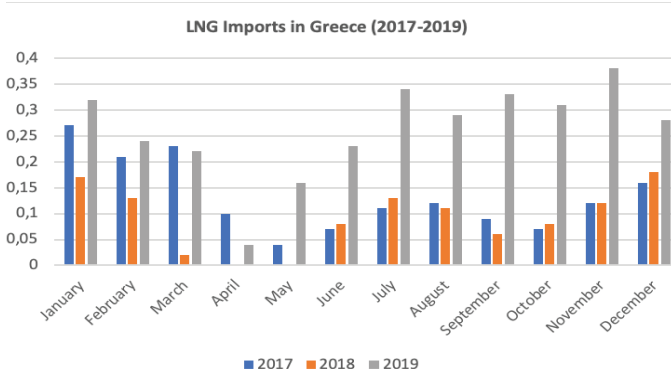


LNG Markets in SE Europe

It appears that LNG prospects in SE Europe and the East Mediterranean in particular are far better placed than they were five years ago, with new projects getting ready to progress and LNG clearly emerging as a priority fuel for several industrial consumer groups helped by lower prices and increased availability.

In SE Europe, LNG seems to be a realistic alternative fuel as it increases security of supply through multiple and independent supply sources, provides the opportunity for new LNG suppliers (e.g. Australia, US, etc.) to export gas to the region, enhances pricing flexibility and safer gas transportation and can also support underperforming gas pipeline projects. It is worth noting that on December 30, 2018, **Greece's** Revithoussa LNG terminal, following an agreement between Cheniere and DEPA, welcomed the first US LNG cargo at its newly build 3rd tank of 95.000-m³ storage capacity. Thus, the Revithoussa LNG terminal opened up the way for new prospects in gas supply by differentiating energy sources and enhancing security of supply in SE Europe, enabling Greece to pitch its claim for a regional gas hub.



Regarding the planned Alexandroupolis FSRU in northern Greece, Gastrade, the promoter of the project, recently launched the binding second-round market test for annual capacity reservations. The deadline for interested participants to submit their offers is February 24, 2020. The market test's first round was completed on December 31, 2018, with the participation of twenty firms from the region, as well as major international gas traders. They expressed interest for annual capacity reservations totaling 12.2 bcm, which exceeded the project's planned regasification capacity of 5.5 bcm. The FSRU will have a nominal regasification and send-out capacity of 5.5 bcm per year and a peak technical regasification and send-out capacity of 22.8 million cubic meters per day.

One further FSRU project in Greece is now in the planning stage and it is promoted by Motor Oil Hellas, a major refining and oil marketing group. This latest FSRU project, which received approval by RAE on March 5, 2019, is to be located offshore in the Agioi Theodoroi area, next to Motor Oil's refinery. The capacity of the FSRU tank will be 135,000-170,000 m³, while its regasification capacity peak is expected to be 470,000 Nm³/h.

Croatia might also play an important role when the LNG terminal planned for the island of Krk is completed. This FSRU terminal would not only make a great contribution to Croatia's supply portfolio, but if its capacity is expanded, it could help bring gas of varied origin all the way to Hungary, Slovakia, and (via reverse flow through the previously noted countries) even as far as Ukraine. In January 2019, Krk FSRU reached Final Investment Decision (FDI) to procure and operate a vessel, with a regasification capacity of 2.5 bcm/y, while it is scheduled to start commercial operations in the autumn of 2020. The total project is estimated to cost €243 million. The EU has disbursed €102 million, the Croatian government will set aside €100 million, while the remaining €32.6 million will be contributed by the founders of LNG Croatia - HEP and national grid Plinacro.

Turkey's first FSRU terminal in Aliaga (i.e. ETKI FSRU), north of the port city of Izmir on the country's Aegean coast, launched operations in December 2016. The 145,000 m³ LNG storage capacity vessel is operated by the Turkish construction companies Kolin and Kalyon with a 20 mcm of send-out capacity per day. In addition, the Botas-Dörttyol FSRU, the world's largest FSRU in operation in the Turkish port of Dörttyol, a district in the southern province of Hatay, started its operation in February 2018 as the country's second FSRU terminal. The FSRU has an LNG storage capacity of 263,000 cubic meters and has re-shipment and gas transfer capabilities, with a regas discharge capacity of 540 mcm per day. Turkey has also two land-based LNG terminals (i.e. Aliaga and Marmara Ereğlisi). Thus, Greece and Turkey are the only countries in the broader Black Sea-SE European region which at present possess LNG gasification terminals which are well linked and integrated into their national gas systems (see the following Map). It is thus anticipated that the SE European region, from Croatia to Turkey, will play a significant role in expanding LNG trade in Europe by 2022 through the construction and operation of several new LNG regasification projects, with the prospect of feeding gas quantities into the Greek, Bulgarian, Serbian and Turkish gas systems, among others.

LNG Terminals in SE Europe



Source: IENE

The SE European Region as Defined by IENE



- | | |
|-----------------------------|-------------------|
| Core countries | |
| • Albania | • Kosovo |
| • Bosnia and Herzegovina | • Montenegro |
| • Bulgaria | • North Macedonia |
| • Croatia | • Romania |
| • Cyprus | • Serbia |
| • Greece | • Slovenia |
| • Hungary | • Turkey |
| • Israel | |
| Peripheral countries | |
| • Austria | • Moldova |
| • Egypt | • Slovakia |
| • Italy | • Syria |
| • Lebanon | • Ukraine |

The Alexandroupolis FSRU



Source: Gastrade

Who are we?

The Institute of Energy for SE Europe (IENE) is a non-profit organization active throughout South East Europe, focusing on energy policy and analysis but also on information dissemination. IENE aims to promote a broader understanding of the major energy and environmental issues in the region. A key objective of the Institute is to contribute towards the implementation of the European Union's sustainable strategy which combines economic and social development, security of supply, environmental protection and climate change mitigation. Further information on the Institute, its mission and vision and its various activities can be found in www.iene.eu



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