

Gas Market Outlook for 2025

- As LNG supply starts a major expansion, uncertainties remain along with a challenge to stabilize the market -

The Institute of Energy Economics, Japan

Takafumi Yanagisawa

Executive Analyst, Gas Group, Energy Security Unit

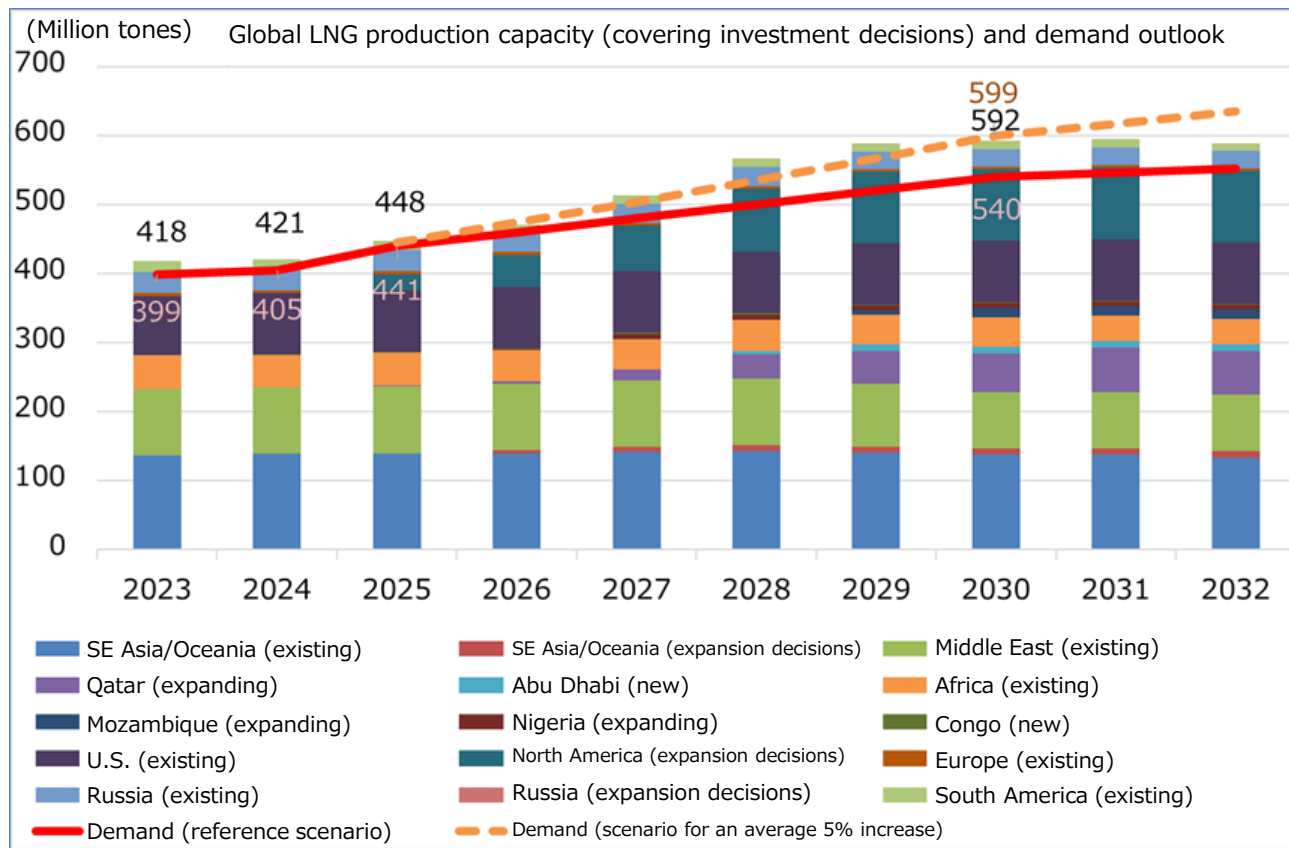
takafumi.yanagisawa@jime.ieej.or.jp

Key Points of the Report

- Global LNG supply is expected to grow faster than forecast demand from 2025.
- However, as there are uncertainties about LNG supply and demand are likely to rise, mainly in Asia, due to the continued weakening of market prices amid supply expansion, an expected LNG oversupply may not be realized. (Asian spot LNG prices are estimated at just below \$12 per million BTU for 2024 and around \$13.5 for 2025.)
- In the international gas and LNG market, temporary supply-demand crunches may occur due to seasonal demand fluctuations and supply disruptions. Investment in and financing for medium- to long-term LNG projects remain important.
- The U.S. Trump 2.0 administration is likely to swiftly revise the Biden administration's pause on permits for LNG exports to non-FTA countries. On the other hand, it could increase pressure on foreign countries to buy U.S. LNG to help reduce the U.S. trade deficit. It will be important for Japan to explore Japan-U.S. cooperation anew with a view to the Asian LNG market, where demand is expected to increase.
- The trend of strengthening measures against methane emissions is likely to continue among businesses in Europe and the United States. It will be important for Japan to promote understanding about CLEAN and other initiatives to reduce methane emissions.
- Shipping bottlenecks are expected to further increase the need to rationalize and optimize LNG transportation.

While LNG Supply Begins to Sharply Expand in 2025...

- ✓ Global LNG supply capacity will grow faster than forecast demand from 2025 to around 2030.
- ✓ However, there are uncertainties about some LNG projects in the construction phase (regarding sanctions against Russia, political instability in Africa, a U.S. pause on LNG export permits, policy trends in Australia, etc.).
- ✓ Demand may increase amid the supply expansion.
- ✓ LNG oversupply expected around 2030 is unlikely to be realized?
- ✓ In the international gas and LNG market, temporary supply-demand crunches may occur due to seasonal demand fluctuations and supply disruptions.



Source: IEEJ Outlook 2025

Expected U.S. Trump 2.0 LNG Policy and Its Impact - 1

① Revising pause on permits for LNG exports to non-FTA countries

- On January 26, 2024, the Department of Energy under the Biden administration imposed a pause on LNG exports to non-FTA countries for the reason of environmental standard revisions.
- On December 17, 2024, the Department of Energy published the 2024 LNG Export Study and a 60-day public comment period. It warned against domestic gas price hikes and pollution expansion in domestic production regions and the world accompanying LNG export expansion, advocating stricter environmental screening.
- Trump 2.0 may promptly lift the LNG export permit pause after its inauguration on January 2025. It may weaken political interventions in international methane emission regulations (such as the Global Methane Pledge).
- However, whether U.S. LNG business operators will relax environmental measures is a different issue.
 - ✓ The Democrat administration's hasty legislative measures are feared to increase litigation risks.
 - ✓ To maintain and expand LNG exports to Europe, which is enhancing methane regulations, U.S. LNG business operators are expected to continue promoting CCS (carbon capture and storage) and methane emission reduction measures.
- It is important for Europe to maintain and increase U.S. LNG imports to phase out dependence on Russia.

