2022, from https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1511.

30. "How Europe Can Cut Natural Gas Imports from Russia Significantly Within a Year," *International Energy Agency*, (March 3, 2022), retrieved April 20, 2022, from <https://www.iea.org/news/how-europe-can-cut-natural-gas-imports-from-russia-significantly-within-a-year>.

31. "REPowerEU: Affordable, Secure and Sustainable Energy for Europe," *European Commission*, retrieved June 9, 2022, from https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/repowereu-affordable-secure-and-sustainable-energy-europe_en.

32. Sarantis Michalopoulos, "Ukraine War Revives EastMed Gas Pipe Talks but EU Insists on Feasibility," *Euractiv*.

33. Elias Hazou, "Cyprus and the Shifting Sands of East Med Energy," *Cyprus Mail*, (April 17, 2022), retrieved April 20, 2022, from <https://cyprus-mail.com/2022/04/17/cyprus-and-the-shifting-sands-of-east-med-energy/>.

34. Mohamed Saied, "Egypt Seeks to Boost Gas Exports to Europe as Russia-Ukraine War Drags on," *Al Monitor*, (March 17, 2022), retrieved April 20, 2022, from <https://www.al-monitor.com/originals/2022/03/egypt-seeks-boost-gas-exports-europe-russia-ukraine-war-drag>.

35. Abdel Latif Wahba, "European Union to Boost Natural Gas Cooperation with Egypt," *Bloomberg*, (April 10, 2022), retrieved June 9, 2022, from <https://www.bloomberg.com/news/articles/2022-04-10/eu-egypt-to-boost-cooperation-on-natural-gas-cabinet-says>.

36. "El Sisi Ratifies EastMed Gas Forum," *Enterprise*, (September 5, 2021), retrieved April 20, 2022, from <https://enterprise.press/stories/2021/09/05/el-sisi-ratifies-eastmed-gas-forum-52446/>.

37. "Egypt Partners with Greece, Israel to Boost Gas Export Plans," *Enterprise*, (November 28, 2021), retrieved April 20, 2022, from <https://enterprise.press/stories/2021/11/28/egypt-partners-with-greece-israel-to-boost-gas-export-plans-59247/>.

38. "Athens and Cairo Mull Changing the Route of EastMed Pipeline," *Euractiv*, (March 4, 2021), retrieved April 20, 2022, from <https://www.euractiv.com/section/energy/news/athens-and-cairo-mull-changing-the-route-of-eastmed-pipeline/>.

39. Elias Hazou, "Cyprus and the Shifting Sands of East Med Energy," *Cyprus Mail*, (April 17, 2022), retrieved April 20, 2022, from <https://cyprus-mail>.

com/2022/04/17/cyprus-and-the-shifting-sands-of-east-med-energy/.

40. Orhan Coşkun and Ari Rabinovitch, "Israel-Turkey Gas Pipeline Discussed as European Alternative to Russian Energy," *Reuters*, (March 29, 2022), retrieved April 20, 2022, from <https://www.reuters.com/business/energy/israel-turkey-gas-pipeline-an-option-russia-wary-europe-sources-2022-03-29/>.

41. "Turkey-Israel Gas Partnership more Viable than Ever: Experts," *Anadolu Agency*, (March 29,

2022), retrieved June 9, 2022, from <https://www.dailysabah.com/business/energy/turkey-israel-gas-partnership-more-viable-than-ever-experts>.

42. Estimated at €19 billion.

43. Karim Elgendy, "The East Mediterranean between Climate Change and Great Power Competition," *RUSI*, (March 21, 2022), retrieved April 20, 2022, from <https://www.rusi.org/explore-our-research/publications/rusi-newsbrief/east-mediterranean-between-climate-change-and-great-power-competition>.