

## **CURRENT TRENDS IN EAST MED GAS POLITICS**

**Oğuzhan Akyener**

### **INTRODUCTION**

In addition to the existing political conflicts in the region, presence of hydrocarbon resources makes the Eastern Mediterranean region much more important in the global dynamics. The region consists of 8 countries, which are Turkey, Syria, Lebanon, Israel, Egypt, Palestine, Northern Cyprus and Southern Cyprus (Although some of which are not officially recognized as sovereign states by some countries.). However, there are important political conflicts and problems between these players, such as; existing Cyprus conflicts, situation of Syria, internal unrests in Lebanon, Israel – Palestinian dissensions and some violent acts of undemocratic coup government in Egypt.

In addition to this very complicated political situation in the region, new gas discoveries and the possibility of having more potential takes the balances in a worse position.

Currently, when the due countries are overlooked, it is known that only Egypt, Israel, Palestine and Cyprus (In this study Cyprus means both Northern and Southern sides) have discovered natural gas resources.



When we look at the proven gas reserves in this context; there are 2.2 trillion m<sup>3</sup> of resources in Egypt, 1 trillion m<sup>3</sup> in Israel, 0.29 trillion m<sup>3</sup> (including Aphrodite, Calypso and Glaucus structures) in Cyprus and 30 billion m<sup>3</sup> in Gaza offshore. In other words, the total amount of gas discovered in the region is around 3.5 trillion m<sup>3</sup>. Where this amount is not too much to make exaggerations. Even so, while putting this reserves and further potentials on the existing conflicts, the area becomes a more complicated question mark for all the players.

In addition to these issues, exclusive economic zone (EEZ) conflicts will also be another aspect of the dynamics, which are directly effecting the energy investments.

In this study, after shortly mentioning the energy potential, discoveries, production and export capacities, existing and planned infrastructures and EEZ conflicts in the region, are tried to be evaluated within long term expectations.

## **EXISTING ENERGY POTENTIAL IN THE REGION**

The Eastern Mediterranean is one of the most strategic geographies that attract the attention of many countries regarding with the global dynamics. Especially in addition to the ongoing political conflicts, with the natural gas discoveries made in the last 15 years, the Eastern Mediterranean has gained a growing importance. As mentioned above, the proved gas reserves in the region is around 3,5 tcm. (Where; 2.2 trillion m<sup>3</sup> in Egypt, 1 trillion m<sup>3</sup> in Israel,



0.29 trillion m<sup>3</sup> in Cyprus and 30 billion m<sup>3</sup> in Gaza offshore.) This volume is not so much by considering the global sight and the increasing demand in the due East Med countries. But again there seems to be existing additional potential in the region.

Moreover, it is obvious that, the current discoveries and resource potential have been used as a political argument in the international arena, mostly by the Southern Cyprus. Therefore, it is necessary to analyze the resource potential in the region accurately and to determine long-term diplomatic goals for each sides in this regard.

As TESPAM, we have prepared and published many comprehensive and consistent projections about the future dynamics of the Eastern Mediterranean up to 2050. In this context, to give brief summary of the existing resource potential of the region:

- Total available proven gas reserves in the region is around 3,5 tcm. Where 2.2 trillion m<sup>3</sup> in Egypt, 1 trillion m<sup>3</sup> in Israel and 0.3 trillion m<sup>3</sup> in Cyprus. Considering that Russia's total reserves is around 39 trillion m<sup>3</sup>, this ratio can be accepted as quite low. Moreover, it has to be mentioned that, East Med gas currently is not a competitor for Russian gas for the future European markets.
- The export potential of Egypt will be around 18 and 20 billion m<sup>3</sup> between 2022 and 2032. This volume may be lower by considering the due operator companies' competencies in field development processes

in Egypt waters. After producing the gas and consuming some portion in domestic markets, Egypt will export the remaining part through the existing idling LNG facilities. In other words, Egypt will have to be taken in out of the due gas export policy equations. Hence, it will use its existing facilities to export and there seems there is no need for additional export infrastructure capacity for Egypt. Moreover, there will not be an important volume of extra free LNG capacity in Egypt's current facilities for Israel or Southern Cyprus to export their contemplated export volumes (between the years of 2022 to 2032). Only some very small portion can be used by Israel's Leviathan exports. But this volume will not be enough to effectively develop the Leviathan field.