② Revising sanctions against Russia

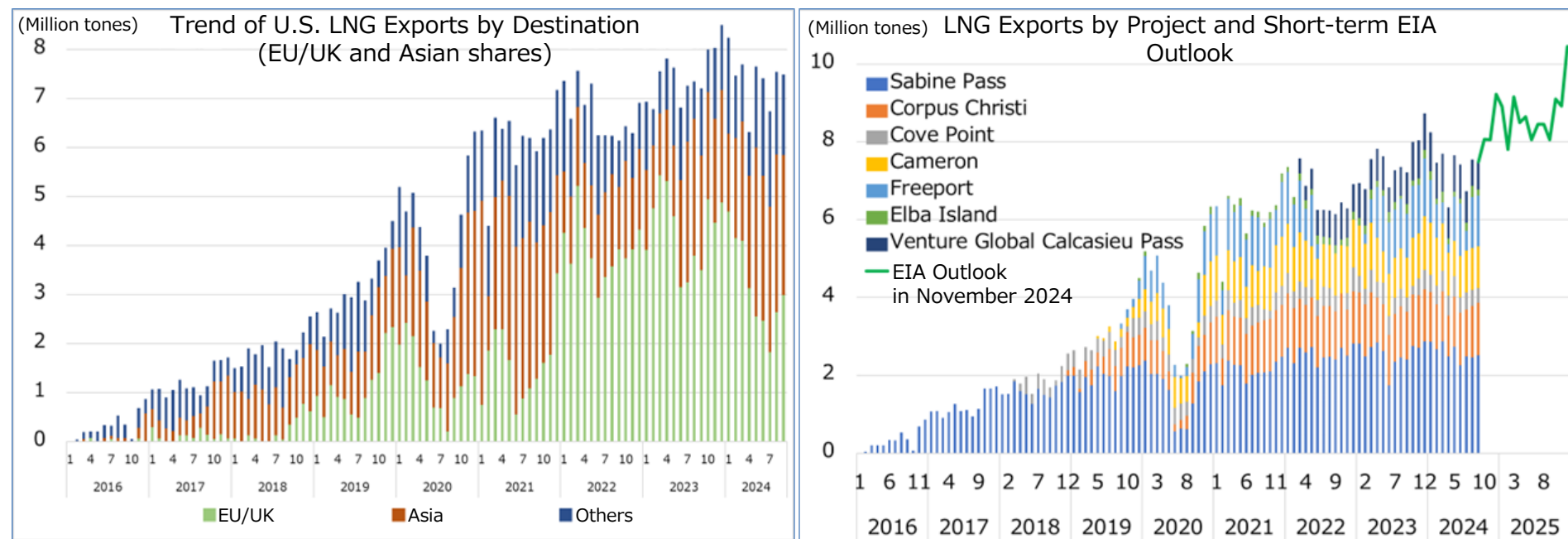
- In November 2024, the Office of Foreign Assets Control (OFAC) announced it would newly subject Gazprom Bank and other Russian financial institutions to sanctions. Gazprom Bank will be prohibited from conducting energy transactions using the U.S. banking system.
- However, transactions related to the Sakhalin-2 project will be exempted from sanctions until June 28, 2025 (although Japanese and South Korean LNG buyers seem to be not using Gazprom Bank.)
- In December 2024, the Russian government announced it would remove restrictions that limit payments for pipeline gas exports (other than LNG exports) to those in Russian rubles through Gazprom Bank.
- Attention should be paid to the Trump 2.0 administration's action regarding sanctions in and after June 2025. Also subject to attention is whether U.S. sanctions would be eased for Arctic 2 and other new projects.

③ LNG purchases under U.S. pressure on Japan and Europe to reduce the U.S. trade deficit

- Trump 2.0, like Trump 1.0, may highlight the U.S. trade deficit as a serious issue.
- Europe and Japan may try to relax trade friction with the United States through the expansion of U.S. LNG purchases.
- In November 2024, in fact, European Commission President Ursula von der Leyen indicated her readiness to consult with Trump 2.0 on increasing U.S. LNG imports instead of Russian LNG imports (perhaps in a manner to forestall U.S. pressure).
- Amid uncertainties about the restart of nuclear power plants in Japan, it will be important for Japan to explore Japan-U.S. cooperation anew with a view to the Asian LNG market, where demand is expected to increase.
→ Meeting the direction of a diverse and realistic energy transition for the Asia Zero Emission Community

