S&P GlobalCommodity Insights

Securing Reliable Supply—Is LNG Investment Faltering?

Presentation to the 2024 Executive Committee Meeting of GIIGNL

Marseille 15 April 2024

Michael Stoppard, Chief Strategist Global Gas

Three phases of reordering global gas

Reset 2022–24

Fixed Supply Volume

Catch-Up 2025–30?

New Supply Uncertainty 2030+

Scenario Differentiation

- The 'law of long lead times'
- Europe and Asia competing

- New LNG supply wave
- Low Russian pipe exports to Europe
- Catch-up or oversupply?

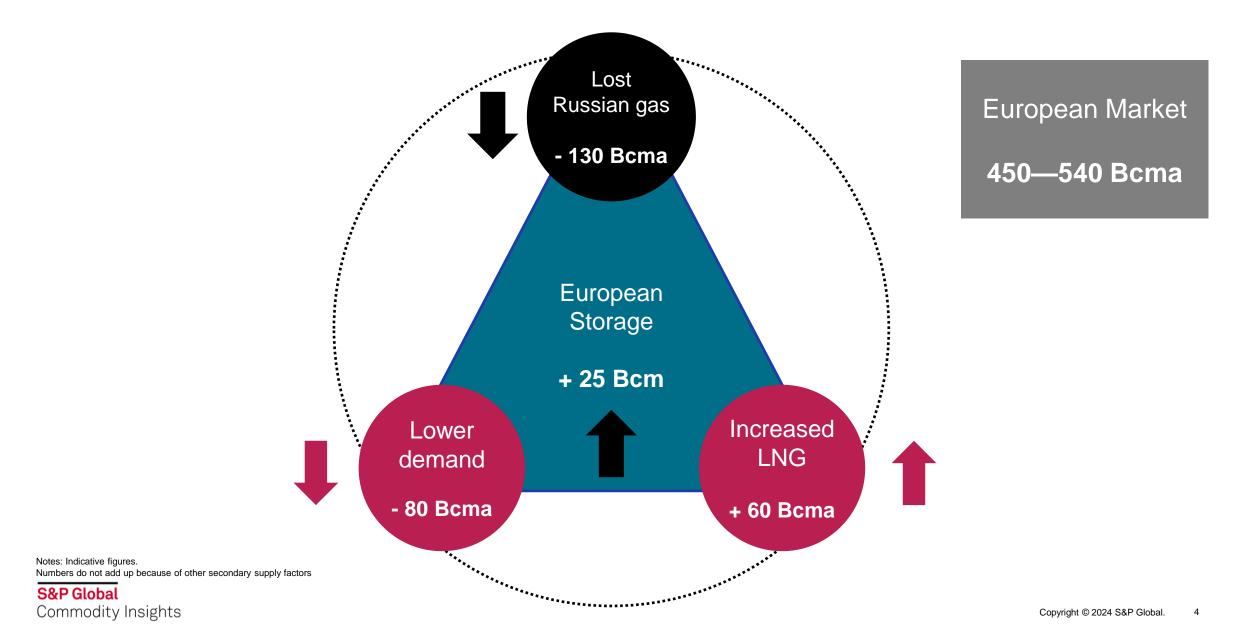
- Pace of RES deployment
- Pace of coal phase-out
- Wildcards: hydrogen and CCUS

Source: S&P Global Commodity Insights.

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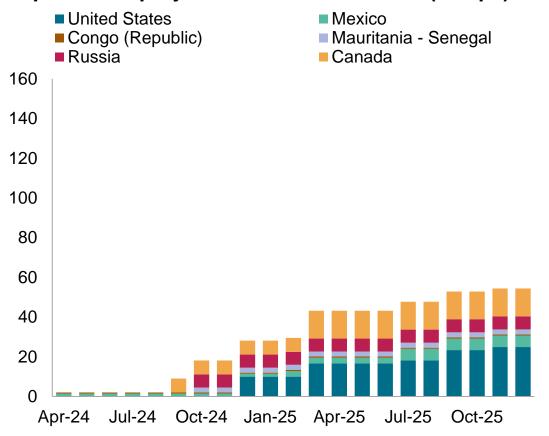
Reset: Short-term Outlook

