

Cyprus Gas Ambitions.. not green nor achievable?

With the flare-up of war in Gaza and the associated tension in the Red and Mediterranean seas, the future of gas exploration in the Eastern Mediterranean has become more unclear, mainly for stakeholders who set this path as a compulsory route toward cleaner and less expensive energy, especially Cyprus.

The Cyprus government is showing great interest in the Vasilico gas liquefaction project, which is being developed by a consortium of state-owned China Petroleum Pipeline Engineering, a unit of CNPC, Metron Energy Applications, Hudong-Zhonghua, and Wilhelmsen Ship Management.

It is Marketed by President Nikos Christodoulides's Government, as A major solution to reduce the power bills on the Mediterranean island, where gas requirements for electricity generation are nothing compared to the gas reserves lurking below the bottom of the Eastern Mediterranean.

The Cypriot market is projected to consume no more than 1 bcm of natural gas annually by 2030, as the initial estimation of Aphrodite's gas field resources was a mean gross amount of gas of about 7 TCF (trillion cubic feet).

Launched in 2020 as a major step to reduce Cyprus's carbon footprint and better align its energy strategy to the European Union's regulations, the project is still under construction, after repeated delays in its presumed completion date. The latest statement indicates that it will be ready by July 2024.

Besides that, After more than twelve years since the discovery of Cyprus's first and largest offshore gas field, Aphrodite, there is no production yet. And Cyprus imports refined petroleum mainly from Greece, Israel, Turkey, Italy and the Netherlands.

The project is partly financed by the EU, which is very interested in Cyprus' role in the Liquid gas market, along with Israel and Egypt. And that - by the European

Commission's words: "Make the Eastern Mediterranean region a strategic partner for the EU in its effort to diversify its gas supply routes".

Project prospects

The Vasilico gas liquefaction project includes a floating gas liquefaction platform and is also expected to have a gas power plant, Besides being a supposed starting point for exporting liquefied gas to Europe.

The government stated that "the initial scenario for the LNG Plant included the construction of two LNG storage tanks with a capacity of 180,000 m³ each, with the provision to expand with a third one."

Delays in the start-up of the project, under the current tension in the region, make its future and feasibility highly questionable, especially if we take into consideration its actual impact on the cost of electricity production in the local market and its potential impacts on the environment on the island where beach tourism is an important source of national income are measured.

"The project's efficiency for reducing electricity bills is questionable, since the rising costs of the project budget, increase of €25 million due to material price hikes, and further delays are likely to incur additional costs.", says Natasa Ioannou, from "Friends of Earth - Cyprus», A leading environmental NGO.

Ioannou added that "While the idea of lowering electricity bills might seem appealing, the Vasilico LNG project's delays, rising costs, and the volatile LNG market make it a risky proposition."

Regional mines

As there is no local gas production, Energy Minister George Papanszio confirmed last year that reducing the electricity bill is by relying on dragging natural gas with an undersea pipe to the island, not via sea-borne liquefied gas shipments, whose price has increased significantly following the Russian war in Ukraine.

Nicosia's plan involves dragging gas from Israel's fields and those within its exclusive economic zone, because the estimated local production is "not enough" as the LNG terminal requires a minimum volume of gas supply every year for the long term to justify the initial capital expenditure.

This was before the situation in Gaza descended into a protracted war, which could expand to Lebanon or the rest of the region, similar to confrontations in the Red Sea. Today, the construction of such a tube, in isolation from its huge economic cost, seems hostage to unaccounted geopolitical developments.

Adding to the fact that the East Mediterranean Pipeline project, that involves Cyprus, Greece and Israel, is frozen due to several factors such as the cost and efficiency, the US support and the tension between Cyprus and Turkey, as the proposed route traverses maritime territory that Turkey contests.