U.S. LNG Exports – Shifting from Europe to Asia Again

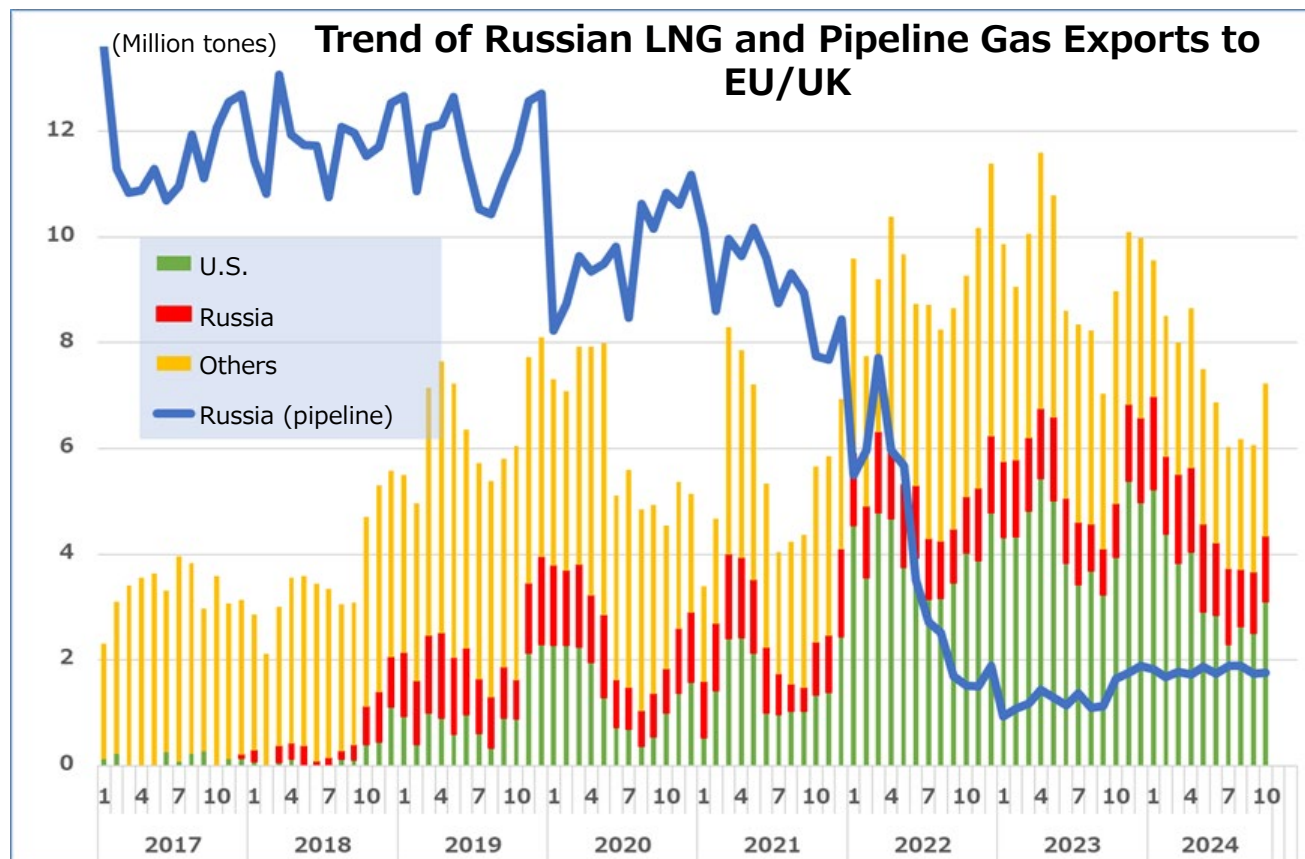
- U.S. LNG exports to Asia are increasing. While the European Union and the United Kingdom saw their share of U.S. LNG exports fall from more than 60% in 2022-2023 to 50% in the first nine months of 2024, the Asian share increased from nearly 30% to nearly 40%.
- U.S. LNG production features stability thanks to abundant large-scale production sites while being vulnerable to the great impact of supply disruptions.
- U.S. LNG supply capacity is expected to increase further in 2025.



Source: Based on data from the U.S. Energy Information Administration

Russian Pipeline Gas Exports to Europe: Existing Even After Reduction

- Russian pipeline gas exports to the EU: Still existing though decreasing from more than 8 million tones in December 2021 to 1 million to 2 million tones per month in 2023-2024
- A decrease in Russian pipeline gas exports to Europe has been covered by U.S. LNG.
- However, Russian LNG exports to Europe are still firm even after measures to reduce them.



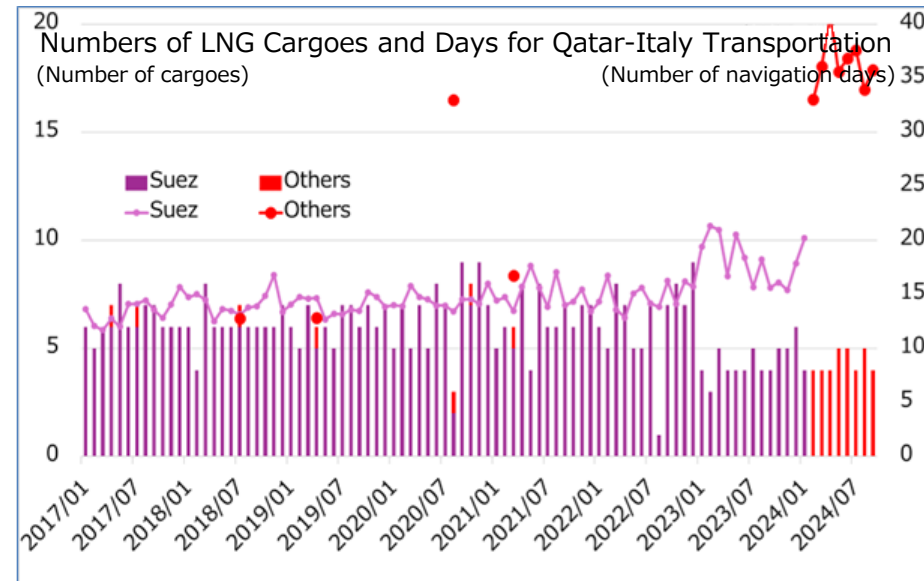
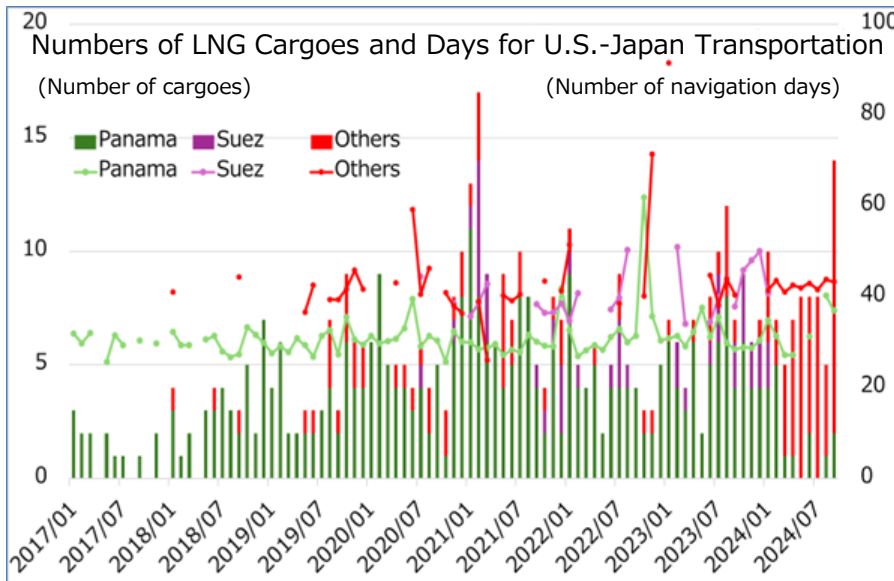
Sources: Based on data from Cadigan LNG Services, Trade Statistics, ENTSOG, and Gazprom

Developments Regarding EU Methane Regulations for Imports

- The European Union Council in May 2024 adopted regulations to track and reduce methane emissions. They took effect in August 2024.
- The regulations are the world's first to regulate methane emissions from imports.
- The regulations require importers to report data about annual methane emissions, including those from countries and businesses exporting goods to the EU from 2025. The EU member countries must establish and notify relevant penalties by August 5, 2025.
(→EU members are expected to make relevant announcements in the future)
- In November 2024, the U.S. Department of Energy and Environmental Protection Agency announced a letter to the European Commission on a plan to set conditions for U.S. LNG to be considered compatible with fuels produced in line with new EU regulations.
- **Expected future scenario**
 - If the United States and Europe agree on the compatibility of their methane regulations, it may contribute much to the formulation of global methane emission control standards.
 - On the other hand, the United States and Europe have appreciated the CLEAN initiative that Japan and South Korea have already promoted.
 - Japan should ask the United States and Europe to understand that the CLEAN initiative seeks to enhance companies' voluntary methane emission control and reduction efforts, instead of government regulations.