The reconfiguration of Europe's gas market: Demand down & LNG up

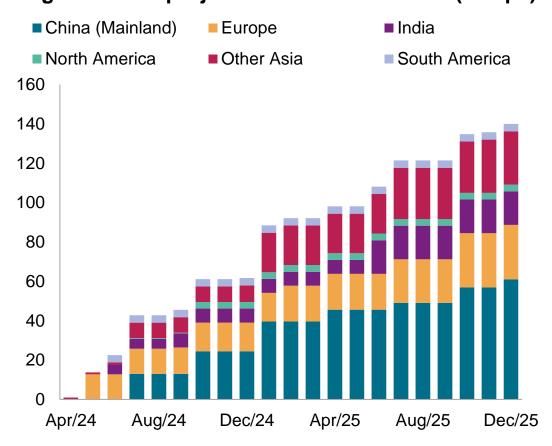


A new wave of liquefaction and regasification capacity due online before winter 2024/25

Liquefaction projects under construction (MMtpa)



Regasification projects under construction (MMtpa)



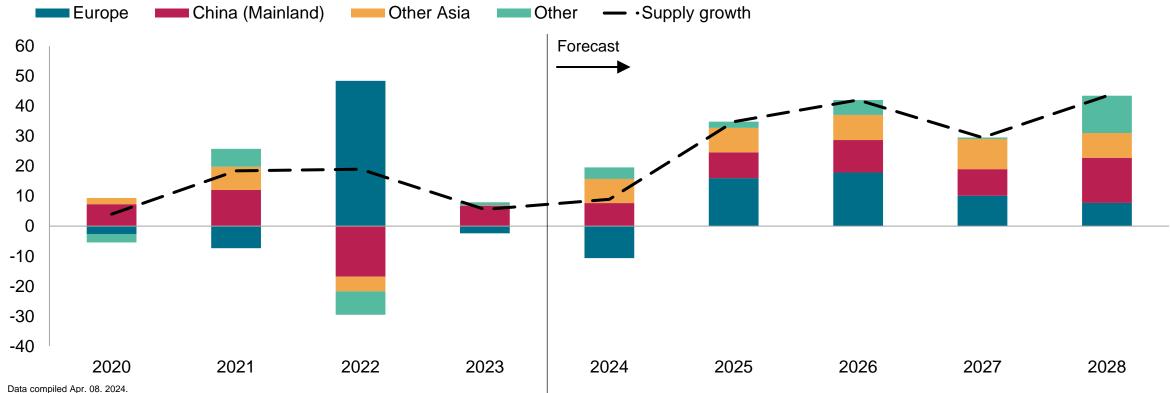
Data compiled Feb. 15, 2024.

Source: S&P Global Commodity Insights.

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LNG supply growth expected to outpace Asia-Pacific demand growth from 2025, loosening the global market

Global LNG import by region compared to supply growth (MMt)

