



Eastern Mediterranean Natural Gas - Prospects & Developments

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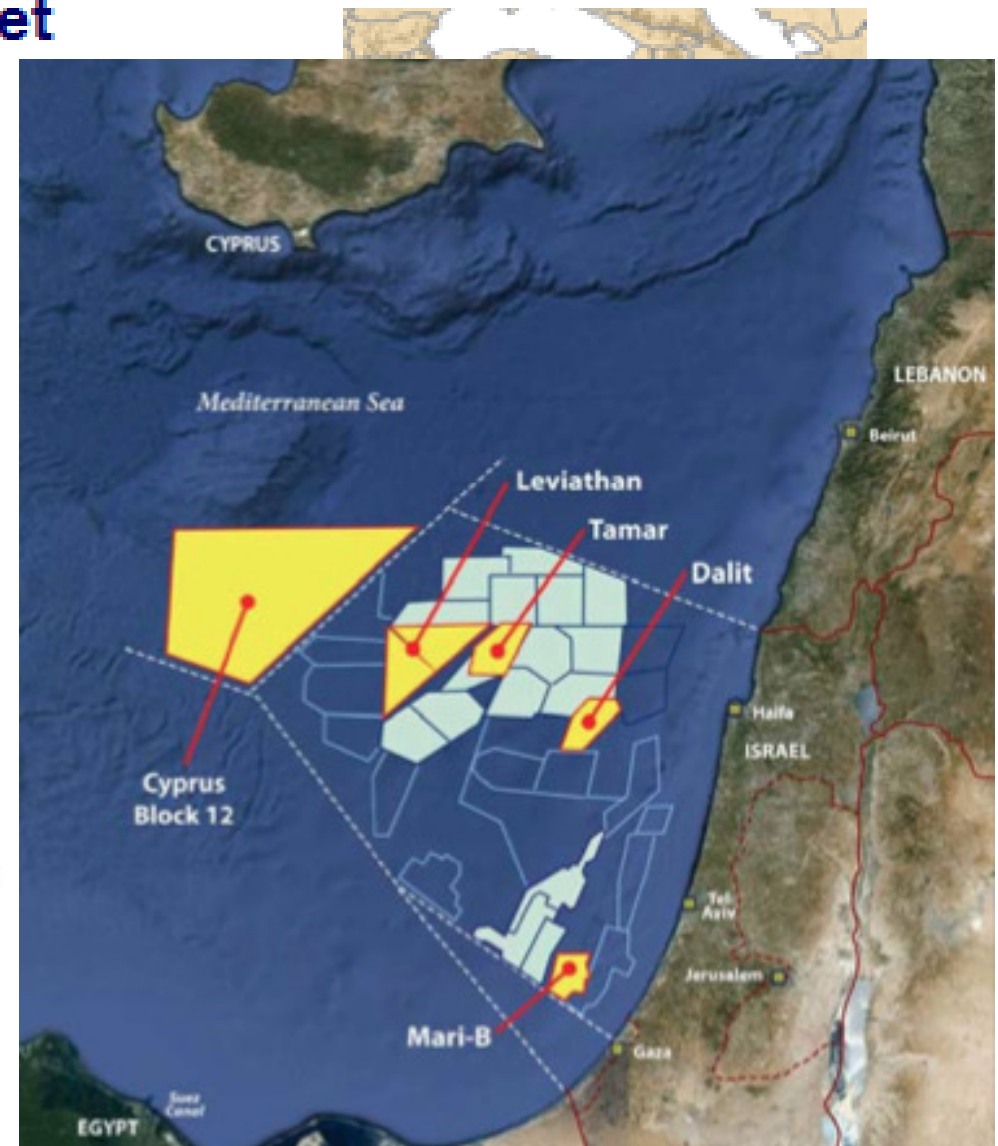
**Hellenic Institute of Marine Technology
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Significant recent natural gas discoveries offshore Israel by Noble Energy and its Israeli partners totaling 27 trillion cubic feet

- ▶ Noble Energy came to Israel in the late '90s
- ▶ Noa discovered in 1999, Mari-B in 2000
- ▶ Andromeda drilled in 2001, Hanna in 2003, each dry holes
- ▶ Acquired more permits and licenses in 2006-2008, conducted additional seismic surveys
- ▶ Tamar and Dalit discovered in 2009
- ▶ Leviathan discovered in 2010
- ▶ Leviathan appraisal, Tamar development drilling, continued exploration in 2011