While Global LNG Transportation Grows, Transportation Bottlenecks Arise on Main Routes

- Panama Canal passage restrictions caused by drought and congestion are leading LNG to be transported via the Cape of Hope usually.
 - ✓ LNG transportation from the United States to Japan avoided the Panama Canal more clearly in 2024.
- The deterioration of the Middle East situation has effectively led the Red Sea and Suez routes to be shut down.
 - ✓ LNG transportation from the Middle East to Europe avoided the Suez Canal more clearly in 2024.
- A long-term LNG transportation strategy must be developed. The commencement of LNG exports from the U.S. West Coast may become a game-changer to avoid transportation bottlenecks and shorten and diversify transportation routes.



Sources: Based on data from ICIS LNG Edge

Other Reference Data

List of Other Reference Data

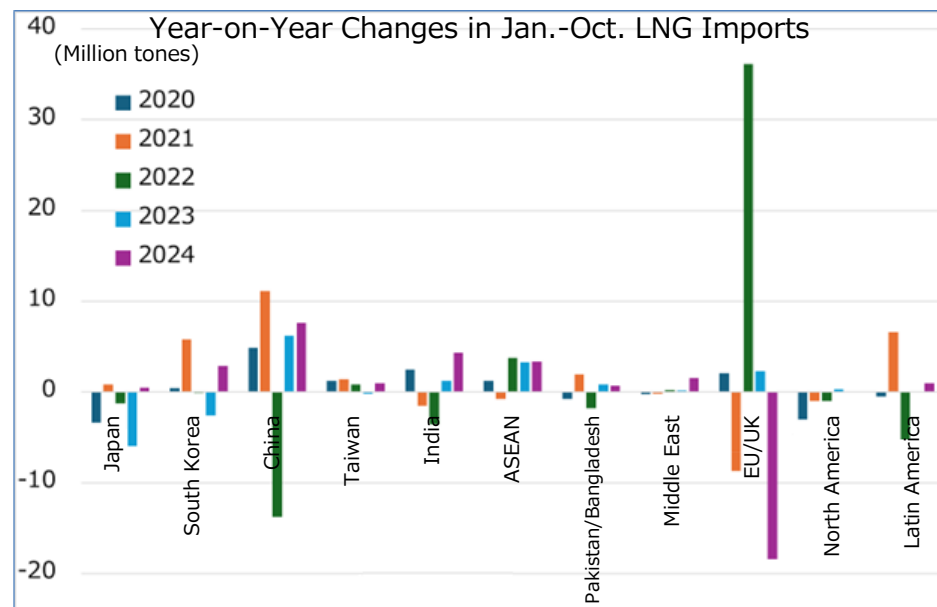
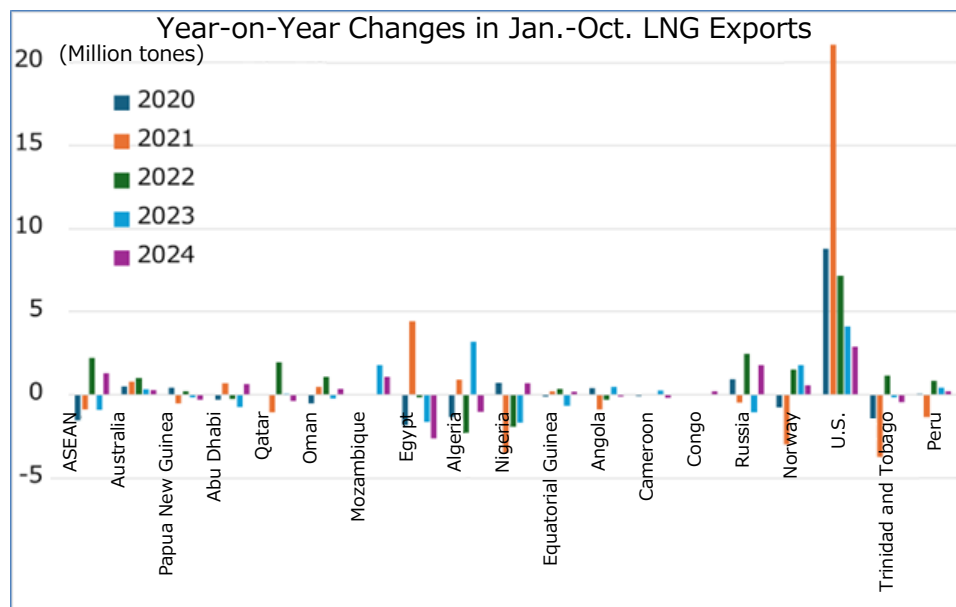
* Detailed data are available on the following slides

- [LNG Exports and Imports:](#)
January-October 2024 global LNG trade grew 1.4% year-on-year to 330 million tons.
- [Gas Consumption in Big Markets:](#)
Total gas consumption in the first three quarters of 2024 remained flat year-on-year (a sharp increase in China and India, and a steep decrease in Europe).
- [Spot LNG Futures Prices:](#)
Stabilization after a substantial decline from late 2022 (low northern hemisphere demand, robust supply, including U.S. production)
- [Chinese Gas Market Trends:](#)
The market size shrank in 2022 for the first time ever, turned up in 2023, and hit a record level in 2024.
- [Indian Gas Market Trends:](#)
The market shrank due to an LNG import decline accompanying price hikes in 2022, before turning up in 2023.
- [Future LNG Production Potential and Challenges](#)
Uncertainties about the United States driving a medium-term expansion, hopes on Canada and other new supply sources (including a decline in chokepoint risks), Qatari sales trends, Australian labor-management conflict risks, etc.
- [LNG Market Topics in 2024 and Focuses in 2025](#)
- [Challenges Regarding Future Maintenance and Demonstration of LNG's Roles](#)

LNG Exports and Imports (January-October 2024): Moderate Year-on-Year Growth

- January-October 2024 global LNG trade grew 1.4% year-on-year to 330 million tones.
 - The United States continued to drive export growth (that was moderate).
 - Imports increased in China, India, South Korea, and Southeast Asia.
 - Imports remained flat in Japan.
 - Imports in the EU and the UK declined substantially in reaction to a sharp increase in 2022.