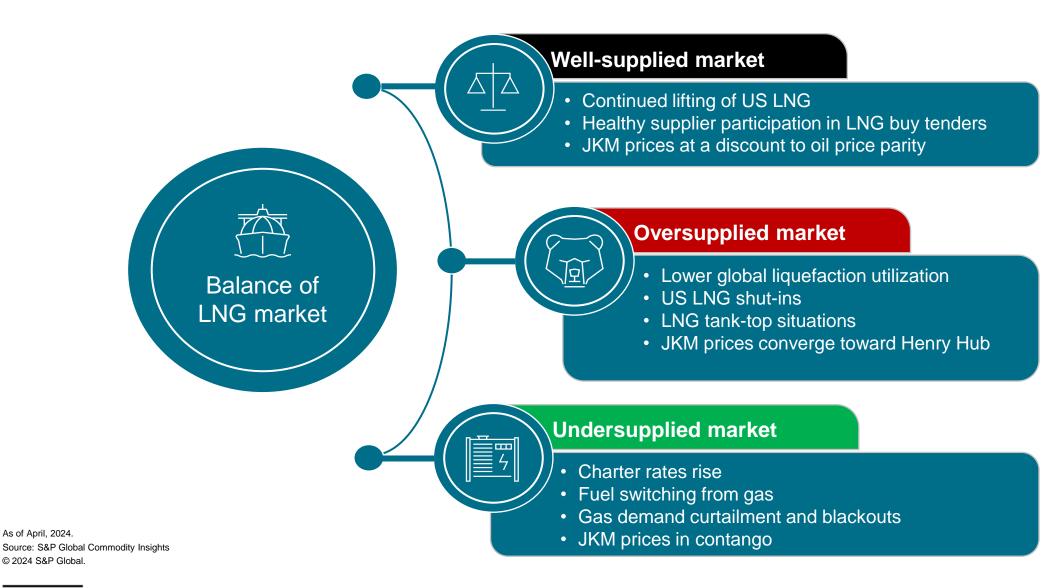


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Catch-up or Oversupply? Medium-term Outlook

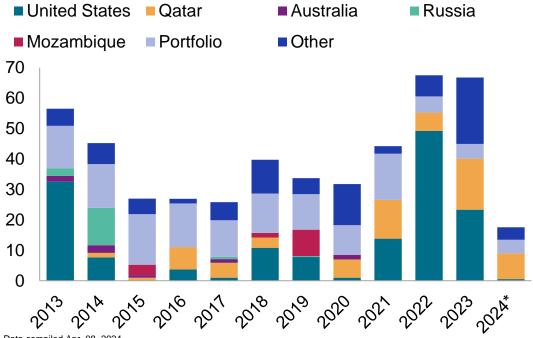
Balance of the global LNG market



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Record LNG contracting activity is an indicator of future supply

LNG contracts by year signed and export country (MMtpa)



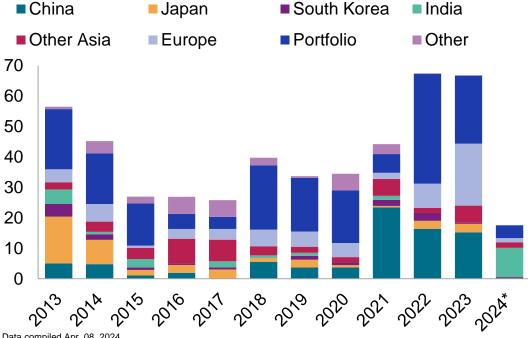
Data compiled Apr 08 2024

Notes: Includes only Sale and Purchase Agreements (SPAs) and Liquefaction Tolling Agreements (LTAs). 2024 data is year-to-date.

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LNG contracts by year signed and import market (MMtpa)



Data compiled Apr. 08, 2024

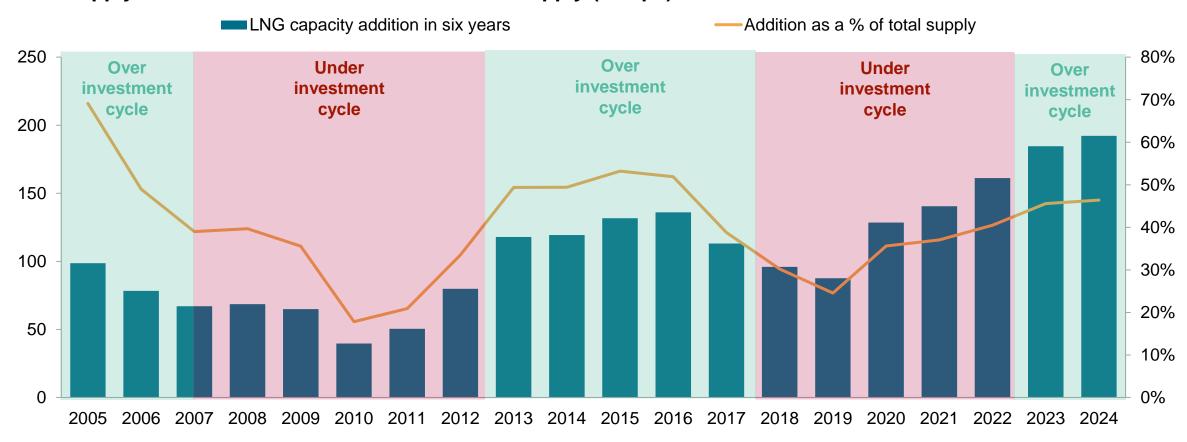
Notes: Includes only Sale and Purchase Agreements (SPAs) and Liquefaction Tolling Agreements (LTAs). 2024* data is year-to-date.

