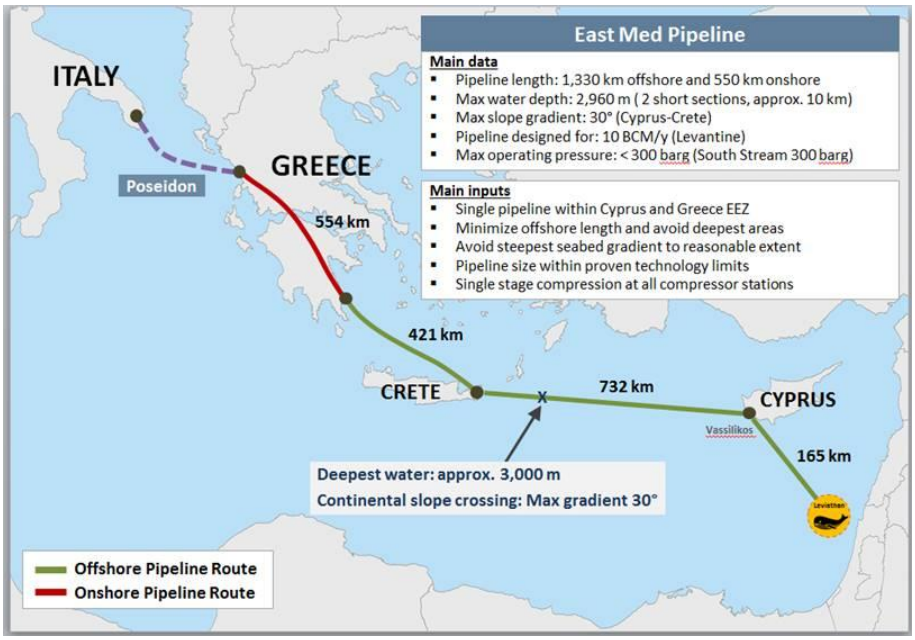
Globes (Eli Zipori – 19.10.2017) – The new solidarity rule in the European Union, that is due to ensure the proper division of gas in case of a crisis, could promote the ambitious offshore gas pipeline project to Italy. Is this the best option?


Eli Zipori

Europe has an interest in Israel's natural gas, the question is how to get it there


Gina Cohen: Israel will offer a more flexible pricing mechanism



Is the gas pipeline project between Israel and Italy, namely the pipeline known as the East Med Gas Pipeline Project, the construction of which relies considerably on the ability to export gas from Leviathan and others, a project that is economic and technically possible? The views in the energy market are divided, but the Minister of Energy Yuval Steinitz is promoting the project

with all diligence – not just with his declaration, but also in his meetings on the issue with his colleagues in Europe.

The establishment of this project, would entail a subsea and onshore gas pipeline running 2,000-2,200 km that would transmit Israeli and Cypriot gas from the existing fields and potential future discoveries if there should be any, to Greece and Italy and from there to additional markets in Europe. One of the main caveats is that over the last 2-3 years the average gas prices in Europe have ranged between $4.5-$6.5 / MMBtu, a level of pricing that makes this project commercially and economically challenging. Another challenge is Russia, that has abundant resources that it can supply within this price range, and the major Russian company Gazprom is even expected to provide a price reduction of about 12.5% to the Turkish national gas company BOTAS, although the final conditions of the agreement have not yet been agreed.

And yet, this ambitious project could create a win-win for all: namely, if Israel and Cyprus would be able to supply gas to Europe, this would provide an outlet for a lot of the Israeli gas and all the Cypriot gas that has yet to be monetized, and for Europe it would mean a diversity of supplies and would thus also enhance the security of supply of many of the countries of the European Union.

As part of the efforts to promote the East Med Gas Pipeline Project to the practical level, a month ago the Director General of the Ministry of Energy, Shaul Meridor met with his Italian, Greece and Cypriot counterparts as well as with the EU Commissioner for Climate Action and Energy Miguel Arias Cañete in Rome on the 11th September. This latest trip came at an opportune time, as the very next day, the Council of the EU passed its revised "solidary rules" to allow the internal gas markets to function even in the face of a shortage of supply. The principle embedded in this new regulation is to deal with the sharing of gas during a crisis situation within Europe.

"The principle of this new legislation is first and foremost a declaration of the need for closer regional cooperation", explains Gina Cohen in an interview to Globes. Cohen is an expert in the natural gas sector in the Eastern Med and a lecturer at the Technion University on the issue, and in the past she has written articles for Globes articles on the project, which is the biggest infrastructure project that Israel will ever be involved in if it moves ahead.