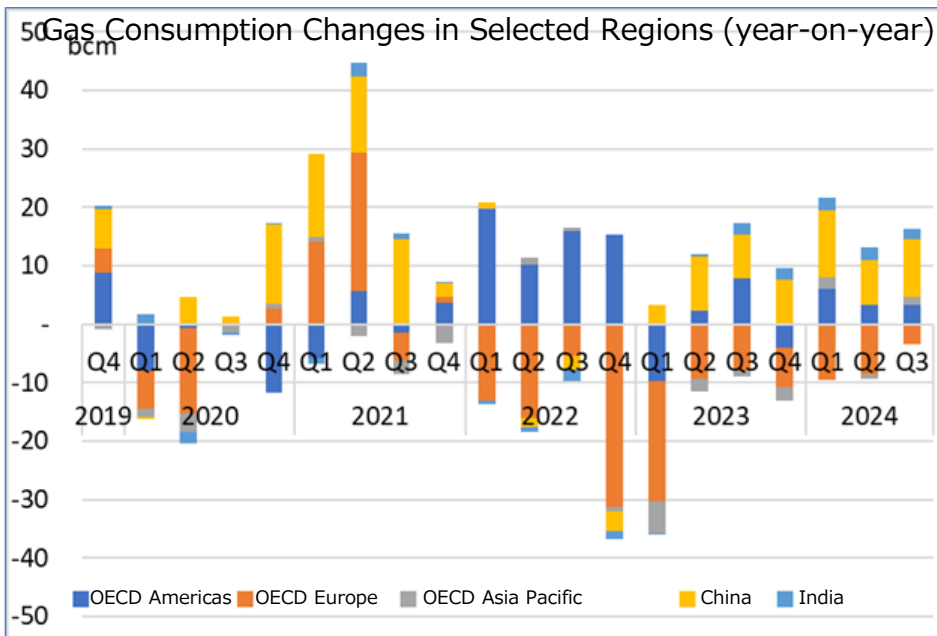
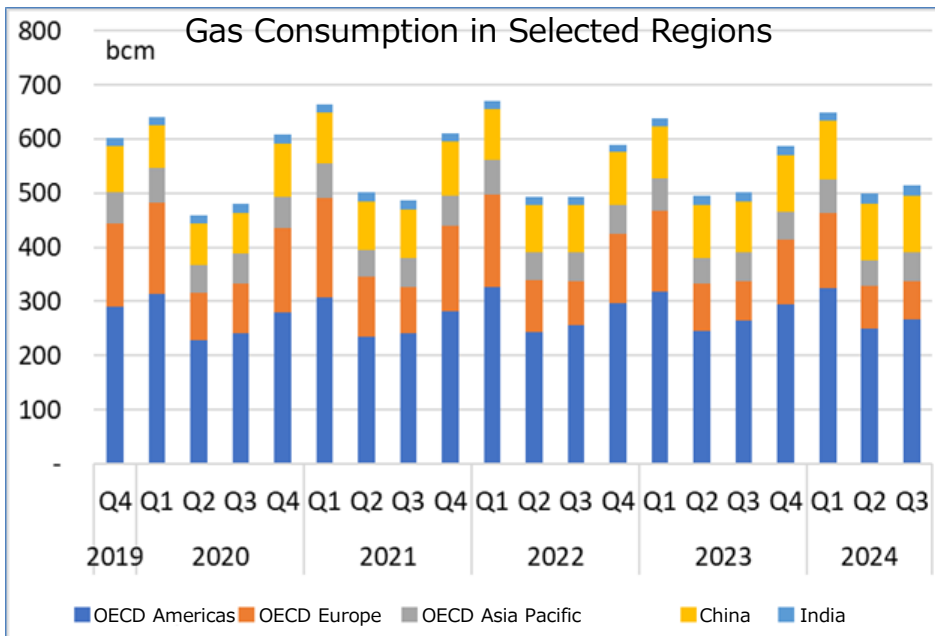
(Unit: million tones)		EU/UK	Japan	China
2021	Jan.-Oct.	55.08	61.42	64.41
2022	Jan.-Oct.	90.23	60.39	50.46
2023	Jan.-Oct.	92.62	54.32	56.19
2024	Jan.-Oct.	74.62	54.48	63.55
2024-2023	+/- mt	- 18.00	0.16	7.36
2024/2023	+/- %	-19.4%	0.3%	13.1%



Sources: Based on Cadigan LNG Service and Japanese and Chinese trade statistics

Gas Consumption in Big Markets (1st-3rd Quarters of 2024)