- Israel's export potential between 2020 and 2040 (when the volume of the Jordanian sales agreement is subtracted) seems to be around 3-5 billion m3 on average. (By subtracting the domestic sale agreements and the possible Jordan sale opportunities. But moreover, we have to note that there seems to occur some political conflicts regarding with the Jordan sales, due to Trump's new plans on Palestine.) Israel is currently looking for a market to transport this volume. For a shorter period, export volume will be much higher than this amount. In addition there are other potential interpreted fields waiting to be discovered in Israel EEZ. All these issues are waiting for a commercially coherent route to reach a market.
- In the Southern side of Cyprus there are 3 discovered fields. Which are
  - Aphrodite with around a 118 bcm reserves,



- Glaucon with around 89 bcm reserves,
- Calypso with around 116 bcm gas reserves.
- By neglecting the political conflicts in the region, possible peak production rates of Aphrodite and Calypso can be around 7 bcma, and for Glaucon around 5,5 bcma.
- Then by assuming the Egypt is out of the joint export balances in the region, Israel's and Cyprus's total peak export potential will be around 25 bcma.
- But the political conflicts and inconsistency of the due mentioned export routes (such as EastMed pipeline) blocks the new development opportunities in the region.
- In addition to these, while assuming the Levantine Basin's resource potential is growing through the northern direction, we expect some important volumes of gas resource potentials in Syria and Lebanon EEZ areas. However, up to this time, there are no completed and tested wells in the region.
- In Lebanon, after a long time of delay, fortunately the first well has just started to be drilled in the 4<sup>th</sup> block within the operatorship of TOTAL. Results may be declared in May 2020. In addition to this drilling activity, the second well in the Lebanon waters is planned to be drilled up to the end of 2020, in the 10<sup>th</sup> block again by TOTAL. For some of the other prepared blocks, government plans to complete the existing bidding round at the end of April 2020. Existing seismic interpretations show

huge structures, which possible bearing gas zones. However, nothing can be said before completing the drilling and testing activities. By the way, there is an important potential and a possible discovery may change all the dynamics in the region.

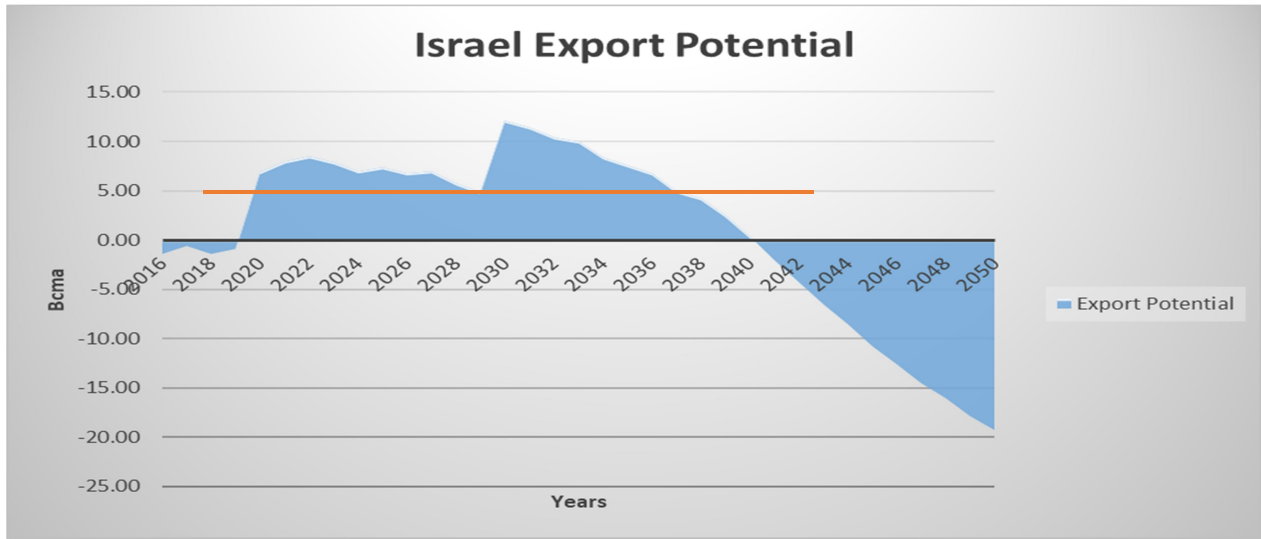
- From the sight of Syria, although ongoing civil war put the country in a chaotic position, it is known that some Russian companies have interpreted some huge probable structures in Syrian waters. There are also some claims that, the due operator company after completing the drilling activity and testing period, has found 250 bcm of gas in a structure. There is not an acceptable information within this regard.