"The new legislation is to facilitate the joint assessment of common security of supply risks, ensure greater transparency by requiring natural gas companies to notify of any long-term gas contracts that represent 28% of the annual gas consumption in any member state and entails neighbouring member states helping each other out to ensure gas supply to households and essential social services in the event of a severe gas crisis. The solidarity principle can even be extended to cover gas-fired power plants if the functioning of the electricity system in a neighbouring country is under threat."

How does this solidarity decision help to promote the Eastern Med gas project?

“The EU and many of its member states want to diversify their sources of natural gas supply. Europe is becoming more and more dependent on gas imports because of a sudden increase in their consumption over the last couple of years and falling indigenous production. For example, the Dutch Groningen field which in 2013 produced 5.2 bcf of gas per day, only produced 2.1 bcf a day during the first quarter of 2017.”

“Other supply concerns include lower potential supplies from Azerbaijan to Europe as the country is struggling to even meet its growing local consumption. Azerbaijan's oil and gas company Socar stated this month that it wants to start importing 5 bcm a year from Russia to offset both lower local production and lower imports from Turkmenistan.”

And Russia must thus be the main benefactor of this fall in local production in Europe?

“Indeed, Russian volumes this year increased 13% compared to last year, and many analysts assess that full year Russian exports to Europe could reach a record-breaking 18.7 bcf/d, surpassing the peak 17.3 bcf/day sold last year. One can thus understand the eagerness of the EU to get totally different sources of supplies, inter alia such as Israel-Cypriot gas”.

And what about the possibility of them importing LNG from the US?

“This option has not turned out to be the panacea that Europe had expected, since only a handful of cargoes have made their way to Europe, since only a small number of LNG cargoes have reached Europe. The reason here is not a shortage of supplies, but too high prices compared to Russian pipeline gas, cheap coal and incentives-backed renewables.”

“Another potential source of gas to the EU looks uncertain. Romania was expecting to sell some of its Black Sea produced gas to central and possibly western Europe. However, a last-minute change in the plans related to the transport of natural gas from the region to Austria has diminished its chances to offload the gas.”

The pipeline is not the only option

The subsea gas pipeline project from Israel to Italy, which would in fact be the longest and deepest such gas project in the world running over 2,000 km, seems very pretentious, is this the only option to export Israeli gas to Europe?

“Absolutely not. Although the Director General of the Ministry of Energy flew to Europe to promote one specific project, namely the East Med Project, there are 4-5 options to bring Israeli and/or Cypriot gas to Europe. The options consist of 2 potential pipeline scenarios and 2-3 LNG scenarios. For ease of comparison, we will assume that the volumes to be exported via any of these projects would be 10 bcm a year.

The first option as we stated is the deepsea over 2,000 km pipeline project from Israel to Italy, via Cyprus and Greece.

What is the estimated cost of this project?

“A preliminary feasibility study conducted for this project stated the costs to be $6.2 billion”

What are the advantages and disadvantages of this project?

"The main advantages of this project, is the inherent committed nature of pipeline projects, which could entail getting some financial backing from the EU Commission's special fund allocated to Projects of Common Interest, if they satisfy the conditions that they represent new volumes of gas and the building of new infrastructure. Other advantages include the relative ease, from the permitting and safety point of view, of constructing a subsea pipeline with minimum transit issues.
Some of the disadvantages include the technical complexities of laying such a long line in ultra-deep waters that could reach up to 3,000m."

So it there a shorter pipeline project version?

"Yes, pipeline to Turkey and from there using the existing line into Greece, which is part of a possible future expansion known as the ITGI Poseidon project, which is due to cross the Adriatic from Greece to Italy; or the Western Line between Bulgaria and Turkey, which would have to be converted into a bi-directional line to enable physical exports from Turkey or used for virtual swaps. Other options to transmit Israeli gas from Turkey to Europe would be to gain capacity in the second phase of the TAP pipeline or construct new lines, which could either be dedicated just for this project if an exemption from third party access could be obtained from the EC, or a joint project to transport Israeli gas and other supplies that will eventually reach Turkey and will be seeking an onward route into Europe."

And what are the advantages and disadvantages of such a project?

"The main advantages of this project is that technically it is a much easier and cheaper project than the longer East Med line, as it would only entail constructing a 500-550 km offshore line. The line would then be able to supply gas both to Turkey and to Eastern Europe all of whom are especially keen to diversify away from Russia."

Can you tell us about the LNG export options?

