

THE ROLE OF EAST MED GAS IN THE EUROPEAN ENERGY SECURITY AND THE BEST CYPRUS GAS MONETIZATION OPTION¹

Panayiotis Tilliros

Senior Economic Officer, Ministry of Finance

1. East Med energy resource estimates and their significance for Europe's Energy Security

Eastern Mediterranean (East Med) estimated resources including the Levantine, the cone of Nile and the Herodotus basin amount to 345 tcf² (about 10.000 BCM³) of natural gas and 3.5 billion barrels of oil. Consequently, the East Med Region constitutes a credible alternative source with the potential to help Europe diversify its sources and reinforce its energy supply and transit security.

Indigenous Gas production in Europe is on trend decline. BP predicts as much as a 45% drop in domestic gas production in the European Union (EU) by 2035⁴. Despite variation, forecast scenarios of European gas consumption and import needs indicate a steadily rising trend. A growing market share is projected for natural gas in the EU-28, which is likely to exceed 30% of Primary Energy Consumption by 2035, compared to 21% in 2014.

Besides its traditional gas supply routes from Russia, Norway (indigenous production) and N. Africa, Europe seeks new gas supplies from the "Fourth Corridor"⁵ in the Caspian sea (Azerbaijan and probably Turkmenistan) and the "Fifth Corridor" in the East Med. According to an official EU website⁶ the EU aims to import initially 10 BCM of gas per year via the Southern Gas Corridor when it opens in 2019-2020, which is predicted to rise to 80 to 100 BCM of gas per annum in the future.

The Caspian gas resources will not be sufficient in diversifying European gas supply even if other countries like Iran and / or Iraq join in, provided the geopolitics can be managed. But there is an additional problem. Gas will have to be transported via a pipeline network, including TANAP⁷ currently under construction, across precarious Turkish territory,

¹ For a detailed analysis of this subject see the Author's Paper / Study with the same title at: <https://www.greekenergyforum.com/publications/studies/2017/the-role-of-east-med-gas-in-the-european-energy-security-and-the-best-cyprus-gas-monetization-option>

² Trillion cubic feet.

³ Billion cubic meters.

⁴ BP Energy Outlook 2035, Jan. 2014.

⁵ The "Fourth and the Fifth Corridors" constitute the Southern Gas Corridor.

⁶ <https://ec.europa.eu/energy/en/topics/imports-and-secure-supplies/gas-and-oil-supply-routes>

Accessed on 18.4.2017.

⁷ Trans-Anatolian Natural Gas Pipeline.

especially in Eastern Turkey, which has been subject to “repeated attacks” over the last 15 years causing serious outages. John Roberts⁸ cautions that the consequences of intensified warfare within Turkey should be seriously taken into account in considering the export options of East Med Gas to Europe. Turkey has had terrorist attacks from ISIS and faces the armed Kurdish independence struggle in pipeline territory. Therefore such pipelines are at grave risk. If the East Med gas is also transported via Turkey transit security will be compromised. It will be like the EU deciding to place all its eggs in one basket. Transit security is of paramount importance: There is no energy security without transit security. The lessons from the Ukraine 2006 and 2009 gas transit crises should not be lost. Another issue is whether the EU would allow Turkey to snatch East Med gas resources and gain leverage over Russia or whether it wants this advantage for itself.

The Republic of Cyprus, as an EU and Eurozone member, has already proved its usefulness to the EU in several fields, including its defence policy (not just on soft power issues), given the explosive situation in the Middle East and Europe’s urgent need to combat terrorist attacks and migration flows. Indeed, Cyprus constitutes the easternmost defence bastion and border of Europe.

Given the East Med energy potential, Cyprus can play a pivotal role in reinforcing the energy supply and transit security of the EU. First, as analyzed above, it would be wise for the EU to have separate routes for the 4th and 5th corridors. Second, pipeline dependence should be avoided. Pipelines render the exporter hostage to the importer and give intermediary states inordinate power at the expense of both. Geopolitical developments can be as fluid as gas and such long-term commitment may be regretted.