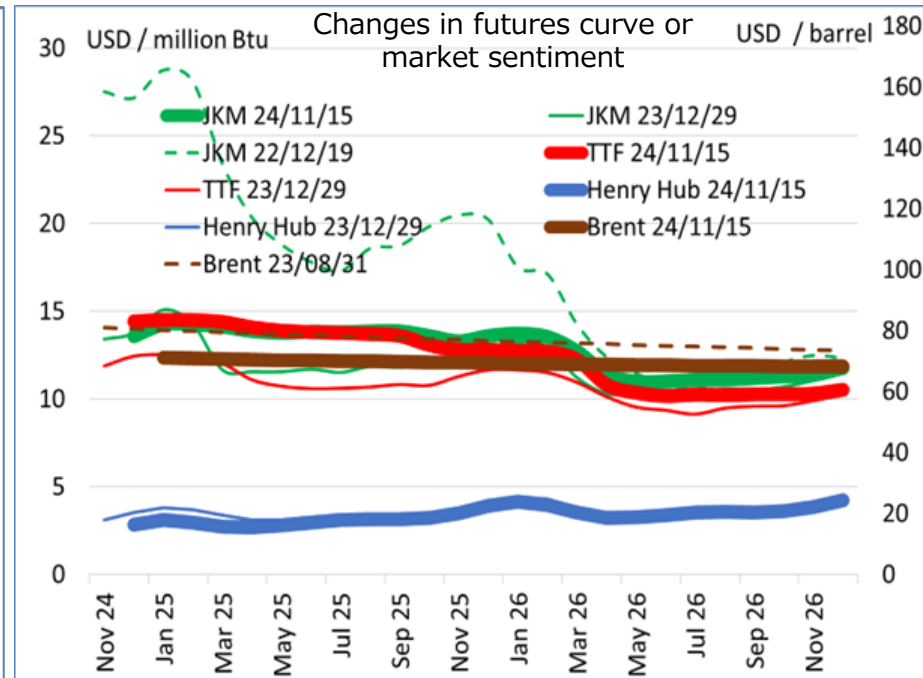
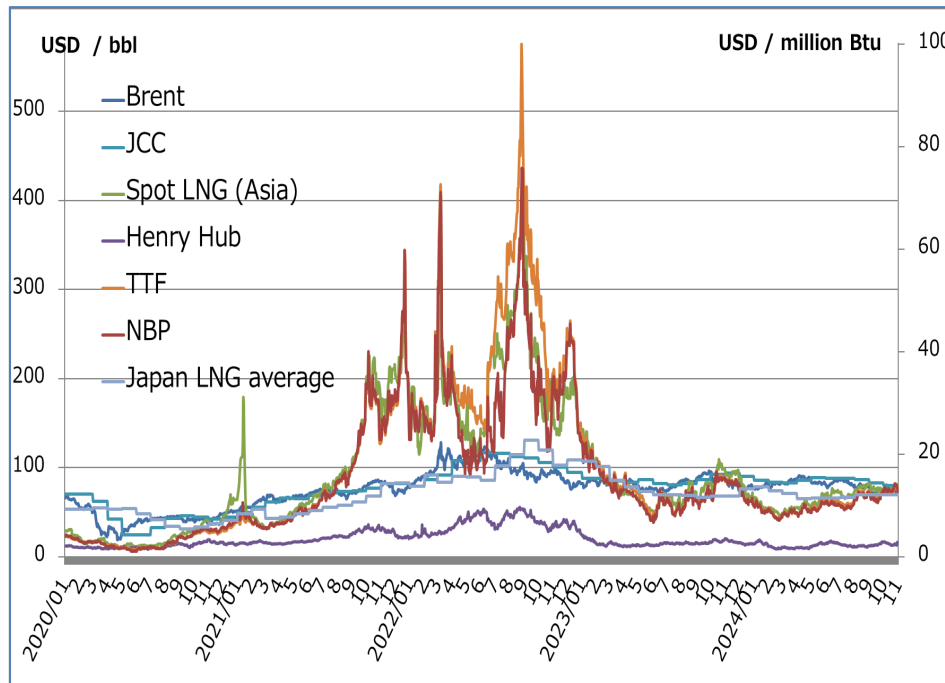
- Gas consumption in the first to third quarters of 2024 remained flat year-on-year in OECD Americas, OECD Europe, OECD Asia Pacific, China, and India.
- Gas consumption increased by more than 10% in China and India and moderately in OECD Americas and OECD Asia Pacific.
- Gas consumption decreased by 7.4% in OECD Europe (by 8.3% in the EU). OECD Europe consumption plunged by some 25% from 2021 before the Ukraine crisis. Factors behind the sharp decrease included demand reduction efforts as well as demand destruction.



Sources: Based on data from JODI Gas, China National Bureau of Statistics, Indian Ministry of Petroleum and Natural Gas (Petroleum Planning & Analysis Cell)

Spot LNG Futures Prices Weakening Amid Sluggish Future Market Sentiment

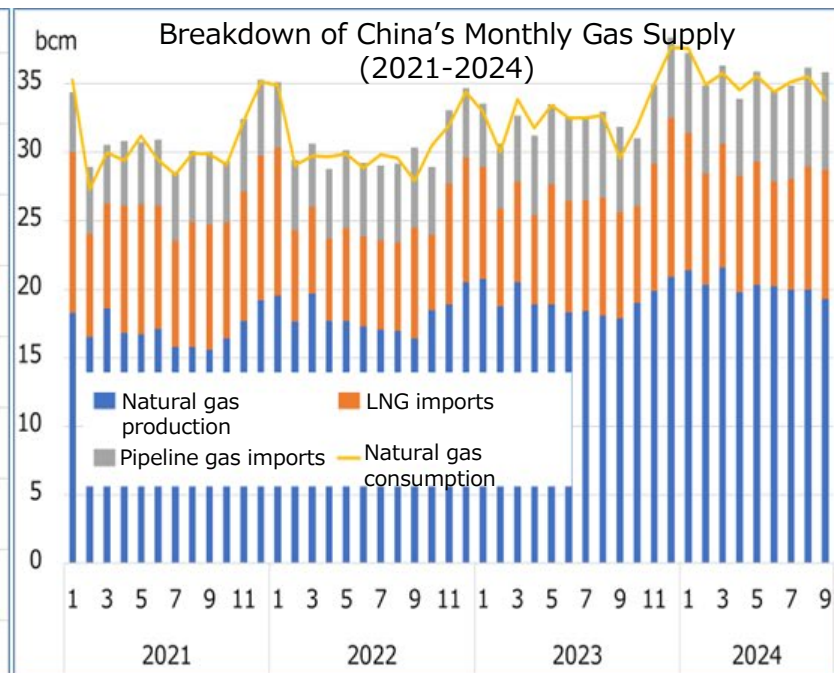
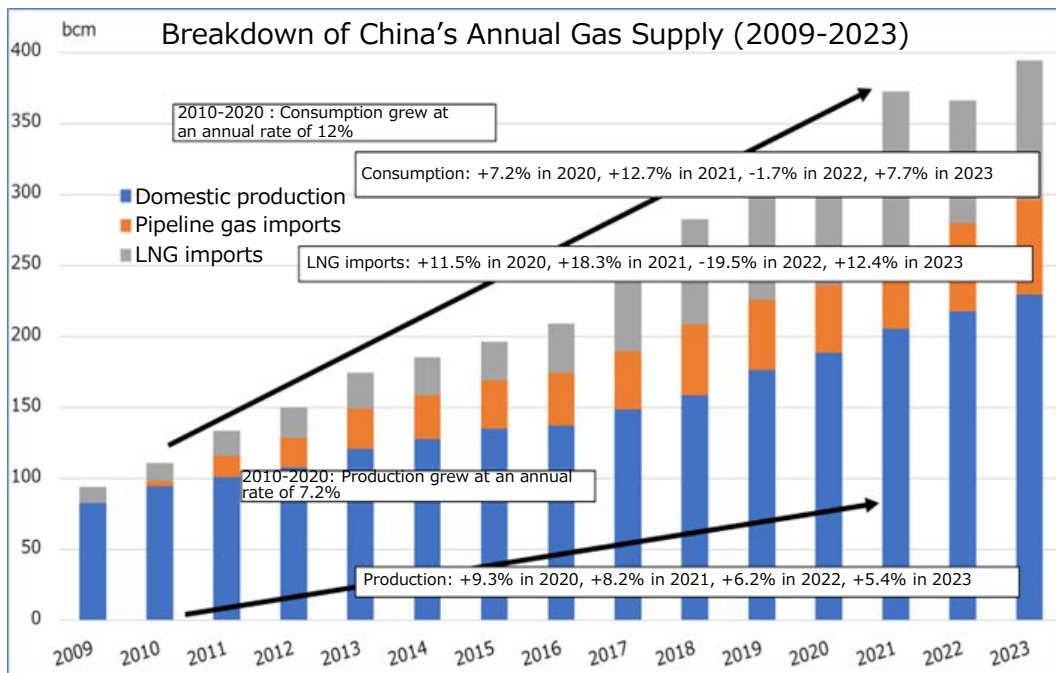
- Prices stabilized after plunging from late 2022 (2023-2024 northern hemisphere winter prices: \$40 → around \$15).
- Northern hemisphere demand remained low. EU demand plunged due to gas demand reduction measures and demand destruction under high prices.
- U.S. and other LNG supply is abundant. Production stays smooth, without major troubles. Future market sentiment is sluggish.