## **TOTAL EXPORT POTENTIAL OF THE REGION**

Gas export potential profiles of a region or a country is as important as the volumes of proved reserves. Because, for the analyses, except the amount of the volumes of hydrocarbon waiting in the reservoir, we need the commercially producible and saleable parts. This part of volumes will determine the importance of the resources and naturally affect the political dynamics.

In this regard, firstly, as mentioned above, we have kept the Egypt in out of the East Med gas export equation. Hence it will export the due potential via its existing free LNG capacity.

For the other reserves bearing countries, to start with Israel, its gas export potential can be observed from the graph below.

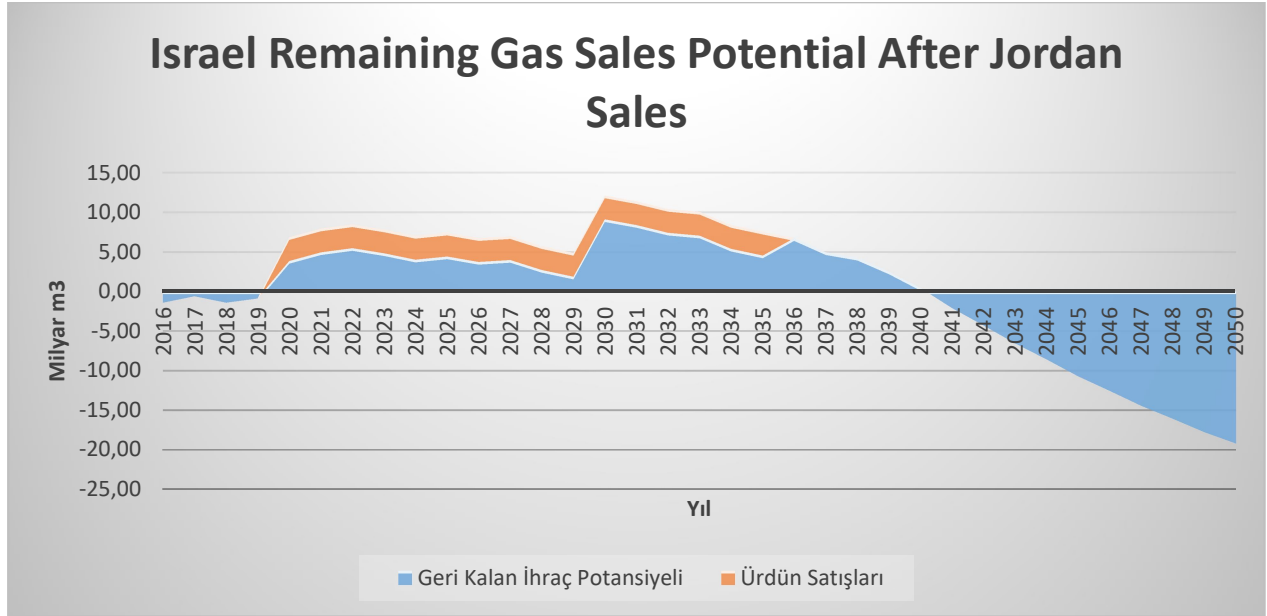


**Graph 1: Israel Gas Export Potential up to 2050**

According to the graph:

- Israel will have only 20 years chance to be a gas exporter in the region.
- Export volume potential is not high and so important by comparing with Egypt.
- By putting a downside limit for long term gas sales agreements; as shown with the orange line in the graph, 5 bcma is available for Israel to make such contracts (from the sales of fully operated Leviathan).
- The extra volume of gas, which can be accepted as the upside potential after extracting the 5 bcma long term volume, can be sold with spot or short term agreements.

