

# TRACKING EGYPT'S LNG EXPORTS FROM 2010-2017



BY AMINA HUSSEIN AND REHAM GAMAL

Egypt is one of the only two countries – alongside Algeria - that have liquefied natural gas (LNG) infrastructure in the Southern Mediterranean. Egypt used to have both LNG importing and exporting facilities; however, the country recently gave up on one of its importing facilities in its way to gain back its position as an LNG exporting country. It is worth noting that Egypt does not rely only on the LNG exports, as there were also pipeline exports of natural gas as in the case of exports to Jordan and Israel.

Egypt has two LNG exporting facilities; both of them had been inactive since 2013 as the Egyptian production was directed to the domestic market to cover the increasing demand.






also supplied the facility. The Abu Qir field, operated by Edison, was also expected to send gas to Damietta from 2012; however, supply was shifted to the domestic market.

The ELNG facility exists in Idku, East of Alexandria. It was established in 2001 when the Egyptian General Petroleum Corporation (EGPC) and Edison signed an agreement with Shell to develop an integrated LNG export project in Egypt.

The plant is a two-train facility on the Mediterranean coast with a capacity of 10 billion cubic meter per year (bcm/y) to export the Egyptian LNG to France and other countries in Europe and the US. ELNG acts as a tolling facility with the upstream suppliers paying a tariff for the liquefaction service. The ELNG can accommodate an expansion of up to six trains in total with potentially different ownerships and sources of feed gas. It is worth mentioning that the two plants have a total maximum production capacity of 9 mt/y.

 The two LNG plants have a maximum capacity of **9 mt/y**

The Idku liquefaction facility recently came back to work as Shell started exporting natural gas from its offshore Burullus and Rosetta fields.

### LNG EXPORTING AND RE-EXPORTING OVERVIEW

As a result of having this unique LNG infrastructure, which involves powerful LNG liquefaction plants, Egypt succeeds in stimulating its regional collaboration through exporting and re-exporting natural gas of many foreign countries across different regions. In addition, LNG suppliers in Egypt can maximize their profits by storing and re-exporting gas, and waiting for price signals before delivering LNG to the higher-paying markets in Asia, Europe, the Americas and the Middle East.

Exports and re-exports were greatly enhanced as well after several years of ups and downs in Egypt's natural gas sector due to offshore giant discoveries that took place in Egypt by international oil companies (IOCs). The first giant discoveries included the Atoll gas field; and the North Damietta offshore concession, which is located in the East Nile Delta and operated by BP. The second giant discoveries included the Zohr gas field, discovered by Eni in 2015. Subsequently came the discovery of the Noroos field, located in the offshore Nile Delta and also discovered by Eni in 2015. At last, came the West Nile Delta project, developed by BP, RWE and DEA, in addition to the East Delta's Taurus and Libra fields that contributed by adding 1.6 mcf, declared by Minister of Petroleum Eng. Tarek El Molla during his participation in Rome MED 2017 forum.

While expecting future production to continually increase, Egypt can make a great use of its LNG facilities to re-export gas and generate revenues without having to use its domestic gas reserves. Besides, Egypt can access the European market as a re-exporter, but not as a direct one, by possessing these LNG facilities.

Furthermore, Egypt is expected to permit free exportation of natural gas not needed domestically in five years by IOCs, by adding a clause within new exploration contracts to allow the exports of IOCs' share abroad, El Molla announced during Al Ahram's energy conference.

### EGYPT'S LNG EXPORTS FROM 2010-2017

Over the period from 2010-2014, Egypt's exports of LNG continuously declined until it stopped in 2015 due to the increased domestic demand. Egypt, then, was able to resume and gradually increase its exports of LNG in 2016 and 2017, according to BP Statistical Reviews of World Energy (2011-2018).

In 2010, Egypt was able to export around 9.71 bcm, of which 49% were exported to Europe and Asia. Spain was the main destination for the Egyptian LNG as it received 27% of Egypt's exports. In 2011, LNG exports declined by 10.4% to reach 8.7 bcm. However, the main importers remained the same. Europe and Asia received around 51% of the exported LNG, and Spain imported 26%.

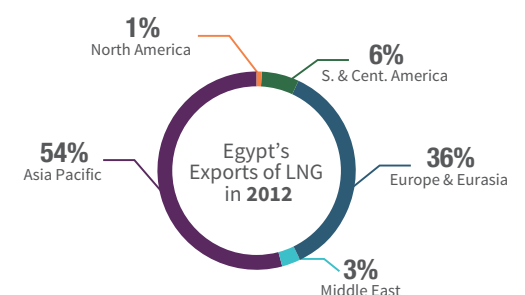


**Spain** was the largest Egyptian LNG importer in 2010 with a share of **27%**



**Spain** was the largest Egyptian LNG importer in 2011 with a share of **26%**

The decline in Egypt's LNG exports continued in 2012 to reach 6.9 bcm, a 20.7% decline. Asia Pacific was the main importing region as it received a total of 54% of Egypt's exported LNG, of which 20% was imported by Japan. The case was the same in 2013, as Asia Pacific received around 76% of the exported LNG, which recorded a total of 3.8 bcm with decline of 44.9%. Japan and South Korea were the main destinations for Egypt's LNG, as they received 21% each.