The EU's overall LNG import capacity is significant and was capable of meeting around 43% of total gas demand in 2015⁹. However, in South-Eastern (SE) and Central Europe and the Baltic, many countries do not have access to LNG and/or are heavily dependent on Russia as the single gas supplier. This renders them vulnerable to a supply crisis. Hence, ensuring that all member states have access to liquid gas markets and diversified sources of supply is a key objective of the EU's Energy Union. Towards this end, the EU targets the improvement of its energy security and competitiveness by tapping into the global LNG market. The European Commission is implementing an EU strategy for LNG and gas

⁸ Roberts John, Senior Fellow at the Atlantic Council and Energy Security Specialist, (21 November 2016). Presentation analyzing “the Turkish factor” at the PRIO Cyprus Center international public conference on “the future of Eastern Mediterranean gas”.

⁹ See European Commission Fact Sheet on “Liquefied Natural Gas and gas storage will boost EU's energy security”, Brussels, 16 February 2016 at: [http://europa.eu/rapid/press-release MEMO-16-310_en.htm](http://europa.eu/rapid/press-release_MEMO-16-310_en.htm). Accessed on 18.4.2017.

storage as one of several measures under the Energy Union package aiming at improving energy security and diversifying supply sources.

2. Cyprus Gas Monetization: LNG Plant and Energy Sector benefits for the economy

This is why an LNG¹⁰ Plant at Vassilikos in Cyprus would serve the best interests of both the EU and the Republic itself. LNG imports to Europe¹¹ are accepted by EU as increasing energy diversification and security. In fact, competitively-priced LNG is forecast to claim a much larger share of the European gas market. Additional gas supplies are necessary for long-term economic development especially of the less developed SE Europe.

Moreover, a Cyprus-based LNG Plant is the principal if not the only way of achieving targeted and specified results concerning the country's energy future. This has become even more imperative following the illegal bank bail-in/haircut¹² imposed by Eurogroup on 25.3.2013 that destroyed the country's economic model, kicked the economy into recession and worsened the prospects of its future potential growth path.

The development of the energy sector around an LNG Plant and the multiplier effects from the implementation of the required infrastructure are indeed key components for the country's economic future for many reasons. A dynamic energy sector can lead to job creation across the entire industry value chain and help develop technical expertise, applied research and innovation. It can create inter-sectoral synergies and economies of scale. Energy-intensive industries such as aluminium and petrochemicals with high value added may develop with natural gas as feedstock, provided international comparative costs and prices remain within a competitive range. Existing plastics manufacturers with access to competitively-priced, locally-produced raw material, such as methanol will receive a much-needed boost. Other industries (chemicals, plywood, paints, permanent press textiles etc.) may spring up, taking advantage of economies-of-scale and interlinkages among economic sectors. The fastest possible introduction of gas into the electricity transformation sector is a most important priority bound to exert a great microeconomic

¹⁰ LNG is natural gas (predominantly methane), condensed into a liquid state by cooling it at $-162\text{ }^{\circ}\text{C}$ for ease of storage or transport. LNG takes up 600 times less volume than gas at standard atmospheric pressure, permitting transport across long distances without pipelines.

¹¹ Natural gas represents around a quarter of the EU's overall energy consumption. In recent years LNG has accounted for around 10% of EU gas imports, mostly coming from Qatar, Algeria and Nigeria. Both percentages are forecast to rise. See: http://europa.eu/rapid/press-release_MEMO-16-310_en.htm. Accessed on 18.4.2017.

¹² For detailed analysis of this issue see the Author's Policy Paper entitled «Causes and impact of the MOUs on the economies of Cyprus, Greece and Portugal» at: http://www.cceia.unic.ac.cy/images/policypapers/policy%20paper_7-2015.pdf and at: <https://www.researchgate.net/publication/292154943>

and macroeconomic impact. The electricity production cost will decline substantially with evident benefits for both households and industrial users. This will exert downward pressure on inflation and render the enterprises and the economy more competitive. Positive macroeconomic implications from LNG exports include increased government revenues, reinforced debt repayment ability from running primary fiscal surpluses without levying or raising taxes, the rise of disposable income, living standards and welfare as well as the correction of chronic macroeconomic imbalances like the trade and current account deficits. Furthermore, the energy sector can contribute to the achievement of a more knowledge-based economy, while the education sector and tailored energy-training programs are already experiencing growth.