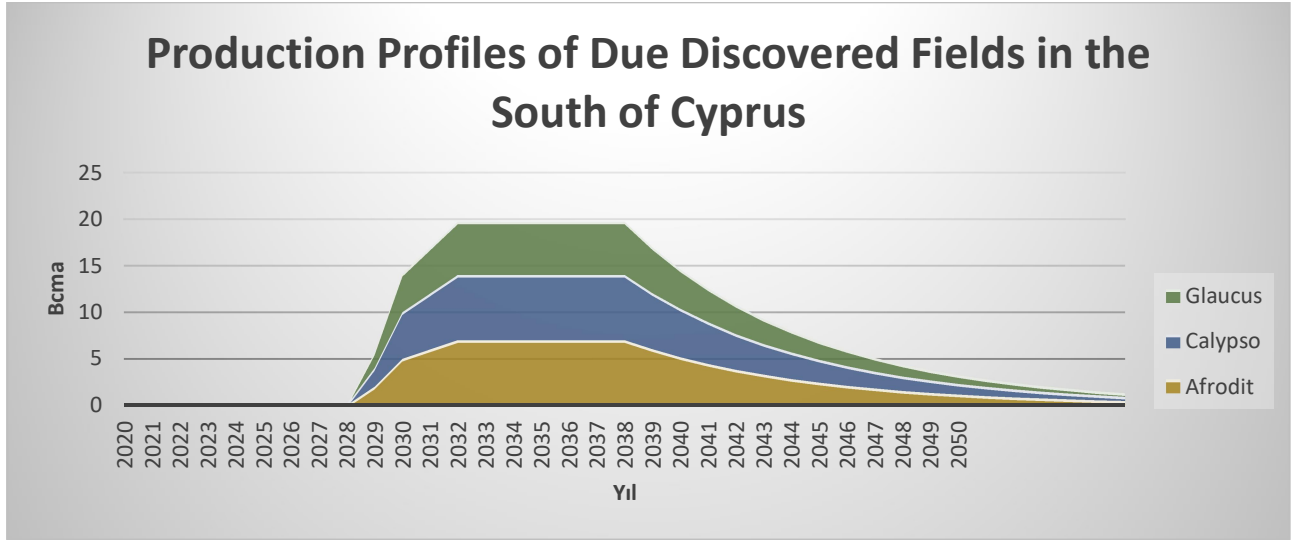
After adding the possible Jordan sales into this graph, then the remaining gas sales potential can be observed in the graph below.



