ACER-CEER webinar on evolving trends in the European gas market

16 November 2023
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 10:45 - 11:00 | **Webinar open for log-in**  
  Starts promptly at 11:00 |
| 11:00 - 11:10 | **Introductory remarks**  
  Benoit ESNAULT, CEER       |
| 11:10 - 11:25 | **Recent trends in EU gas markets**  
  Riccardo GALLETTA, ACER  
  Mitja MALETIN, ACER       |
| 11:25 - 11:55 | **Panel discussion: gas market adjustments to a new equilibrium**  
  Moderator: Joaquin GARCIA GIMENEZ, ACER  
  Pawel LONT, EFET  
  Kacper ŻEROMSKI, ENTSOG |
| 11:55 - 12:10 | **Q&A**                                                                 |
| 12:10 - 12:15 | **Closing remarks**  
  Csilla BARTOK, ACER       |
Housekeeping rules

Questions shall be posed using the Slido tool within Microsoft Teams

Use direct link: https://app.sli.do/event/6sTs mHG3yqGU9y91x2Qeqh

Slides from this webinar will be uploaded to ACER website

Keep your microphone muted unless the chair gives you the floor

Questions from other participants can be ‘liked’ to increase their visibility

Substance-related questions will be addressed during the relevant Q&A session; although they can be posed at any point
European gas market trends and price drivers

The Report analyses the drivers behind the unprecedented gas price rises in 2022 and offers an overview of the latest trends at European gas wholesale markets.

It consists of two Chapters:

1. Gas market trends
2. Analysis of the drivers that led to the unprecedented price surge across summer 2022

Trading-related analyses have been done in collaboration with ESMA
Price drivers and key findings
Drivers of high gas prices in summer 2022

**Primary driver**
- Section 1: Disruption of Russian supplies

**Demand-side drivers**
- Section 2: Demand developments
- Section 3: Storage market

**Supply-side drivers**
- Section 4: LNG market
- Section 5: Infrastructure congestion

**Market re-equilibrium**
- Section 6: Trading developments
1. Disruption of Russian supplies via pipe is the primary cause of high gas prices

The disruption triggered intense price competition among buyers to secure alternative gas resources.

2. Resilient gas demand sustained high prices

The build-up of storage inventories and a growing use of gas-fired power plants were the main contributors.

3. LNG supply met demand, but at a high cost

Most of the extra gas supplies were procured through costly spot LNG deliveries in competition with global LNG buyers.

4. Congestion added cost

Highly congested access to pipelines and LNG terminals in North-West Europe - an outcome of the EU supply shift from Russian pipeline gas - added to the significant constraints.

5. The trading environment showed challenges

Hub trading volumes remained robust, despite the surge in trading margins caused by the record-high prices. However, futures’ hedging became more challenging.
Dropping Russian gas supply caused record-high gas prices

Aggregated Russian pipeline supply into the EU (bcm/day, left axis) and TTF day-ahead hub prices (EUR/MWh, right axis), Jan–Dec 2022

- Russian gas pipeline imports met 40% of EU imports in 2021, while they cover 8% in 2023 (up to Q3).

- The decline followed a series of events, amidst the EU effort to reduce its energy dependence on Russia, in response to its invasion of Ukraine.

- In this situation, heightened supply uncertainty sparked a competitive pricing race for additional gas resources.

Source: ACER based on Platts and ENTSOG TP.
Resilient gas demand sustained high prices

Gas final demand fell by 14% in 2022 compared to 2021. Significant annual demand drop occurred in Q4 2022, resulting from decreased industrial production. Milder weather conditions, increased efficiency investments and behavioural changes also helped. During summer 2022, EU gross storage injections equalled 35 bcm, aiming at refilling storages (assisted with public funds) which were below average levels.

Year-on-year change in gas demand for the months of July and August 2022:
- Industrial and household consumption had shrunk by 5.6 bcm (-13.4%)
- Storage injections increased by 3.1 bcm (+16%)
- Demand for power generation was 3.1 bcm (+23%) larger

Source: ACER based on Platts and, Eurostat and GIE.
European gas markets after the 2022 supply shock: status and outlook
Market in delicate equilibrium after supply & demand adjustment

A combination of gas infrastructure investments unlocking the possibility of additional LNG supply and the sharply reduced gas consumption resulted in EU gas markets finding a more sustainable balance then at the peak of the crisis.

Source: ACER based on ENTSOG TP, GIE and Eurostat.
LNG largely filled the gap left by drop in Russian supply

The Russian (pipeline) supply drop has been largely offset by rising LNG imports to the EU and reduced gas demand. Selected Member States in South-East Europe where long-term contracts are maintained are still highly exposed to a full disruption.

Source: ACER estimations based on ENTSOG TP, Eurostat, Platts and Bruegel data
High & volatile prices a reminder that EU not yet in the clear

An improved demand-supply balance has driven energy prices further down during 2023. However, supply is still tight, making prices exposed to unexpected developments. Asian LNG demand and recent geopolitical tensions remain important factors for EU gas prices going forward.

Source: ACER based on Platts price data. Note: TTF Month-ahead and EEX Germany Month-ahead contracts are, respectively, the referential EU price benchmarks for gas and electricity delivery.
The prices of gas futures fell further across 2023, anticipating an improved supply-demand balance. However, they remain 1.5 times higher than the average of the preceding five-years (i.e., 20 to 25 EUR/MWh). This is primarily due to a reinforced global competition for LNG that has the potential to exert upward pressure on prices.

