Turkish Gas Market

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EXIST - CEO

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TURKISH ENERGY MARKET
ACTIVITIES

- **Electricity Day Ahead and Intraday** Market Operations
- **Organized Wholesale Natural Gas** Spot Market Operations
- **RESS Operations**
- **Billing Transactions**
- **Settlement and Financial Transactions** of Day-Ahead, Intraday, Balancing Power Markets
- **Settlement and Financial Transactions** of Organized Wholesale Natural Gas Spot Market
- **Settlement** of Ancillary Services Market,
- **Eligible Customer** Transactions
INSTALLED CAPACITY & POWER GENERATION

**Installed Capacity & Power Generation**

- **Imported Coal**
- **Domestic Coal**
- **Natural Gas**
- **Hydro**
- **Wind**
- **Solar**
- **Geothermal**
- **Biomass**
- **Other**

**Total Generation** 96 GW

**2020 Installed Capacity**

- **Natural Gas** 27%
- **Hydro** 32%
- **Wind** 9%
- **Geothermal** 2%
- **Biomass** 1%
- **Other** 1%
- **Imported Coal** 12%

96 GW
POWER MARKET
DAY AHEAD MARKET

DAM Cleared Quantity (TWh)

DAM Volume (bn EUR)

Market Clearing Price (EUR/MWh)
GAS MARKET
GAS CONSUMPTION

Gas Consumption

0 10 20 30 40 50 60 billion Sm3


Consumed Gas by Sector

Household 32%
Power Generation 25%
Industry 28%
Service Sector 10%
Others 5%

Energy Exchange Istanbul
BOTAŞ Pipeline Grid

Source: Gazbir
ENTRY CAPACITY DEVELOPMENT

Total Entry Capacity

<table>
<thead>
<tr>
<th>Year</th>
<th>Entry Capacity (Sm³/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>190</td>
</tr>
<tr>
<td>2017</td>
<td>229</td>
</tr>
<tr>
<td>2018</td>
<td>288</td>
</tr>
<tr>
<td>2020</td>
<td>341</td>
</tr>
<tr>
<td>2023</td>
<td>472</td>
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Breakdown of the Daily Entry Capacity (mcm/day)
- **LNG**: 117 mcm/day
- **145.5 mcm/day**
- **40 mcm/day**
- **0.78 mcm/day**
- **Production**
- **Storage**

Energy Exchange Istanbul
GAS IMPORT

<table>
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<tbody>
<tr>
<td>Algeria</td>
<td>8%</td>
<td>9%</td>
<td>8%</td>
<td>9%</td>
<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td>Azerbaijan</td>
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<td>14%</td>
<td>12%</td>
<td>15%</td>
<td>21%</td>
<td>25%</td>
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<tr>
<td>Iran</td>
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<td>17%</td>
<td>17%</td>
<td>16%</td>
<td>17%</td>
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<td>3%</td>
<td>4%</td>
<td>4%</td>
<td>5%</td>
<td>4%</td>
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<tr>
<td>Other</td>
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<td>3%</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
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<tr>
<td>Qatar</td>
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<td>2%</td>
<td>3%</td>
<td>6%</td>
<td>5%</td>
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<td>52%</td>
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<tr>
<td>USA</td>
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<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>3%</td>
<td>6%</td>
</tr>
</tbody>
</table>

* 2020 covers 11 months

Share of LNG & Pipeline on Turkey's Gas Import

- **Algeria**: 8% (2015), 9% (2016), 8% (2017), 9% (2018), 13% (2019), 12% (2020*)
- **Iran**: 16% (2015), 17% (2016), 17% (2017), 16% (2018), 17% (2019), 11% (2020)
- **Nigeria**: 3% (2015), 3% (2016), 4% (2017), 4% (2018), 5% (2019), 4% (2020)
- **Qatar**: 4% (2015), 2% (2016), 3% (2017), 6% (2018), 5% (2019), 8% (2020)
- **USA**: 0% (2015), 1% (2016), 1% (2017), 1% (2018), 3% (2019), 6% (2020)

*2020 covers 11 months*
GAS IMPORT CONTRACTS

Long Term Gas Contracts

- Russia
- Iran
- Azerbaijan
- Algeria
- Nigeria

Energy Exchange Istanbul
GAS MARKET PROCEDURES

How does STP works

- Continuous trading
- 54 hours trade window for a gas day, a contract opens at 08:00 D-1 and closes at 14:00 D+1.
- Daily reference price of a gas day will be announced at 08:00 D+1
In 2020,
• 64% increase in trade volume
• 2.089 million Sm3=22 Twh

Monthly Trade Volume (million Sm3)

Share of Sessions on Trade

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
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<tbody>
<tr>
<td>Day Ahead</td>
<td>90%</td>
<td>85%</td>
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<tr>
<td>Intraday</td>
<td>5%</td>
<td>6%</td>
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<tr>
<td>Day After</td>
<td>5%</td>
<td>9%</td>
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<tr>
<td>Weekly Products</td>
<td>1%</td>
<td>5%</td>
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<tr>
<td></td>
<td>6%</td>
<td>6%</td>
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Energy Exchange Istanbul
Monthly Average Spot Prices (EUR/MWh)
ONGOING PROJECTS

- Physically Settled Future Power Market (VEP)
- Renewable Energy Guarantees of Origin (YEK-G System)
- Physically Settled Future Gas Market (VGP)
THANKS FOR LISTENING