Source: S&P Global Commodity Insights

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The LNG supply expansion is significant compared to previous waves

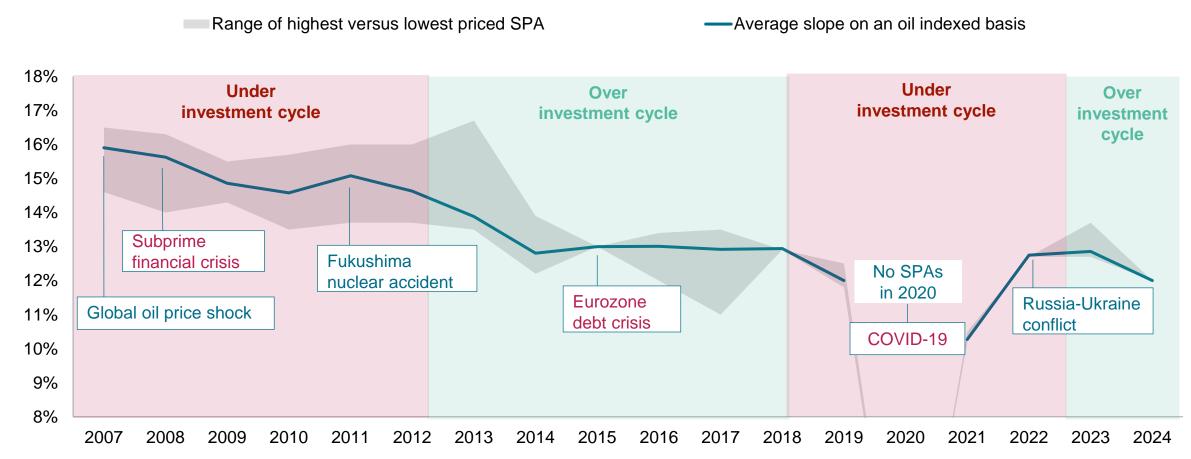
LNG supply under construction and as % of total supply (MMtpa)



As of March 21, 2024. Source: S&P Global Commodity Insights. © 2024 S&P Global.



Downward pressure on oil indexation likely to return



As of March 21, 2024.

Pricing indexation of long-term LNG contracts into Asia based on year of signing

Identified LNG contracts in chart are more than or equal to 1 MMtpa and 15 years or longer in duration.

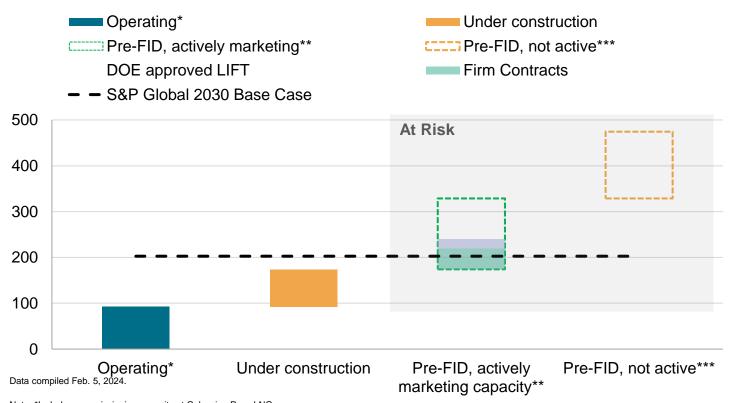
Source: S&P Global Commodity Insights.

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A word on the US LNG 'Temporary Pause'

US and Mexico LNG export project DOE non-FTA status (MMtpa)



Note: *Includes commissioning capacity at Calcasieu Pass LNG.

Note: **Actively marketing pre-FID export projects that are awaiting DOE NFTA approval or may need an extension.