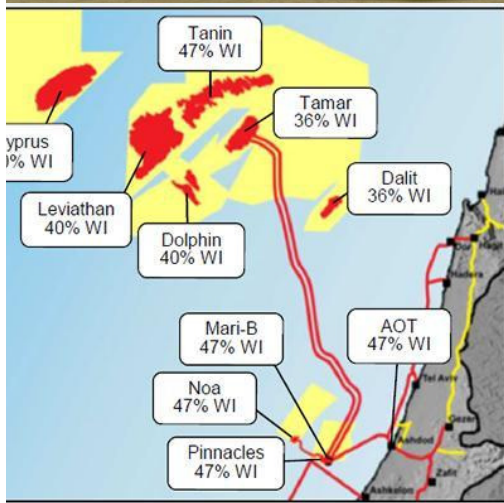


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The Tamar Project

- Drill 5 wells to ~ 5000 m
- Install subsea development @ 1700 m
- Install 150 km of dual 16" pipelines
- Build and transport Tamar platform
- Install Tamar platform near Mari-B



The Tamar deposit of ~9 TCF could supply Israel gas requirements for more than 20 years.

Further exploration will take place by Noble Energy and other companies.

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**FLOATING
REGASIFICATION**

Hadera Gateway

START UP:	COUNTRY:	PROJECT ROLE:	KEY TECHNOLOGY:	COUNTERPARTY:	BASELOAD CAPACITY:	STS:	TOTAL SENDOUT:	OPERABILITY:
2012	Israel	Consulting Services	FSRU, STL Buoy	Israel Electric Corporation Israel Natural Gas Lines	500 mmscf/d	6	16,689.40 MMscf	101.65%

Leviathan field – 19 TCF, the largest natural gas discovery in the world in the past decade





Pipeline to Greece



Vassilikos Energy Centre

Pipeline to Turkey



East Med Gas Export Options



LNG plant in Israel



JORDAN

Egypt LNG (existing)

SEGAS LNG (existing)



