Natural Gas Industry in the Arab Countries:
Current Scene and Prospects

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Agenda

1. OAPEC in Brief
2. Natural Gas in the Arab Countries: Key Figures
3. Role of Arab Countries in the Global Gas Markets
4. Implications of Covid-19 pandemic and Future Prospects
OAPEC in Brief

Our Members...

Arab Member Countries

1968

11

Objectives...

OAPEC is concerned with the development and prosperity of the petroleum industry by fostering close and fruitful cooperation among its members.

- Cooperation among members in the field of petroleum industry
- Determination of means of safeguarding the legitimate interest of the members
- Creation of suitable climate of investment of capital and expertise in the petroleum industry
OAPEC has sponsored the creation of four companies and a training institute to form a solid foundation for joint Arab action and Arab economic integration in the petroleum industry.

1. Arab Maritime Petroleum Transport Company (AMPTC)
2. Arab Shipbuilding & Repair Yard Company (ASRY)
3. Arab Petroleum Investment Corporation (APICORP)
4. Arab Petroleum Services Company (APSCO)
5. Arab Petroleum Training Institute (APTI)
Proven Gas Reserves in the Arab Countries

Development of Gas Reserves in the Arab Countries (1990-2019), tcm

<table>
<thead>
<tr>
<th>Year</th>
<th>Reserves, tcm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>25.3</td>
</tr>
<tr>
<td>1995</td>
<td>31.1</td>
</tr>
<tr>
<td>2000</td>
<td>36.9</td>
</tr>
<tr>
<td>2010</td>
<td>54.1</td>
</tr>
<tr>
<td>2019</td>
<td>56.3</td>
</tr>
</tbody>
</table>

Total increase in the remaining gas reserves: 122%

Source: OAPEC

* tcm: trillion cubic meter

Distribution of proven gas reserves in the Arab Countries, end of 2019

- Qatar: 42%
- KSA: 16.2%
- UAE: 13.7%
- Algeria: 8.0%
- Iraq: 6.6%
- Egypt: 3.9%
- Others: 3.2%
- Libya: 2.2%
- Kuwait: 1.7%

Source: OAPEC

Natural Gas Industry in the Arab Countries: Current Scene and Prospects
Gas Production Boom.. Who Led the Global Gas Boom?

Development of Gas production per region in bcm (1990-2019)

- North America
- CIS
- Arab Region
- Other MENA
- Asia Pacific
- Europe
- South America

Total Growth (%) in Gas Production Per Region (1990-2019)

- Asia Pacific, 354%
- Arab Region, 339%
- World, 99%
- North America, 78%
- CIS, 18%
- Europe, -8%

Gas production has grown in most regions, thanks to continuous exploration & development activities in gas producing countries.

Arab region has recorded the second largest growth rate of gas production over (1990-2019) period.

Source: OAPEC

Natural Gas Industry in the Arab Countries: Current Scene and Prospects
Gas consumption has grown rapidly in the vast majority of regions, thanks to its economic and environmental advantages over other fuels.
01. Arab Countries invested billions of dollars in export infrastructure to deliver its gas to consumers in Asia & Europe.

02. The total pipelines export capacity is estimated at 115 bcm/y.

03. The total LNG capacity in the Arab countries is 140 mtpa or 33% of the global LNG capacity in 2019.

04. Arab countries play a key global role to provide efficient, cleaner & sustainable energy source to its consumers (16% of the international gas trade).
Development of gas exports from Arab countries (2009-2019)

<table>
<thead>
<tr>
<th>Year</th>
<th>BCMMY</th>
<th>Pipelines</th>
<th>LNG</th>
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</thead>
<tbody>
<tr>
<td>2009</td>
<td>103</td>
<td>65</td>
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<td>2011</td>
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</tr>
<tr>
<td>2019</td>
<td>150</td>
<td>54</td>
<td>96</td>
</tr>
</tbody>
</table>

Source: OAPEC

Arab region is a major LNG supplier to Asia, Europe and emerging markets within the MENA region.

The region is the second largest source of gas exports via pipelines to Europe behind Russia.
Implications of Covid-19 Pandemic on the Global Gas Markets

1. **Spot gas prices reached historic lows in Asia and Europe**
   Gas prices fell below $2/MMBTU in major hubs in Asia and Europe in Q2 but start to gain strength in Q3.

2. **FIDs Delay of the vast majority of planned LNG export projects**
   17 new projects have been delayed to 2021 and beyond.

3. **Cancellations of LNG export cargoes “specially from the US”**

Evolution of international spot gas prices ($/MMBtu)

Source: Cedigaz
Arab LNG exports are slightly affected by covid-19 pandemic (1% lower Y-O-Y over the 9 months of 2020)

Arab countries are the long term-reliable supplier of LNG to consumers in the global markets

Cancellation of 40 LNG cargos for June loading, further 40-50 LNG cargos for July/August loading

Sharp drop of LNG exports from 14.2 MT in Q1 to 7 MT in Q3 2020

* MT: million tonnes

Source: OAPEC calculations based on ICIS LNG, LNG unlimited data
Future Prospects: Unlocking the Potential of Gas Resources

The total growth rate of proven gas reserves was the highest in the Arab region (reached around 120%) over 1990-2019.

However, the proportionality of Gas Reserves growth to Gas Production growth is lower compared to other regions over the same period.

There is still a room for investments in the gas resources to boost gas production levels.

Source: OAPEC
Future Prospects: Key Actions/measures to Unlock the Potential of Gas Resources

- Opening new blocks (offshore & onshore) for exploration activities (Egypt, UAE,..)
- Tapping into Gas-Cap reservoirs & technically challenging gas fields (UAE, Kuwait) to meet the growing demand
- Tapping into unconventional gas reservoirs (Saudi Arabia, Oman)
- Expediting the development of recent gas finds to boost production levels (Egypt)
- Expansion of LNG export capacity (Qatar’s North gas field expansion) for strategic reasons

**Total 2020-2024 Gas Investments in the Arab Countries**

**Source:** APICORP

**TOTAL INVESTMENTS OF THE GAS SECTOR 2020-2024**

$162 bn
A Number of Arab countries have announced their plans to expand LNG production capacity over the next 5-7 years. LNG capacity in the Arab region will be boosted by around 45% in total by 2027.
Future Prospects: LNG Bunkering in the Arab Region

4 planned LNG bunkering projects in the Arab region

The global Sulphur cap of 0.5% could drive the global uptake on LNG as bunker fuel

Promising prospects for demand on LNG as a marine fuel, which could reach 30-40 MT by 2040

Projects in the FEED phase

- Development of a bunkering terminal at Sohar port, with 1 MTPA capacity entered the FEED phase, expected to be operational by 2024 (JV between TOTAL and PDO)
- FID is expected in late 2020

Projects with signed preliminary agreements between the partners

- In late 2018, Inpex and ADNOC signed MOU to explore for LNG bunkering in the UAE
- In late 2019, QP and Shell signed a shareholder agreement to establish LNG bunkering company

Planned projects still under discussion

- Damietta and Pari ports authorities commenced discussions in late 2019, to discuss installing LNG bunkering services at Damietta port located on the Mediterranean coast
Conclusions

Arab region has many factors that contribute to achieve fully integrated gas industry

Arab region was among largest contributors to the global gas production increase over the past decades

Arab countries play a key global role to provide efficient, cleaner & sustainable energy source to its consumers

Arab countries are committed to continue investments in the gas sector for strategic and demand reasons

Key message

Gas has the potential to play a greater role in attaining a sustainable energy future
Thank You for Your Attention