Natasa Ioannou, answered our question about the EU stand on this project, saying: "The European Union's (EU) stance on the Vasilico LNG terminal is complex since there was an initial backing of the project where the EU provided financial support for the project viewing it as a way to diversify Cyprus' energy sources and potentially lessen reliance on Russia. However, the EU's focus has increasingly shifted towards renewable energy sources to meet climate goals. The main aim is to achieve carbon neutrality by 2050, and LNG doesn't align with that vision in the long term since it is a huge project, apparently unprofitable, and it contradicts climate goals."

Ioannou added: "The EU might see the project as a temporary solution, but the long-term economic and environmental benefits of renewables are more attractive. And the EU actively encourages Cyprus to pursue renewable energy sources through targets, funding, and technical support."

Technical obstacles

The Cypriot government's insistence on dragging gas ashore from the fields of the Levant Basin came after government concern over gas pumping from the Avrodit

field towards Egypt, which owns the only two gas liquefaction plants operating in the eastern Mediterranean.

During the negotiation with Chevron, the operator of this field, whose plan was to dispense with the floating production unit - which was included in the plan version in 2019, in favor of transporting gas from the field to an Egyptian liquefying plant.

After years of examining the possible success of this joint path with Egypt, Papanastasio considered in October 2023 that the Chevron plan undermined Cyprus's ownership of the gas field, in Egypt's favor, because the latter would be in control of the use and sale of liquefied gas.

Speaking to "Agros" platform, the Cyprus Minister of Energy acknowledges that the problem in returning to the 2019 plan is the absence of the necessary gas transport infrastructure from Aphrodite and the rest of the fields within the Cyprus region, as well as the difficulty in justifying the completion of private infrastructure, in the absence of any formal plans to develop Cyprus' marine fields.

The LNG terminal in Vasilico, according to Papanastasio, will rely on a floating storage and liquefaction unit called Etyfa Prometheas, to be operational in July 2024.

This unit, according to open maritime data, remains anchored in a Shanghai port, despite talk of its delivery last November.

This delay does not seem to be on the part of the manufacturer, which has conducted tests on the unit over the past year, but rather shows its link to the completion volume of the liquefaction and storage plant in Vasilico.

This is reflected in Papanastasio's reference to the possibility of leasing this unit to another country, likely to be the United Arab Emirates, until the completion of the terminal in Vasilicos.

How Green is this project?

Cyprus continues to rely predominantly on oil burning for electricity production, minimally on coal and renewable energy sources. According to Energy Minister George Papanzio, the latter's contribution to total production at the national level is about 32%.

According to BB's Statistical Bulletin figures, in Cyprus, solar energy was the most expensive sector in alternative energy, if 2021 saw a 60.8% year-on-year rise, while wind output rose by 2.8%, and other renewable energy production fell by 30.8% year-on-year.

"The Vasilico LNG terminal has significant environmental costs for marine life. Investing in renewable energy sources is a far better option for a sustainable future» says Natasa Ioannou.

Ioannou elaborated that "Naming the Vasilico LNG terminal as a "green policy" is misleading, because LNG is still a fossil fuel and also by investing in fossil fuels it locks Cyprus into a future away from renewable, clean and safe energy», adding that "Liquefied Natural Gas (LNG) is a fossil fuel, and its combustion releases greenhouse gasses that contribute to climate change. While it burns cleaner than coal, it's still detrimental to the environment."

And when questioned about the Vasilico LNG terminal's environmental impact on marine life, "FoE" answered: "LNG facilities discharge cooling water that can be several degrees warmer than the surrounding seawater. This thermal pollution can harm marine ecosystems by disrupting feeding and breeding grounds. Additionally, spills of LNG or LNG byproducts can be toxic to marine life."

On the other hand " The construction and operation of the terminal can disrupt marine habitats, impacting everything from plankton, especially Posidonia meadows to several marine life." FoE explained.

Ioannou also said that "facilities generate underwater noise from ship traffic, machinery, and construction. This can disrupt communication and navigation for

marine creatures like whales and dolphins, and also disturb the normal functions of other marine life."