Lebanon Oil and Gas Sector
Towards a Comprehensive
Energy Policy

Facts, Opportunities and Challenges

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ESA – March 7th, 2017
Economy of Lebanon

- Population: 4.2 M – 6.0 M
- Literacy: 99% to 96%
- Youth Unemployment: 30%
- Poverty: > 30%
- Elders poverty: 30%
- Population of slums: 30%

- No. of young, secondary and post secondary schools: 20,000

- Petroleum and Chemical engineers will be graduated in 6 engineering schools in 2017: 300

- 5 Lebanese universities ranked among the best in the MENA and among the 700 universities over the world
2007- Petroleum Policy for 10 years

- Modern legal frame for Offshore and “Onshore” Petroleum activities
- Involve Lebanese investors in Petroleum services
- Conversion Power from Liquid Fuel to Natural Gas

2010 – Electricity Policy

- 2020 – 12% Renewable Energy
- 80 % - Natural Gas (~0.16 tcf)
- Cooperation Public - Private
Purpose

• *Security Energy:*
  o Independence of Lebanon in term of Hydrocarbon Supply and Electricity generation

• *Sustainable development – Expansion of the Lebanese Economy*
  o Ties between Hydrocarbon and Industries -manufacturing, PC, C, IE
  o Public & private sectors
  o Jobs creation
  o International standards: workers rights, social guarantees,

• *Transparency & Accountability*

  o Regardless of Upstream (Exploration & production) activities
Elements of the New Policy (2/2)

- **Comprehensive and Integrated:**
  - The whole value chain: Downstream, Midstream, Upstream
  - Strong ties between Manufacturing Industries/C/PC and HC sector
  - Infrastructures
  - Education and Researches
  - Regional & International Cooperation
  - SWF: The whole value chain ……
  - Challenges & Mitigation
Oil Pipelines from Irak & Saudi to Lebanon
Downstream sector & Industries

- Successful “Distribution sector” managed by private sector for more than 70 years

- Successful Refining sector from 40s to 80s:
  - Tripoli – IPC (Shell, Exxon, BP, CFP, ..) : 1940-1980 - 22000 bopd
  - Saida/Zahrani (Caltex/Chevron)- Saudi Oil: 1950 – 1982 -17000 bopd

- Reconstruction of 1 or 2 refineries: Public – Private

- Natural Gas Import – 3 Terminals:
  Gas supply 2020 : 200bcf

- Onshore/Offshore Gas pipes
  - To Power Plants
  - To Industrial zones
Midstream sector

- Midstream is the key of Energy security
- Oil Storage: 2 terminals to be rehabilitated
- Gas Storage: to be built
- Oil Pipelines: obsolete – to be rebuilt
- Gas Pipelines – Land pipe from Egypt to Lebanon through Jordan and Syria
- Ongoing studies – Marine pipelines – Import/Export of natural gas:
  - Lebanon/Egypt
  - Lebanon/Turkey
  - Lebanon/Egypt
  - Lebanon/South-North

- Public Private

Lebanon Gas Master Plan Draft
Upstream sector – E & P

- NOC: Commerciality, Governance
  The whole Value chain
  PP and Foreign Investments

- Exploration and field development
  Involve Lebanese in petroleum Activities:
  - Local content
  - SME
  - Jobs creation

- Petroleum Services: Encourage Foreign and National investors in the development of regional services bases

- Involve Lebanese investors (banking sector and others) in petroleum development activities

- Domestic market Supply

- Export Options: Europe through Turkey or Cyprus
- Export to Asia: Lebanese LNG plants or through Egypt
## Challenges & Mitigations

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<th>Challenges</th>
<th>Mitigations</th>
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<td>Lack of Infrastructure: Ports, Heliports, export gas pipelines, pipelines to main cities</td>
<td>Public, territorial collectivities, private sector Legal frames</td>
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<td>Lack of Lands</td>
<td>Modern urban plan to locate regional supply base(s), marine construction sites, gas process plants, refinery (ies), chemical and petrochemical industries</td>
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<tr>
<td>Vocational and technical Researches</td>
<td>Technical education system to be upgraded – Public and Private sectors</td>
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<td>Free Zones for regional Petroleum Services Bases</td>
<td>Public, Private Upgrading of legal frame International cooperation</td>
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<tr>
<td>Transparency</td>
<td>Anticorruption laws Accountancy</td>
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Thank You