Sources: Based on data from Japanese Trade Statistics, CME, ICIS LNG Edge

Chinese Gas Market Trends

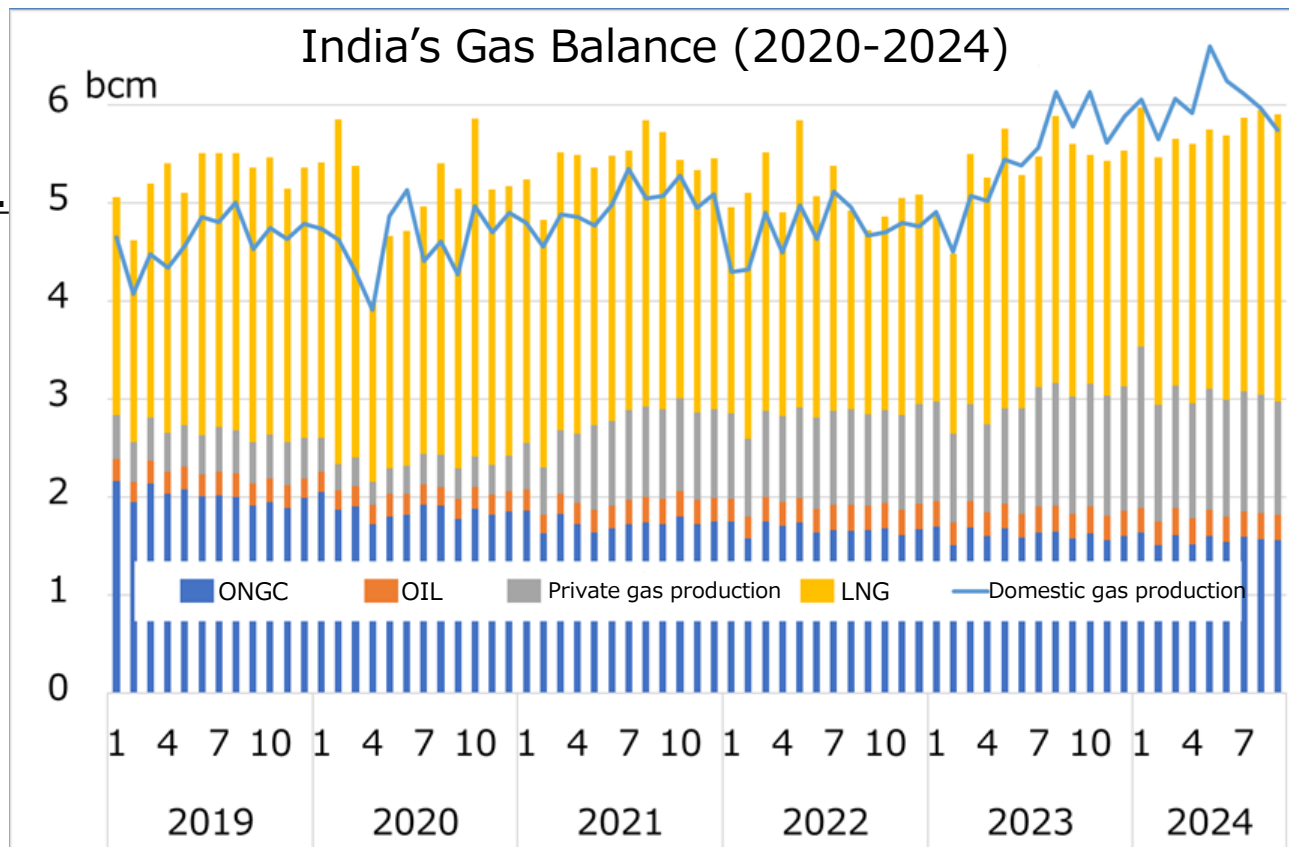
- China's gas market size shrank in 2022 for the first time ever, turned up in 2023, and hit a record level in 2024.
- In January-September 2024, gas consumption increased by nearly 10% year-on-year, domestic gas production by more than 7%, LNG imports by nearly 12%, and pipeline gas imports by nearly 15%.



Sources: Based on data from National Bureau of Statistics, National Development and Reform Commission