In the light of the foregoing, a two-train¹³ LNG Plant is fully justified provided at least 10 tcf of proven reserves become available, including the existing 4.5 tcf reserves of Aphrodite (Block 12 in Cyprus' Exclusive Economic Zone / EEZ). Several exploratory drills are planned in 2017 and 2018 by the International Oil Companies (Exxon Mobil, ENI and Total) and Independents operating in the EEZ of Cyprus. The probability of success according to the reevaluation of the revised exploration model seismic survey results is rated to be considerable. Cyprus' Blocks 10 and 11 are strong candidates for carbonate reservoirs like Zohr's, whose discovery in August 2015 was a game-changer, revolutionizing the industry in the Eastern Mediterranean.

Future liquefaction capacity can be expanded according to gas field discoveries, cooperation among the involved companies, the East Med countries joining in, such as probable future producers like Lebanon, Syria and currently-producing Israel (despite Israel's decision to construct a pipeline to Turkey), other potential investors and of course European and world demand.

In fact, the Cyprus objectives are in line with the main dimensions of EU's Energy Union strategy¹⁴. Cyprus can serve as the axis that boosts the energy partnership between the Southern European and Eastern Mediterranean countries so as to contribute to the achievement of Energy Union goals. The development of a Mediterranean gas hub with regional supplies from a Cyprus-based LNG Plant will reduce EU dependence on specific energy suppliers, routes and fuels and contribute significantly to Europe's energy requirements and energy security. Cyprus satisfies all the necessary and sufficient conditions to become an energy hub in the East

¹³ A train is the equipment needed to liquefy the gas and export it from an offshore block.

¹⁴ The Energy Union encompasses the goals of: 1. Securing Europe's energy supply; 2. Ensuring fair competition in a fully integrated European energy market; 3. Protecting the environment and in particular combating climate change; and 4. Improving energy infrastructure.

Med based on the construction of an LNG plant. Cyprus's advantageous position at the intersection of major international energy routes to Europe and Asia via the Suez Canal renders it a most suitable natural location for the Plant.

All in all, an LNG Plant is the single indisputable option for achieving the optimal development of Cyprus's hydrocarbons potential in addition to contributing to EU energy security objectives. The primacy of an LNG Plant is underlined as the best and the most rational choice for both Europe and Cyprus in the context of regional geopolitics, Middle East instability and the new Great Game of geopolitical rivalry over energy routes. At the same time, an LNG Plant will bestow maximal benefits on the Republic's economy. Cyprus may gradually develop into an energy center and an energy trading junction, underpinning the Cyprus strategic imperative to become a regional energy hub and raising investment opportunities in the hydrocarbons sector in the short, medium and long term. In addition, the Republic will gain substantial geopolitical leverage beyond material capabilities, thus rendering possible a fairer solution of the Cyprus problem.

3. East Med regional cooperation

The East Med gas constitutes a viable, secure and independent alternative corridor for European incremental demand and diversification needs. Furthermore, the exploration and development of East Med gas reserves present an excellent opportunity for regional co-operation and contribution to regional political stability and growth. The promotion of common interests has already led to the emergence of trilateral partnerships and cooperation over a range of fields among Cyprus, Egypt, Israel and Greece. Other regional states, without hegemonic aspirations, like Lebanon and Syria (once stabilized) and further afield (Jordan, Qatar etc.) can enhance the alignments in different spheres of common interests among neighbouring countries and extend them beyond energy cooperation into areas of common challenges such as terrorism, extremist ideologies, migration and sustainable development. A shared vision and regional cooperation shall not only act as catalysts for peace, growth and economic prosperity but are an essential part of a win-win solution. It will maximize the benefits for both energy exporters and importers (including Turkey which has rising gas needs), safeguard security of supply and demand and enhance regional stability. At the same time, it will determine the regional investment flows in the offshore energy supply sector, the international political and economic relations of the area and the geopolitical structure of the region's energy export and shipping routes.