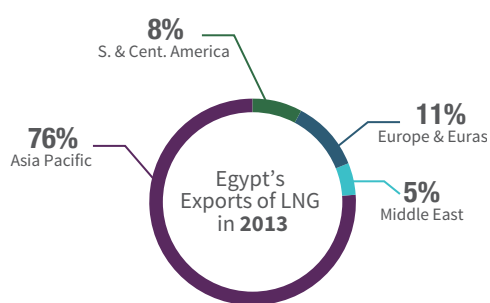


**Japan** was the largest Egyptian LNG importer in 2012 with a share of **20%**

The first facility is operated and owned by the Spanish Egyptian Gas Company (SEGAS), while the second one is managed by the Egyptian Liquefied Natural Gas Company (ELNG).

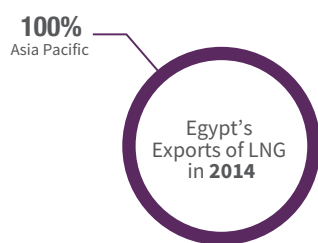
The SEGAS facility is located in Damietta. It came on-stream at the end of 2004 and its exports were mainly directed to the European market through receiving terminal at Sagunto in Spain. It was the first liquefaction facility to be built in Egypt as a single train plant with a capacity of 5.5 million tons per year (mt/y).

The Damietta plant initially received gas supplies from the Temsah fields and Ha'py Development Area operated by British Petroleum (BP) and Eni via the national gas grid. In addition, the Scarab and Saffron fields in the West Delta, owned by Shell/Petronas, have



**Japan & South Korea** were the largest Egyptian LNG importers in **2013** with a share of **21%** each

Since 2014 until now, it has been noted that most of the LNG exports of Egypt were directed to Asia Pacific market as it is considered to be the motor of growth in LNG demand. In 2014, all LNG exports by Egypt reached 0.5 bcm to record a 88.6% decline in comparison to that of 2013, and they were totally delivered to Asia Pacific countries, where China represented 40% of the total LNG exports. China is one of the most influential LNG markets; its demand of natural gas has been highly increasing over the decades to combat rising levels of pollution by moving to cleaner source of fuel.



**China** was the largest Egyptian LNG importer in **2014** with a share of **40%**

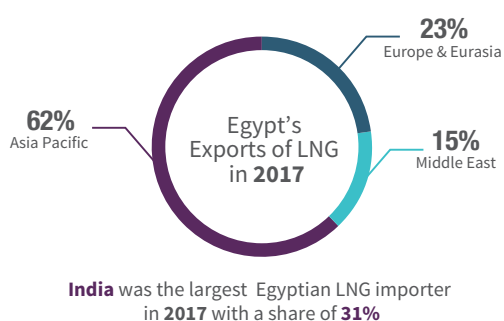
Despite the new discoveries, production of natural gas declined by 6.6% year-on-year in 2015 while the consumption decreased only by 0.4% for the same period, according to BP Statistical Review of World Energy June 2016. Hence, to satisfy the difference, Egypt had to shift its natural gas supply away from exports to the domestic market by relying on LNG. Accordingly, 2015 witnessed no LNG exports by Egypt.

In 2016, LNG exports resumed to reach 0.8 bcm, from which 62% went for the Asia Pacific region. All countries within the region accounted the same for 13% of the total LNG export.



**All Egyptian LNG importers in 2016** had the same share of **13%** each

In 2017, LNG exports highly increased by 62.5% to reach 1.3 bcm, where Asia Pacific region resumed its imports by 62% consecutively; however, India got the highest share of 31% of the total LNG exports. India is one of the LNG-based economies where LNG consumption increased from 24.7 bcm in fiscal year (FY) 2016/2017 to 26.3 bcm in FY 2017/2018, as explained by Petroleum Planning & Analysis Cell, MoPNG, 2018.



**India** was the largest Egyptian LNG importer in **2017** with a share of **31%**

### ACHIEVING SELF-SUFFICIENCY

After years of natural gas surplus, Egypt turned into a net natural gas importer in FY 2015/16. This natural gas imbalance obliged the government to pay a bill of about \$2.2 billion in FY 2016/17, according to a press release by the Ministry of Petroleum and Mineral Resources.

The recently discovered natural gas fields have given the government the chance to plan for halting natural gas imports and reclaiming its position as a natural gas

exporter. The Egyptian government appeared to be optimistic about achieving self-sufficiency, declaring in several occasions that Egypt will stop importing natural gas by 2019. Accordingly, the government expects to restart exporting natural gas by June 2020, according to the declarations of the Egyptian president and the minister of petroleum. It is worth mentioning that these plans correspond to the results and conclusion of several studies that discussed the future of natural gas market in Egypt.

By possessing exceptional liquefaction infrastructure, running at full capacity, and resuming natural gas discoveries, Egypt is paving its road towards being a remarkable LNG exporter, in the longer term, for the European market. This step was promoted by two deals: First, signing of memorandum of understanding for the strategic partnering in the energy field between Egypt and European Union. Second, Egypt signed an agreement with Cyprus, in September 2018, to establish a direct subsea gas pipeline that will transport gas from Cyprus' Aphrodite gas field to Egyptian liquefaction plants then re-exporting LNG to European countries.