THE FUTURE OF NATURAL GAS AND LNG

The Small-Scale LNG use Euro-Mediterranean Conference & Expo
Vincent Demoury, General Delegate

NAPLES – MAY/15/2019
THE WORLD NEEDS MORE & CLEANER ENERGY

Gas will outpace growth of other hydrocarbons and its share in the Primary Energy mix will grow by 2040

**Historical Energy Demand**
2000 - 2017

- **Compound Annual Growth Rate**
  - Coal: 2.7%
  - Oil: 1.1%
  - Gas: 2.3%
  - Hydro: 2.5%
  - Biorenewables: 1.7%
  - Nuclear: 8.3%

**New Policies Scenario**
2017-2040

- **Annual Growth Rate**
  - Coal: 0.1%
  - Oil: 0.4%
  - Gas: 1.6%
  - Hydro: 1.7%
  - Biorenewables: 1.3%
  - Nuclear: 7.1%

**Sustainable Development Scenario**
2017-2040

- **Annual Growth Rate**
  - Coal: -3.6%
  - Oil: -1.5%
  - Gas: 0.4%
  - Hydro: 2.3%
  - Biorenewables: 0.4%
  - Nuclear: 9.7%

Source: IEA WEO 2018
LNG IS THE FASTEST GROWING GAS SUPPLY SOURCE

The LNG market will double between 2017 and 2035

Source: Shell LNG Outlook 2018
LNG PROVIDES ENERGY ACCESS TO 42 COUNTRIES WITH A COMBINED POPULATION OF 4.9BN

20 producing countries supplied LNG to 42 importing countries in 2018

Source: GIIGNL LNG Playbook
LNG imports increase for the 5th year in a row

**THE LNG INDUSTRY IN 2018**

- **313.8 mt**
  - Imported
  - +8.3%

- **406 mtpa**
  - Liquefaction capacity
  - +41 mtpa

- **11%**
  - % of global gas demand

- **25%**
  - Delivered on spot*

- **42**
  - Importing countries

*Spot: transactions with physical delivery occurring less than 3 months from the transaction date

Source: GIIGNL Annual report
ABUNDANT LNG SUPPLY WORLDWIDE
LNG provides low-carbon energy from multiple regions

Liquefaction capacity by region (mtpa) 1978-2018

Pre-FID projects (mtpa)

- Middle East: 51
- Mexico: 17
- Asia Pacific: 61
- Russia & FSU: 52
- Africa: 105
- United States: 336
- Canada: 275

Source: GIIGNL Annual Report, IGU 2018 World LNG Report

> 850 mtpa of proposed projects
The share of spot & short-term trade increased due to the flexible volumes from US and Russia.

<table>
<thead>
<tr>
<th>Total Imports (MT)</th>
<th>Spot &amp; Short-term Imports (MT)</th>
<th>Spot Imports (MT)</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>313.8</td>
<td>99.3</td>
<td>78.7</td>
<td>25%</td>
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**Spot & Short-term vs. Total LNG Trade**

Source: GIIGNL Annual report, Kpler
LNG IS AVAILABLE TO FUEL THE GLOBAL ROAD AND MARINE MARKETS

1. LNG supply is available in key markets globally

2. The LNG road network is developing in EU & China

3. The marine segments are adopting LNG
   - Container
   - Tanker
   - Bulker
   - PCT
   - OSV
   - Ferry

4. Key downstream infrastructure is being developed

Source: Shell

SMALL-SCALE LNG USE EURO-MEDITERRANEAN CONFERENCE AND EXPO
Creating Sustainable Energy Systems with LNG

- Policy-driven emerging economies will continue to drive demand growth
- LNG growth will outpace gas demand growth
- Supply expansion underway but competitiveness remains essential
- Public policies need to recognize the benefits of LNG in terms of energy security, affordability and sustainability
- Uncertainties remain high but manageable
THANK YOU

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