LNG MARKET UPDATE
Tighter Market - Higher Prices; Stronger Competition - Higher Volatility

Europe establishing as premium market, narrowing spreads with HH

MARKET UPDATE - MADRID OCTOBER 6 2022

Source: EIA, Heren, Platts, METI, JOGMEC
Since the start of the Russia-Ukraine conflict the EU, its Member States and Asian countries are taking measures to guarantee energy security.

### Policy Context

<table>
<thead>
<tr>
<th>Measure</th>
<th>EU</th>
<th>France</th>
<th>Netherlands</th>
<th>Germany</th>
<th>South Korea</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce dependence on fossil fuel imports</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Increase LNG imports</td>
<td>✓</td>
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<tr>
<td>Diversification of LNG imports (increased partnerships with other suppliers other than Russia)</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>Additional investments in LNG and pipeline gas</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>Common purchases of LNG</td>
<td>✓</td>
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<tr>
<td>Storage (filling levels, obligations on operators, incentives, capacity increase)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>Increased/restart nuclear generation</td>
<td>✓</td>
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<tr>
<td>Increased/restart or slower reduction of coal generation</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Expand oil reserves</td>
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<tr>
<td>Mechanism to regulate gas prices</td>
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<tr>
<td>Energy saving measures: rationing of natural gas, power generation</td>
<td>✓</td>
<td>✓</td>
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</table>
EUROPE DRIVING IMPORT GROWTH DESPITE HIGH PRICES

Global LNG imports up by 14.1 MT or +5.7% in 8M 2022 vs. 8M 2021, European imports up by 62%

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Source: GIIGNL, Kpler
EUROPE BENEFITS FROM US LNG AND DEMAND DESTRUCTION IN ASIA

67% of US exports delivered to Europe in 8M 2022

LNG Imports change: 8M 2022 vs 8M 2021

Source: GIIGNL, Kpler

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EUROPE FACES LOWER PIPELINE GAS SUPPLY AND USES LNG TO REFILL STORAGE

As of beginning of October 2022, European gas storages 90% full

EU6* includes Belgium, France, Italy, Netherlands, Spain, Portugal

EU8** = EU6* + Germany + Austria

Source: GIIGNL, AGSI, ALSI
US LIQUEFACTION DRIVES SUPPLY GROWTH

US LNG ramps up, Hammerfest resumed production

Source of LNG Imports: 8M 2022 vs 8M 2021

- Atlantic +8.7 MT (or +9.6%)
- Pacific +3.8 MT (or +4%)
- Middle East +1.6 MT (or +2.6%)

New capacities: Sabine Pass T6; Calcasieu Pass

Source: GIIGNL, Kpler
USA - RECORD EXPORTS, RECORD DELIVERIES TO EUROPE

Notwithstanding the Freeport outage, USA outperform, sending around 70% to Europe in 2022

Source: GIIGNL, Kpler
EUROPE: PLAYGROUND OF THE “BIG THREE”

US – quick ramp up for European needs

Top 3 European suppliers in 8M (%)

- US
- Other
- Qatar
- Russia

European LNG suppliers in 8M 2021-2022

Source: GIIGNL, Kpler

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NEW RECEIVING CAPACITY OUTPACES LIQUEFACTION CAPACITY ADDITIONS

So far new liquefaction capacity in 2022 is 16.5 MTPA, all from the US. Receiving capacity additions reach 30.9 MTPA

Source: GIIGNL, Kpler

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POLICY-DRIVEN DEVELOPMENT OF NEW FSRU IN EUROPE

Around 60 MTPA of regasification capacity under construction, 80% offshore

Utilisation rate >80%

- FSRU-based projects decided in Germany (5), Italy (3), Netherlands (2), France (1), Finland/Estonia (1), Greece (1), Cyprus (1)

- FSRU-based projects proposed in Germany (1), Albania (1), Greece (4), Latvia (1), Poland (1), Slovenia (1), Turkey (1), UK (1)

Source: GIIGNL
MARKET UPDATE - MADRID OCTOBER 6 2022

CONTRACTS: SECURITY OF SUPPLY FIRST, SUSTAINABILITY ON THE BACK-BURNER?

38 long-term contracts signed in 2022 for more than 46 MTPA

Contracts signed by duration

<table>
<thead>
<tr>
<th>Year</th>
<th>&lt;10 years</th>
<th>10 ≤ X ≤ 15 years</th>
<th>&gt;15 years</th>
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<tbody>
<tr>
<td>2019</td>
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<td>2020</td>
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<td>2021</td>
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<tr>
<td>2022</td>
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</tbody>
</table>

Contracts signed by importers

**2022**
- South Korea: 7%
- Thailand: 2%
- China: 27%
- Europe (incl. Germany): 2%
- France: 4%
- Germany: 3%
- Portfolio: 50%
- Others: 5%
- Multiple: 29%

**2021**
- Portfolio: 16%
- China: 29%
- Pakistan: 4%
- Japan: 3%
- South Korea: 3%
- Bangladesh: 2%
- Taiwan: 2%
- Singapore: 3%
- Others: 5%

Source: GIIGNL

KEY TAKEAWAYS

» LNG imports growth 2022 driven by Europe due to Ukraine-Russia conflict thanks to
  - Expansion of US capacity
  - Demand destruction in Asian countries

» Tight market in the short-term taking into account higher LNG demand and necessary time to put new projects in operation
  - Pipeline supply disruption from Russia could further boost LNG demand in Europe
  - Asian demand could rebound due to approaching winter season

» Accelerated infrastructure development could relieve the situation in the medium/long term
  - FSRU development in Europe
  - New wave of US LNG and Qatar additions to come in 2026

» Demand destruction could be significant and persistent
  - Affordability issues for emerging markets
  - Risk of economic recession