Note: ***Other pre-FID US and Mexican LNG export projects that are awaiting DOE NFTA approval or have been approved for DOE NFTA exports but may need an extension. Includes applications that are several years old and may no longer be active.

Source: S&P Global Commodity Insights.

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Three Possible Outcomes

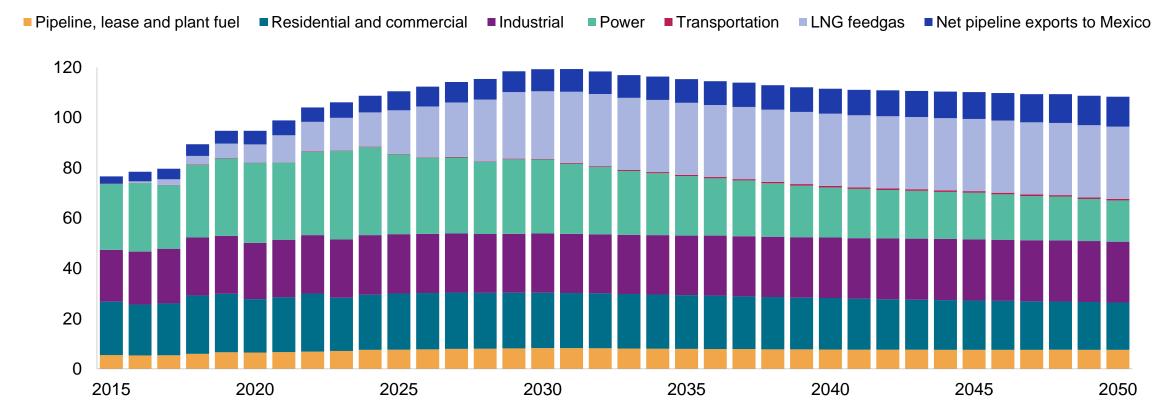
Revert

Tighten

Halt

US gas demand enters decline by 2030..but what about power demand from AI?

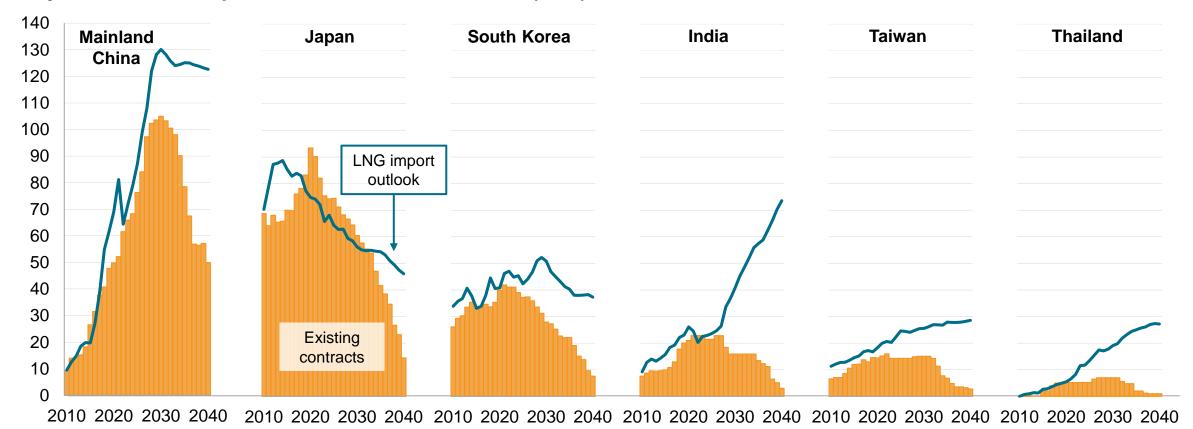
US Lower 48 natural gas domestic demand and exports (February 2024 outlook, Bcf/d)



Data compiled Feb. 21, 2024. Source: S&P Global Commodity Insights, EIA. © 2024 S&P Global.