**Graph 2: Israel Remaining Gas Sales Potential after Jordan Sales up to 2050**

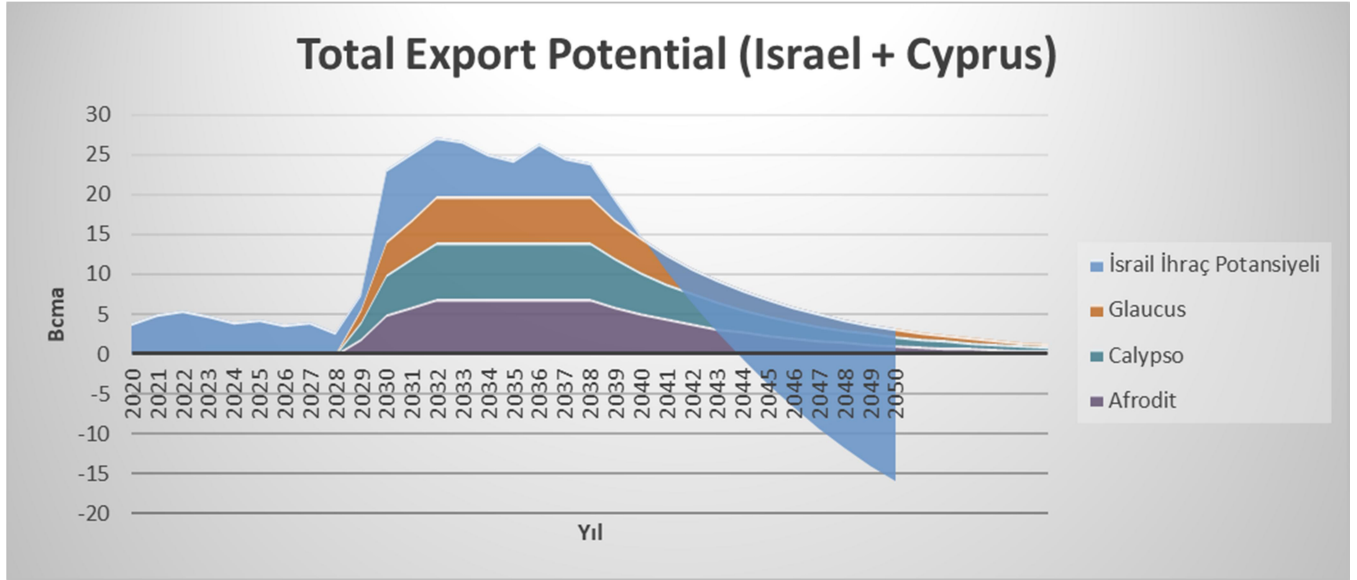
The other remaining possible export volumes in the region can be accepted as the due discovered fields in the southern side of Cyprus. In this regard, by neglecting the political conflicts and accepting all can be taken into production in 2025, then Aphrodite, Calypso and Glaucus fields' gas production profiles can be estimated as can be seen in the graph below.





**Graph 3: Production Profiles of Due Discovered Fields in the South of Cyprus**

Note: Hence being very small, (below 1 bcma levels) we have neglected the possible Cyprus domestic gas consumption in our calculations and accepted the production profiles as the export volumes. So, the total export potential of “Israel + the due discovered fields in Cyprus” can be observed in the map below:



**Graph 4: Total Export Potential (Israel + Cyprus)**

As a result, by adding the new discoveries (which the Northern Cyprus also has rights on them), there is an important volume of export potential (through 25 bcma levels) in the region.

However, for these fields to be developed and turn into economics, some security, policy and market milestones have to be solved. Otherwise, neither the Leviathan Stage 2 nor the due 3 discoveries locating in the south of Cyprus cannot be developed.

## HOW TO EXPORT THE GAS?

In order to

- develop all the fields discovered in the south of Cyprus,
- develop the second stage of Leviathan,

- and find investors for new exploration blocks of Israel

A commercial, technical, secure and politically acceptable route, which is reaching an acceptable market has to be effectuated. This is the main issue for having a real solution for the region.

However, how? And from which route?

Proposed East Med gas pipeline is not a doable project from the sights of commerciality, security and politically. The costs are too high and this makes the transportation tariffs to reach unacceptable levels, for gas sales to be economic.

There are 3 big markets for the due volume of East Med gas to be able to be sold. They are Turkey, Italy and Austria. Turkey is the best commercial and technical option from the sight of producers. For Italy and Austria markets, the only commercial route again is the path going through the Turkey. Which means, there are no realistic and doable alternatives without Turkey.

In addition to these, LNG or electricity transportation options also are also not commercial and viable according to our calculations.

By the way, the proposed East Med pipeline route also goes through the EEZ of Turkey, which means for any commercial acts, Turkish permission is the key!

In this concept, for all possible export routes, Turkey has to be evaluated in the centre of the dynamics. That's why, a possible Turkish route have to jointly be studied.

## **TURKISH STEPS IN THE REGION**

In the last decade, Turkey is following much more active and dynamic agenda regarding with the East Med issues.

In this concept,

- Turkey initially increased its naval forces capabilities with new domestic technologies, equipment and warships.
- By having 2 (offshore) seismic and 3 drilling ships, increased its know-how and technical operatorship capabilities and Turkey has started to make exploration activities in the region.
- In this regard, showed the global players that, it can make the drilling activities domestically in a successful and cheaper way.
- By utilizing its military and technical capabilities, Turkey showed that it will protect its and the Northern Cyprus's rights and EEZ borders in any case.
- Lastly, Turkey signed an EEZ agreement with Libya and officially declared its EEZ borders.