September 2013



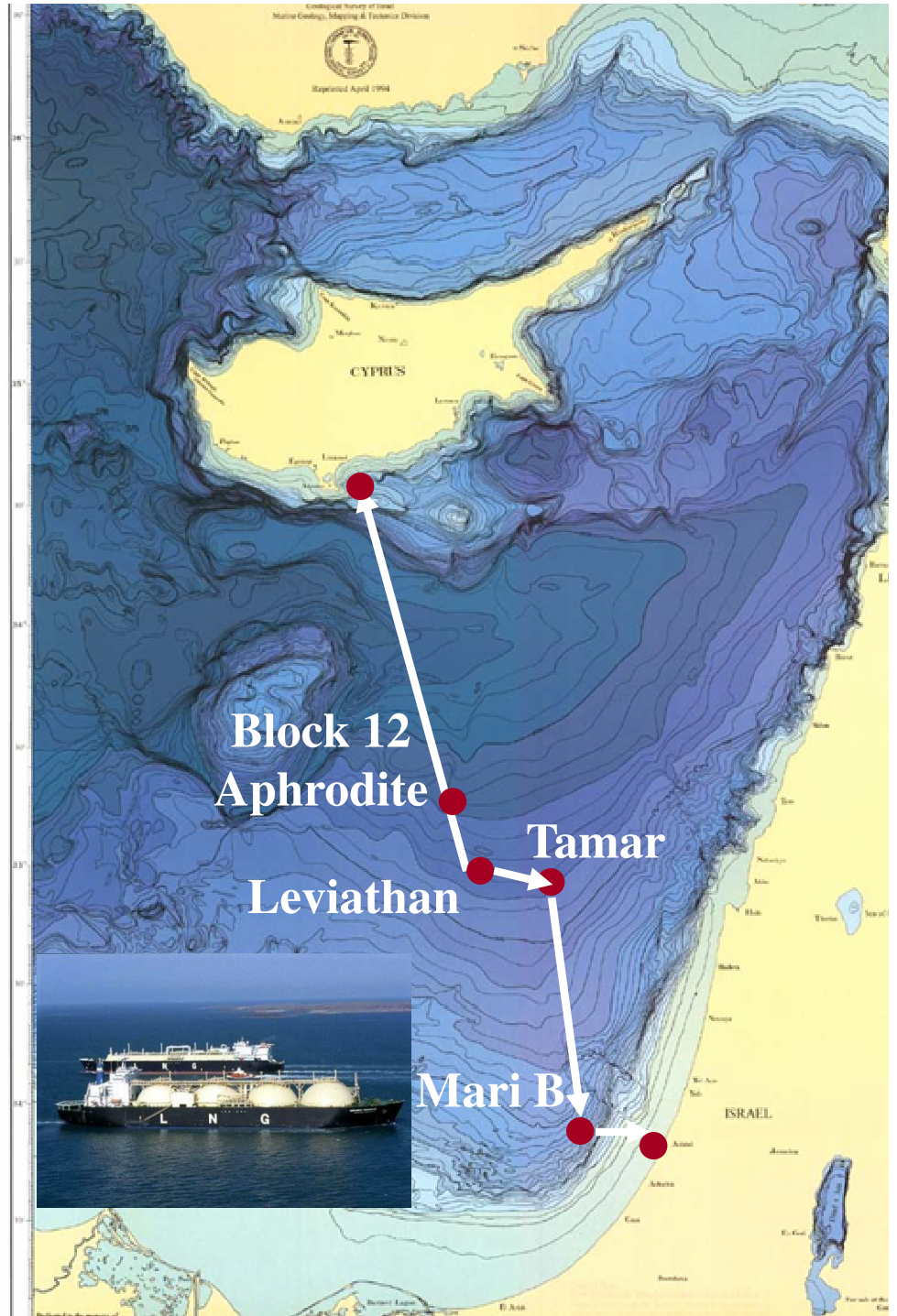
Aqaba Free

Natural Gas export options

- LNG plant in Eilat or Ashkelon
- FLNG
- Pipelines to Turkey, Cyprus, Greece, Egypt, Jordan
- Production of methanol, fertilizers & petrochemicals, GTL

Leviathan-Vassilikos (Cyprus) Pipeline (initial estimates)

- ✓ Leviathan is located ~200 km from Vasilikos
- ✓ Pipeline crosses water depth of more than 2 km
- ✓ Pipeline & Development cost – \$4-5 billion
- ✓ LNG plant cost \$5-12 billion



Southeastern Europe is a key market for the new sources of gas in the Eastern Mediterranean because of:

- its proximity to the source and
- its potential for growth.

The Pipeline Options:

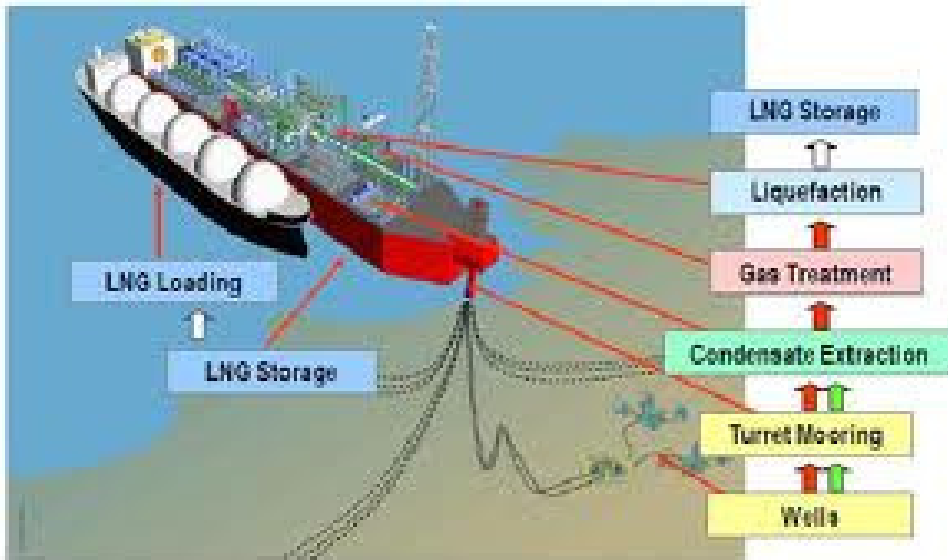
- Is the most Politically and Commercially attractive solution;
- Works complementary with the LNG option, allowing for a win-win scenario;
- Is the option that may be operational before 2020 and enabling the Mediterranean gas to reach first an attractive developing market.