In addition to rising demand, expiring contracts also leave a wide gap for uncontracted volumes in Asia

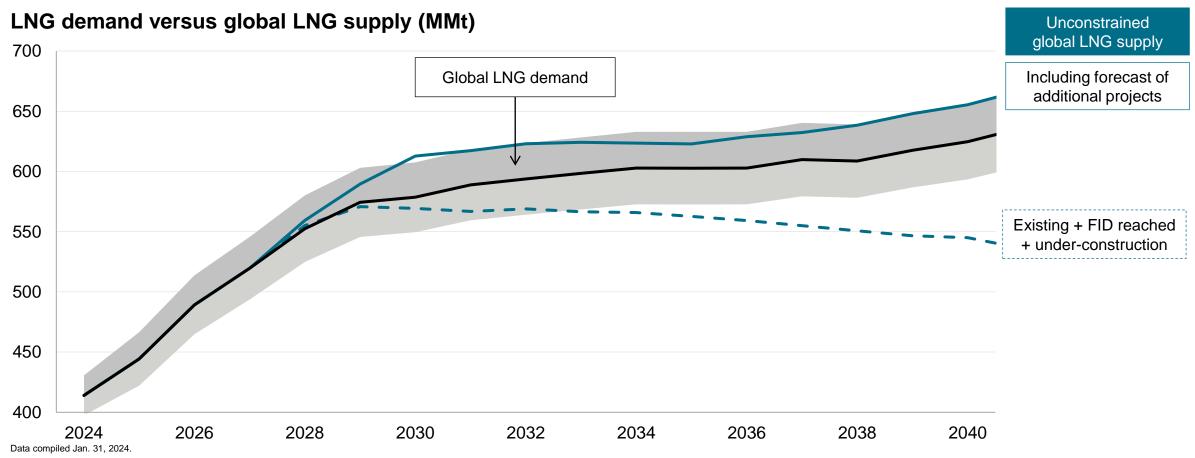
Major Asian LNG importers: Contracts vs demand (MMt)



Data compiled Jan. 31, 2024.
Source: S&P Global Commodity Insights.
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Strong liquefaction FIDs over the next few years risk outpacing import needs, with risk of over-supply emerging in 2029-2030



Grey shaded area represents the reasonable range of demand up- and downside; we consider the LNG market loosely balanced as long as supply is within the grey range. Pre-FID refers to liquefaction status; pre-FID fields at existing facilities are included in the Existing status. Source: S&P Global Commodity Insights.

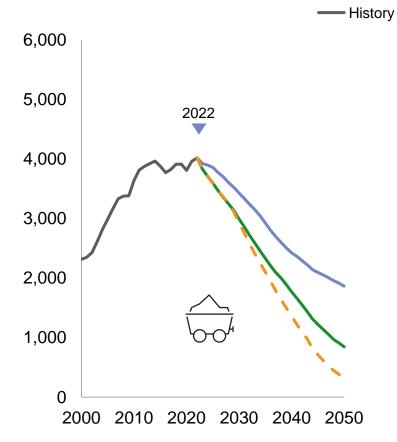
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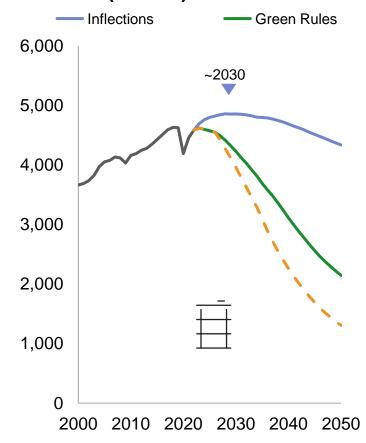
Uncertainty—Gas & Energy Scenarios

Peak global demand for natural gas likely to come later than for coal and oil

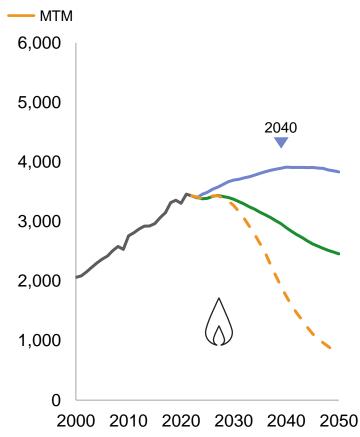
Global primary <u>coal</u> demand, 2000–50 (MMtoe)