In addition to these stable and effective steps in the region, Turkey declared that:

- Energy is not an argument for additional conflicts and it has to be a peace and a common development element.
- By protecting the Turkish and Northern Cyprus's rights, Turkey is welcome for all joint study ideas and projects in the region.



This is a very important and constructive approach while considering the worsening regional conflicts. Turkey wants more peace and integration in the East Med. But again in this concept, shows that, it will not let its own or the Northern Cyprus's EEZ rights to be disregarded.

### **ENERGY AS A LEVERAGE for PEACE**

Energy can be used as a leverage for peace in East Med, instead of increasing the conflicts. As mentioned above, Turkey has a stable and a constructive position in East Med. In addition, currently all the possible resource development options are hinged on the route / permission of Turkey.

In this regard,

- From the perspective of the gas producers (sellers), Turkey is the greatest and stable market with less transportation costs and acceptable gas prices. And Turkey has increased its capabilities to make all types of exploration activities (such as seismic, drilling, drilling services, etc.) with its domestic technology. Which means, logistically a better situation to develop the due fields.
- Turkey is also open for all fair and consistent recommendations related with the joint studies in the region.
- Israel and Italy seems to be eager and positive towards the energy cooperation scenarios in the region.
- Due to support its investments and expectations in Lebanon, Eni may be another partner for Turkish oil companies.

- From the governmental side, Lebanon also invites Turkey for joint exploration activities.
- There are also some declarations from some of the diplomats of Greece about having Turkey to invite joint studies in East Med gas issues.

These strides give us clues about the possibility of a joint activity and an energy solution in the region.

Having a joint investment environment and making the resources being developed, may change all the balances in the region. For instance, with the development of the due fields and taken them into production, expected commercial results will help each side to prepare a healthier environment for solving the conflicted issues.

## CONCLUSION

Although the conflicts and the multinational problems are worsening in the region, East Med may have a new chance to find solutions by courtesy of energy opportunities.

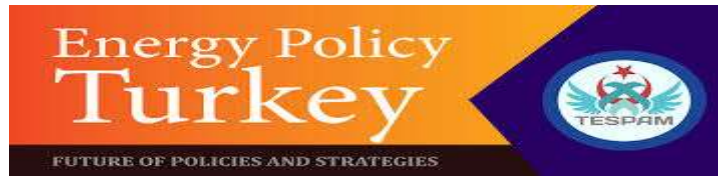
“Using energy as a key development argument and a leverage for peace in the region” may be possible. Instead of having more conflicts and wars!

As mentioned above, Turkey welcomes all players in the region, on the condition of protecting the rights of the TRNC (Northern Cyprus) and its own.

Israel’s and Turkey’s common studies may be the first step in this regard.

Within this consideration, the best available (development – transportation – sales) step by step option may be as:

- To develop the second phase of Leviathan,
- To make a new shareholders agreement in Aphrodite by including the Northern Cyprus as a shareholder,
- To develop the Aphrodite and link the production to the Leviathan,
- To transport the gas via a new pipeline through the route: Leviathan – Cyprus – Turkey,
- To sale nearly 1/3 of the gas (to be exported) to the Turkish domestic market,
- To transport the remaining portion via extended BOTAS system to the EU Border,
- To check the available free capacities or extension possibilities in Turkish Stream or TAP pipelines (to reach the European portion to Italy or Austria markets),
- If there are not enough transportation capacities, to construct a new line up to the demand points,
- To make new shareholders agreements in Calypso and Glaucus by including the Northern Cyprus as a shareholder,
- To develop the new fields (Calypso and Glaucus) by linking them to the Leviathan,
- To upgrade the due transportation capacities and to follow the previous sales path,



- And lastly to continue for further exploration steps, within the partnership of Turkey!

With such an integrated and commercially lucrative environment, it will be easier to find more acceptable solutions for the existing multinational problems. Which means, contrary to customary expectations, this time energy can be used as a leverage for peace and serenity, instead of conflicts and wars!