Next Steps:

- A decision by the producers regarding the quantity of natural gas to be diverted to the European Markets;
- Political decision by the EU to enable the establishment of this new energy corridor to Europe;
- In depth feasibility study to reinforce the technical and commercial viability of the project.

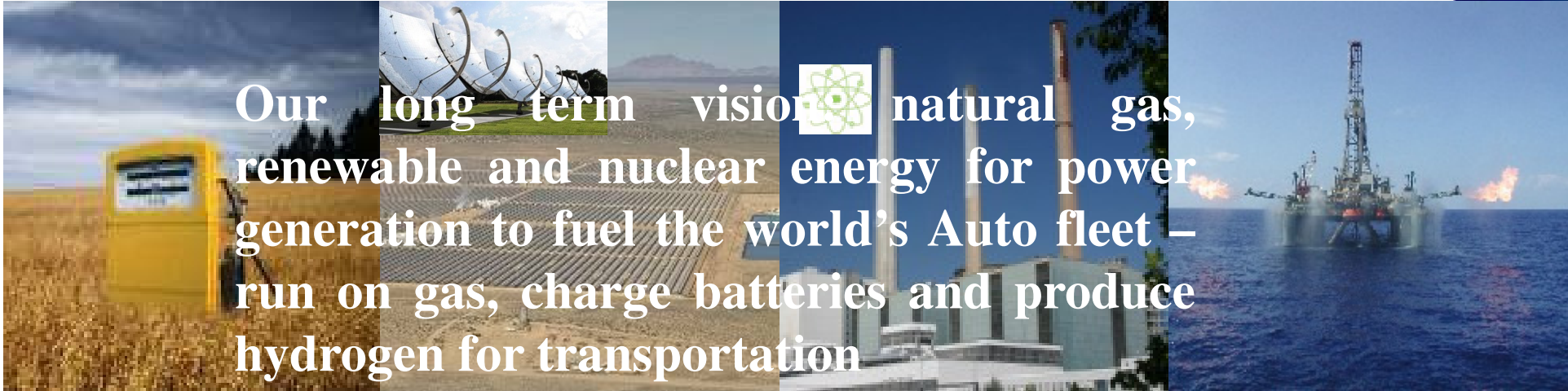
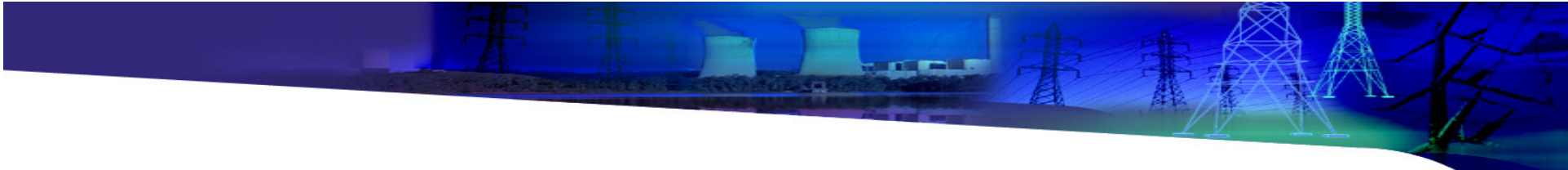


Floating LNG



Technology Risk



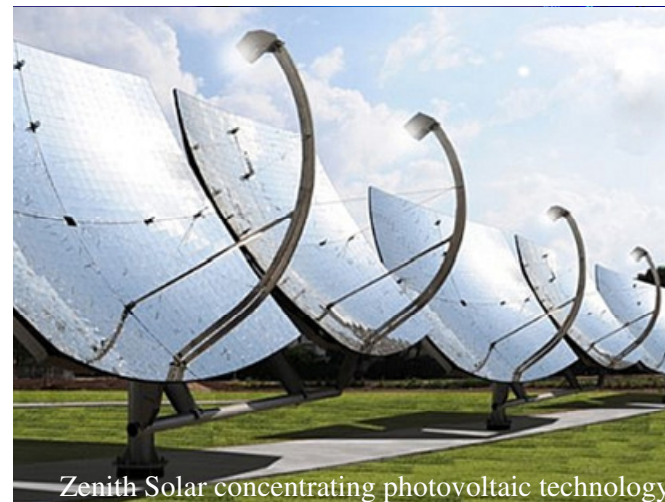


The Clean Transportation Vision





Natural gas & renewable energy to enhance energy and environmental security



Thank You