Indian Gas Market Trends

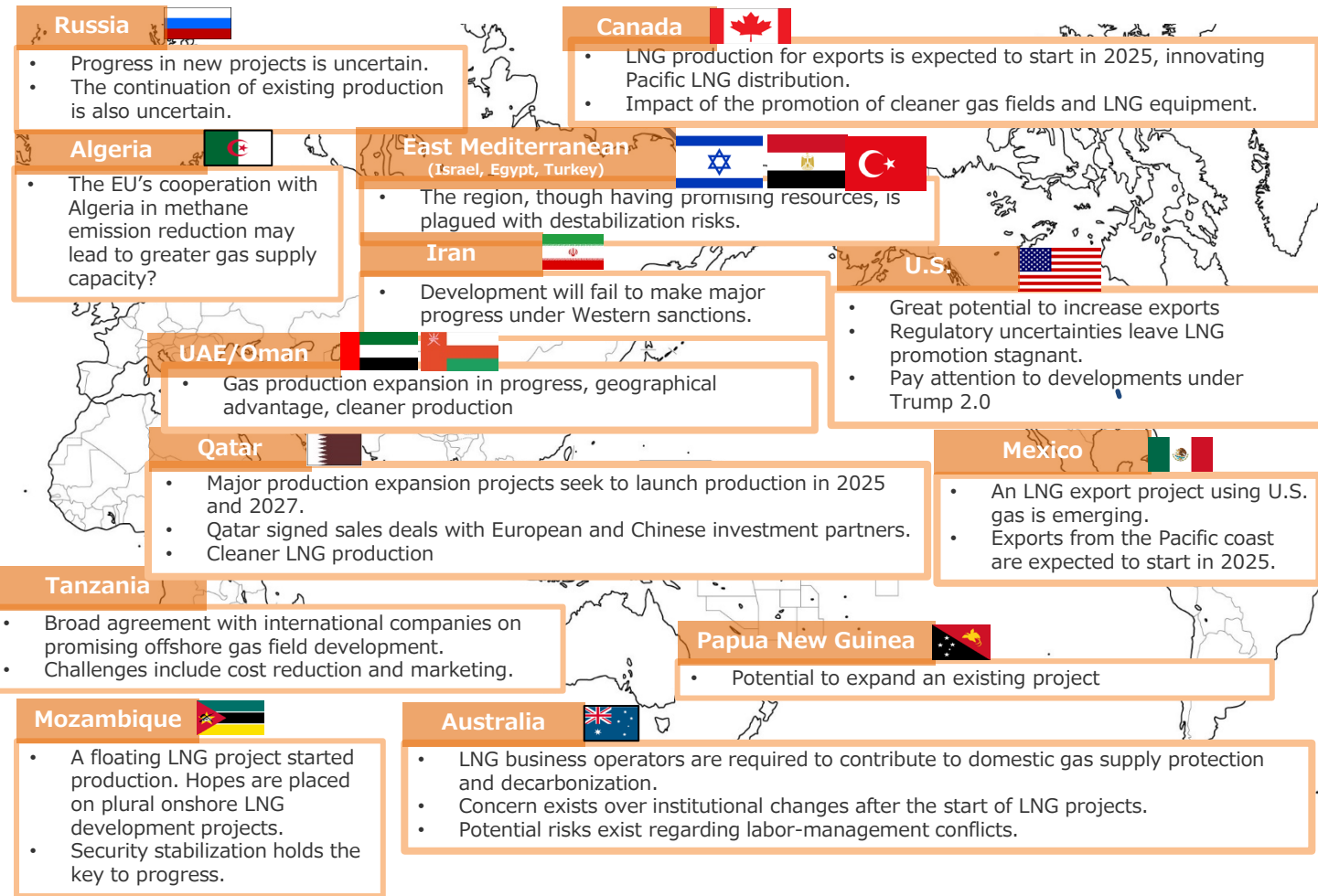
- India's gas consumption shrank in 2023 before restoring an upward trend in 2023 (up 13% year-in-year in the first to third quarters of 2024).
- While domestic gas production increased smoothly (by 5% year-on-year), state-run ONGC's production continued to decrease (by 3%). Private sector production expanded substantially (by 18%).
- LNG imports plunged in 2022 before scoring double-digit growth in 2024.



Source: Based on data from Ministry of Petroleum and Natural Gas (Petroleum Planning & Analysis Cell)

Future LNG Production Potential and Challenges

- While the United States is driving medium-term production growth, uncertainties are growing due to a pause on new LNG export permits for non-FTA countries and the cancellation of construction permits for some LNG projects.
- Hopes are placed on Canada and other new LNG supply sources (expected to contribute to **supply volume expansion, the avoidance of transportation chokepoints, and the shortening and diversification of transportation routes**).
- Qatar's LNG marketing is making progress. Attracting attention is the next step, including sales to parties other than investment partners.
- Australia is urgently required to maintain a stable supply and reduce risks.



LNG Market Topics in 2024 and Focuses in 2025

- Developments in the three largest LNG exporters (the United States, Qatar, and Australia) will remain the key to LNG market stability in 2025.
- Pay attention to developments regarding methane emission controls for LNG value chains.

Topics in 2024	Focuses in 2025
High LNG prices combined with relative market stability	Can production stability be sustained without trouble?
The United States as the largest supplier in the global LNG market	LNG production expansion in North America, including the West Coast
Slowdown in development of long-term U.S. LNG projects	Progress in LNG projects after the lifting of a pause on new LNG export permits
Rapid decline in European LNG purchases	Will LNG projects decrease or maintain a high level?
Further increase in China's LNG imports	Growth in LNG supply under long-term contracts is expected to help increase import stability
Robust import growth in Asian emerging LNG markets	Asian emerging countries to increase LNG imports in response to supply capacity growth
Progress in Qatari LNG production expansion and negotiations on large contracts	Will sales growth lead to a further increase in LNG production expansion projects?
Progress in LNG development in non-North American regions, such as Abu Dhabi and Oman	Will additional LNG development project make progress?
Progress in Australian LNG brownfield projects	Will measures be taken to sustain stable LNG exports?
Growing momentum for methane emission controls for LNG value chains	Progress in methane management cooperation between LNG producing and consuming countries and in the development of international methane emission standards
Growing LNG transportation bottlenecks at canals	Progress in rationalization and optimization of LNG transportation
Portfolio players' increased presence	Contributions to LNG procurement and starting LNG production
Progress in materializing e-methane projects	Will the development of LNG projects and cost cuts make further progress?

Challenges Regarding Future Maintenance and Demonstration of LNG's Roles

- Government-industry cooperation is required in implementing measures to enable Japan's long-term stable LNG procurement.
- Shipping bottlenecks at canals and marine transportation routes may further increase the need to rationalize and optimize LNG transportation.
- LNG's economic and environmental advantages should be clarified.

	Focuses of attention (including challenges that LNG-consuming countries can tackle)
Supply	<ul style="list-style-type: none"> ✓ Japanese government-industry cooperation in stabilization of regulations and support for LNG development to expand and maintain global LNG production ✓ Rationalization and optimization of LNG transportation (to address shipping bottlenecks at canals and marine transportation routes) ✓ Addressing Russian pipeline gas export reduction and Russian LNG supply disruption risks ✓ Addressing material gas shortages and production trouble in LNG producing countries (promoting dialogue and cooperation)
Demand	<ul style="list-style-type: none"> ✓ The size and speed of LNG and natural gas demand growth in China effects the global gas balance. ✓ The status of nuclear power plant operations affects global LNG demand (the Japanese status has great influence). ✓ European gas demand declines (demand reduction efforts and demand destruction), affecting the global gas balance. ✓ LNG demand aggregation and development support for Southeast Asian emerging and other markets
Pricing	<ul style="list-style-type: none"> ✓ Securing appropriate-size long-term supply contracts to control volatility ✓ In line with growing U.S. LNG production, LNG contract prices have increasingly been indexed to gas hub prices rather than crude oil prices for traditional contracts. How high is an adequate share for contracts with prices indexed to gas hub prices?
Climate	<ul style="list-style-type: none"> ✓ Clarifying standards for decarbonized energy transition – methane and GHG emission controls ✓ Promotion of CCUS (carbon capture, utilization, and storage) and green electricity for the LNG liquefaction process can contribute to the greening of LNG.
Financing	<ul style="list-style-type: none"> ✓ Fundraising methods are required to respond to shorter LNG contracts. ✓ Emphasizing the economic and environmental advantages of LNG as an area for investment and lending.