Global primary <u>oil</u> demand, 2000–50 (MMtoe)



Global primary <u>gas</u> demand, 2000–50 (MMtoe)

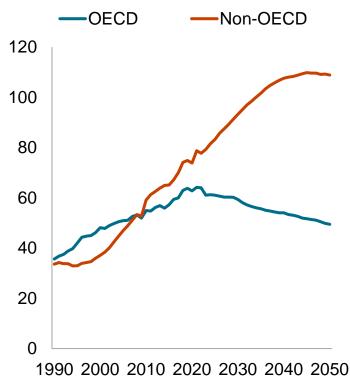


Data compiled July 2023.

Source: S&P Global Commodity Insights.

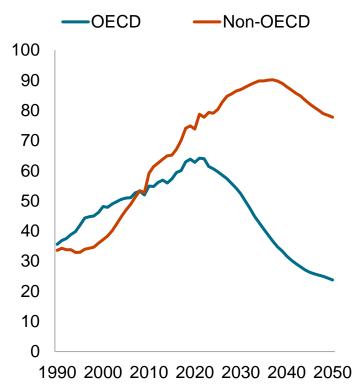
OECD demand falls while gas use in developing countries rises through 2030

Inflections gas demand (Tcf)



As of Jan. 30, 2024. Source: S&P Global Commodity Insights. © 2024 S&P Global.

Green Rules gas demand (Tcf)

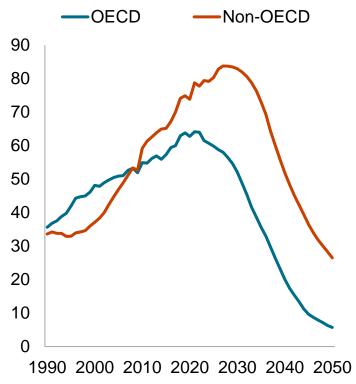


As of Jan. 30, 2024.

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MTM gas demand (Tcf)

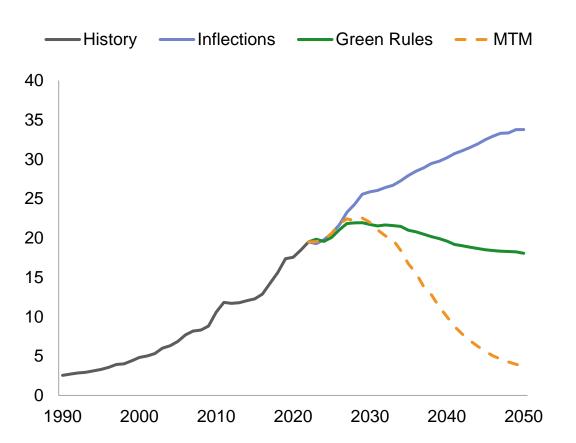


As of Jan. 30, 2024. Source: S&P Global Commodity Insights. © 2024 S&P Global.

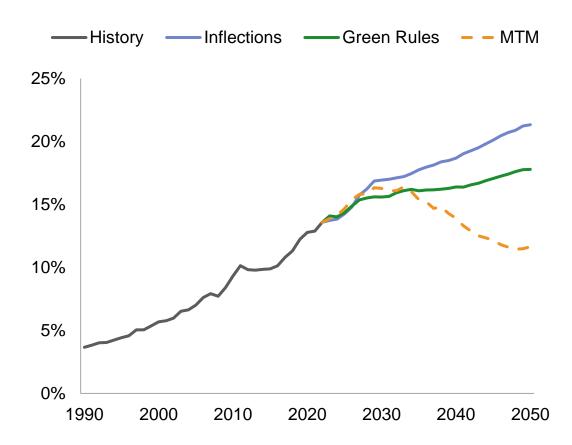
Global LNG trade remains an important element of global gas supply

LNG share of global gas supply rises even as overall demand stalls as in Green Rules

Global LNG net trade (Tcf)



LNG as a share of global gas supply (%)



Data compiled July 2023.

Source: S&P Global Commodity Insights.



Thank you

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