Levant Basin Hydrocarbon Potential and Future Development

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Outline of Presentation

- Status of Offshore Development
- Main Drivers for Offshore Success
  - Geology
  - Markets
  - Companies
  - Government
- Conclusions
Status of Offshore Development

- 10 gas fields discovered, most of them in deep-water
- 3 gas fields developed (MariB, Noa, Tamar) and 2 more underway (Leviathan, Karish)
- Secured gas reserves in excess of 800BCM (2P/2C)
- 65% of electricity made from gas, will increase to 90%
- Several export contracts are signed
The activity in Israel is part of a larger effort to develop the entire Levant Basin in the eastern Mediterranean Sea.

- Approx. 2000 BCM (75 TCF) of gas discovered in the Levant Basin in recent years.
- Ongoing exploration activity is taking place in Israel, Egypt, Cyprus and Lebanon.
Thick basin-fill, with various potential source and reservoir rocks and salt cover
Various types of stratigraphic and structural traps
3 proven plays and 2 “new” plays, one of them – Zohr-type- is proven in Egypt/Cyprus
Geology: Basin Modelling

Thermal maturation profile across the Levant Basin
Beicip-FranLab 2015-Basin Analysis

- Modeling shows extensive, shallow biogenic Gas System and deep thermogenic Oil System
- High potential for Gas and Oil Generation
Assessment of YTF in place volumes is based on 3D numerical geologic model of oil and gas generation, migration and entrapment taking into account exploration success.
Markets: Domestic

Main Factors for Increase in Demand:

- Natural growth of population
- Closing coal-based electric plants
- Wider use in heavy industry and households
- 90% of Electricity will be generated from gas and renewables
- Conversion to electric and CNG cars (No imports of fuel based cars by 2030)
- Petrochemical Industry will be developed

Gas Demand Forecast (IHS, 2016)
Markets: Export

Status of Export:

- Jordan: two contract are signed (47 BCM)
- Egypt: one contract is signed (64 BCM)
  - two more contract are negotiated for LNG export and domestic
- Europe: feasibility studies for the EastMed Pipeline are ongoing (10-20 BCM/Y)
- Turkey: one contract is negotiated (10 BCM/y)
Companies: E&P Activity

- Excellent rate of success in discovering gas in the Tamar Sands (100%).
- Fast development of the Tamar gas fields (less than 3 years)
- Longest tie-back pipe from the Tamar field to the Tamar platform
- FPSO is built for the Karish field - the first in the region
- Stable and reliable supply of gas from the offshore fields
Government: Policy and Regulation

- Resolving Anti-Trust and competition Issues
- Providing conditions for timely development of new gas fields
- Promoting the expansion of the domestic gas markets (Closing coal station, supporting CNG+ electric in transportation, supporting industrial and residential use)
- Promoting export options (EasdMed Pipe etc..)
- Adopting high regulatory standards (1\textsuperscript{st} + 2\textsuperscript{nd} Bid-Rounds etc..)
- Improving management of data (NDR system)
Conclusions:

- In the past 10 years the Israeli offshore experienced fast and successful development of its hydrocarbon resources.

- The success is the result of several main drivers: favorable geologic conditions, existence of domestic and export markets, effective E&P programs and government support.

- Geologic modeling shows significant potential for additional gas and oil discoveries.

- These will be successfully developed through the combined effects of all main drivers.
Thank You!!