"There is the option of using the LNG facilities in Egypt: The Idku facility owned by Shell, Petronas and EGAS, or the Eni Union Fenosa majority owned Damietta liquefaction plant.

Some of the advantages of this option include: the fact that the LNG facilities have been fully amortized and so liquefaction costs would be lower than a greenfield facility. Shell is the largest publicly-traded energy company in the world in terms of revenues, and the world's leading LNG player, with dedicated LNG vessels and consumers around the world.

Some of the disadvantages of this option include: the need to construct a 350-400 km offshore pipeline to Egypt; the fact that the LNG facilities in Egypt were constructed in 2005 and involve high boil-off."

Why should Israel not establish an LNG export facility in its own country and thus not be dependent on a foreign country or company?

"That is indeed another option – namely the construction of either an onshore or offshore (FLNG) facility in Israel or Cyprus, but of course, even under such a circumstance, Israel would use an international company to promote such a facility, as only a handful of companies have the ability to establish such facilities."

Can one assume that this would cost a fortune?

"Indeed, such a facility could probably be constructed at an estimated cost of about $10-11 billion for an offshore or onshore plant respectively. Some of the advantages of this option include: the LNG facilities would be efficient low boil-off, would entail no third party risk and would provide the flexibility of sending the gas either to Europe or to other destinations.

Some of the disadvantages of this option include: the high costs especially whilst there is still a world glut of LNG supplies; potentially geopolitical disadvantages that Israeli LNG would face compared to other export markets, and the still relatively untried nature of FLNG facilities if this was the chosen liquefaction technology. Hitherto there is only one operational FLNG facility in the world."

You are describing a situation that Europe would very much be interested in Israeli gas and the only question that remains is what option to choose to export the gas.

"The main advantage of Israeli gas to Europe, regardless of the final route that it will take, is that it will be a totally new and different source of gas, and so is a clear distinction for example to more Russian gas coming via the TurkStream or gas from the Kurdish Region of Iraq which could be exported by a joint venture involving Russia's Rosneft. Such projects could best be described as wolves in sheep's clothing.

In addition, when compared to LNG, East Med gas could replace LNG imports into Southern Europe. Southern European countries scrambled for spot cargoes during the last long cold winter of 2016-2017 and some of these volumes could be replaced with Israeli gas, explicitly when consumption in Israel is lower.

My conclusion is clear: Israeli sourced gas available for exports is both plentiful with 1 TCM of gas reserves in Israel and low consumption rates within the country. This is combined with the fact that the Leviathan producers might be amenable to offer different terms, such as not objecting to the re-export of natural gas once purchased by Turkish or European customers so that this would enhance not just competition in Europe, but would help to promote exactly what the EU is currently striving to achieve in its solidarity principle.

Are you not underrating the Russian power and interests. After all, they are unlikely to sit back quietly and they have their own inherent advantages

You are right, but Israel would probably be willing to hold a discussion on price linkage mechanisms to exploit a move away from some of the rigid oil indexation formulas required by Russian suppliers and offer instead European hub based prices thus providing greater flexibility to buyers in Turkey and Europe.

In that respect, just like the US LNG producer Cheniere, which has been pioneering changes by selling LNG FOB with no destination clauses and based on Henry Hub price indexation, Israel could bring much-needed change east of Europe and the Mediterranean, by rethinking the terms of the contract and by bringing something that the other producers cannot bring.

The development, the volumes and Leviathan's export target markets

The gas volume reported: in an announcement to the stock market made lately the gas partnerships stated that the best estimate is of 21.4 tcf of gas, with the lowest estimate being 16.7 tcf and the highest being 25.8 tcf.

The development plan: in February this year, the partnerships received their final investment decision for the development of the field for a cost of $3.75 billion and for an annual capacity of 12 bcm, in order to enable first gas from the field by the end of 2019.

The Turkish option: Turkey is known to be one of the prominent export target markets. According to the gas partnerships' reports for 2016, the country's gas consumption in 2015-2016 was 48 and 46 bcm of gas respectively, after having grown by more than 10 bcm since 2009. "Turkey is totally dependent on the import of natural gas and LNG and it is working to diversify its sources of supplies as well as to try to become a gas transit or gas hub to eastern, central and even western Europe….. the partnerships are conducting talks with entities in the Turkish market relating to the supply of natural gas from the Leviathan field and are also holding officials talks with official entities in the government regarding the export of gas to Turkey, in a project that would entail constructing a gas pipeline from Israel to Turkey.

What do the volumes mean?