Next winter could bring new challenges…

Source: ACER calculation based on Platts.
Note: The assessment considers the monthly average of the daily settlement prices for forward products with delivery up to December 2024.
Gas market adjustments to a new equilibrium - Panel Discussion.
### Implications on how EU gas markets are adjusting

The Russian supply shock prompted a major rebalancing of the EU gas market that will have a lasting impact. There are forward-looking implications to be considered.

<table>
<thead>
<tr>
<th>1. Higher dependence on LNG supply:</th>
<th>2. Emergency measures and well-functioning markets equilibrium:</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU gas prices will be more exposed to global competition and turn more volatile. Increased reliance on LNG calls for safeguarding competitiveness and enhancing transparency.</td>
<td>Summer 2022 brought challenges and opportunities to stakeholders, followed by redistributing and price shielding measures. Policy reflections are needed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Evolution of gas demand:</th>
<th>4. The role of underground storages:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce demand to adjust to a tight supply market and assist decarbonisation goals, while preserving the economic activity and security of supply that gas offers.</td>
<td>Engaging a market response that enables sufficient storage injections, whilst limiting public support interventions. Extract lessons from the summer 2022 experience.</td>
</tr>
</tbody>
</table>
EFET views – Gas market adjustments to the new equilibrium

16 November 2023, ACER-CEER Webinar on Gas MMR
2022 – what have we learned?

- Markets have worked well – price signals to reduce demand and attract gas deliveries;
- Emergency measures need to be consulted and coordinated, as they can cause disruptions;
- Cooperation and coordination between Member States is key – improved access to markets & capacities is needed.
Market performance July 2022 – July 2023

EFET 2023 Gas Hub Benchmarking Study

- Little progress in gas hubs development
- Market access & free flow of gas effectively still constrained in many jurisdictions
Gas markets in the new equilibrium

Until new volumes become available, markets will remain tight and volatile.

1. Contemporary gas markets offer the necessary tools to manage price volatility.

2. Emergency measures may end up being counterproductive if retained after the crisis is over.

3. Fluctuations of gas demand can be accommodated if market participants remain free to use the flexibility services & to contract gas as they chose.

4. Market demand for storage filling should be tested first, before any storage obligations are triggered.

16 November 2023, ACER-CEER Webinar on Gas MMR
THANK YOU FOR YOUR ATTENTION

MORE INFORMATION

Pawel Lont
European Gas Markets Manager
p.lont@efet.org

16 November 2023, ACER-CEER Webinar on Gas MMR
Gas market adjustments to a new equilibrium

Infrastructure and SOS perspective

Kacper Żeromski, Deputy Director, System Development
Europe’s dependence on Russian gas supply (before the war)

The EU before the war was importing ca. 155bcm of Russian gas every year and depends on Russian gas to cover minimum 25% (125 bcma) of its annual demand.

Beginning of the war perspective:
- The global gas production capacities were too tight to supply the global market and for the EU to be able to replace Russian gas on the short term. It theoretically would require:
  - use of 100% of global liquefaction capacities 365/24/7
  - Possibly additional LNG carriers to be commissioned
- EU alternative import capacities, including LNG were too limited to be able to replace Russian import capacities. It would require:
  - use of 110% European import capacities 365/24/7
- Infrastructure bottlenecks within the EU additionally prevent from using 100% of the alternative import capacities and prevent from perfect cooperation between Member States (some MSs are more dependent than others)

Minimum dependence on Russian gas (source: TYNDP 2020)
EU dependency on the RU - SOS context – before Feb 2022

Findings from Summer Outlook 2022, Yearly Outlook 2022

COOPERATION IS KEY

- All countries need to be able to cooperate to:
  1. Avoid the risk of demand curtailment
  2. Share the risk of demand curtailment if infrastructure allows for it
  3. Inject to storages and withdraw in optimal way
  4. Use their import infrastructure in coordinated way

ENCHANCED CAPACITIES + INVESTMENTS

- Short term and mid term infrastructure developments are needed

ALTERNATIVE SUPPLY

- Additional LNG and other than Russia supply pipeline supply

DEMAND RESPONSE

- As a result of organic reduction due to prices or policy-based demand measures would be needed to ensure security of supply and preparedness

PREPARDNESS

- Storages are key for peak demand situation
Change of the landscape - measures

COOPERATION IS KEY
Multiple new interconnections allow to efficiently avoid the risk of demand curtailment, cooperate in high demand situations, including solidarity scenarios

ENCHANCED CAPACITIES + INVESTMENTS
Finalisation of the ambitious investment program contributes to increased market integration and enabled

ALTERNATIVE SUPPLY
Baltic Pipe opened access to the new supply source in the CEE region. Partial redirection of NO supplies to CEE allowed for more optimal import of LNG to WE and bypass bottlenecks from West to East

DEMAND RESPONSE
Significant number of investments contributed to market integration, allowing better response to the pan European supply challenges

PREPARDNESS
New gas source, more capacities available allows to increase security of supply and seasonal preparedness in the region
Thank you for your attention

ENTSOG - European Network of Transmission System Operators for Gas
Avenue de Cortenbergh 100, 1000 Bruxelles

www.entsog.eu | info@entsog.eu
Q&A session

Connect to Slido

- Directly in MS Teams
- Through www.slido.com #ACER-CEER
- Scan QR code
- Use direct link: https://app.sli.do/event/6sTsmHG3yqGU9y91x2Qeqh