



# Gas Market Outlook and LNG Decarbonisation in Southeast Asia

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# Gas 2025: short and medium-term outlook

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## Gas 2025

Analysis and forecasts to 2030

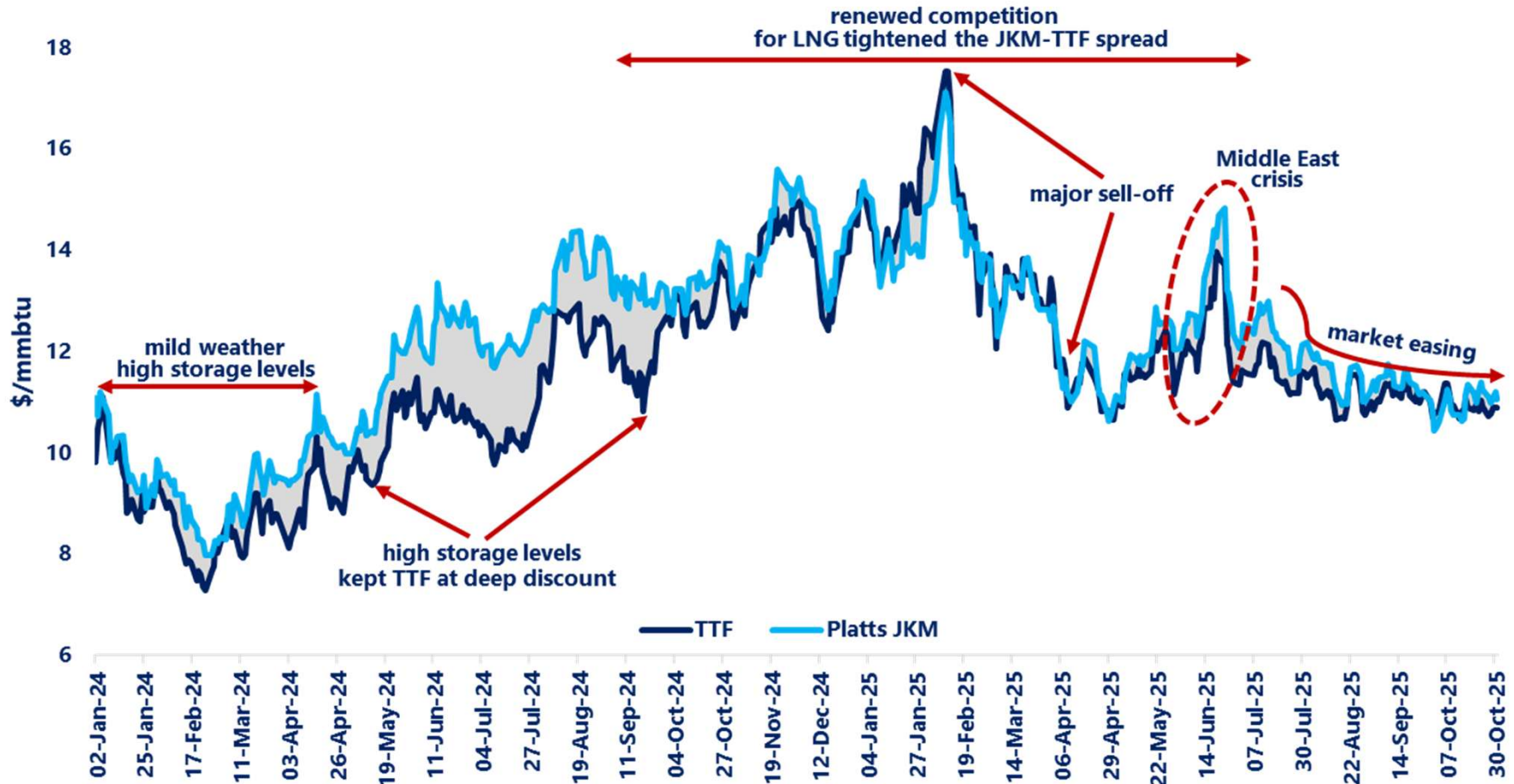


<https://www.iea.org/reports/gas-2025>

# Global gas market trends

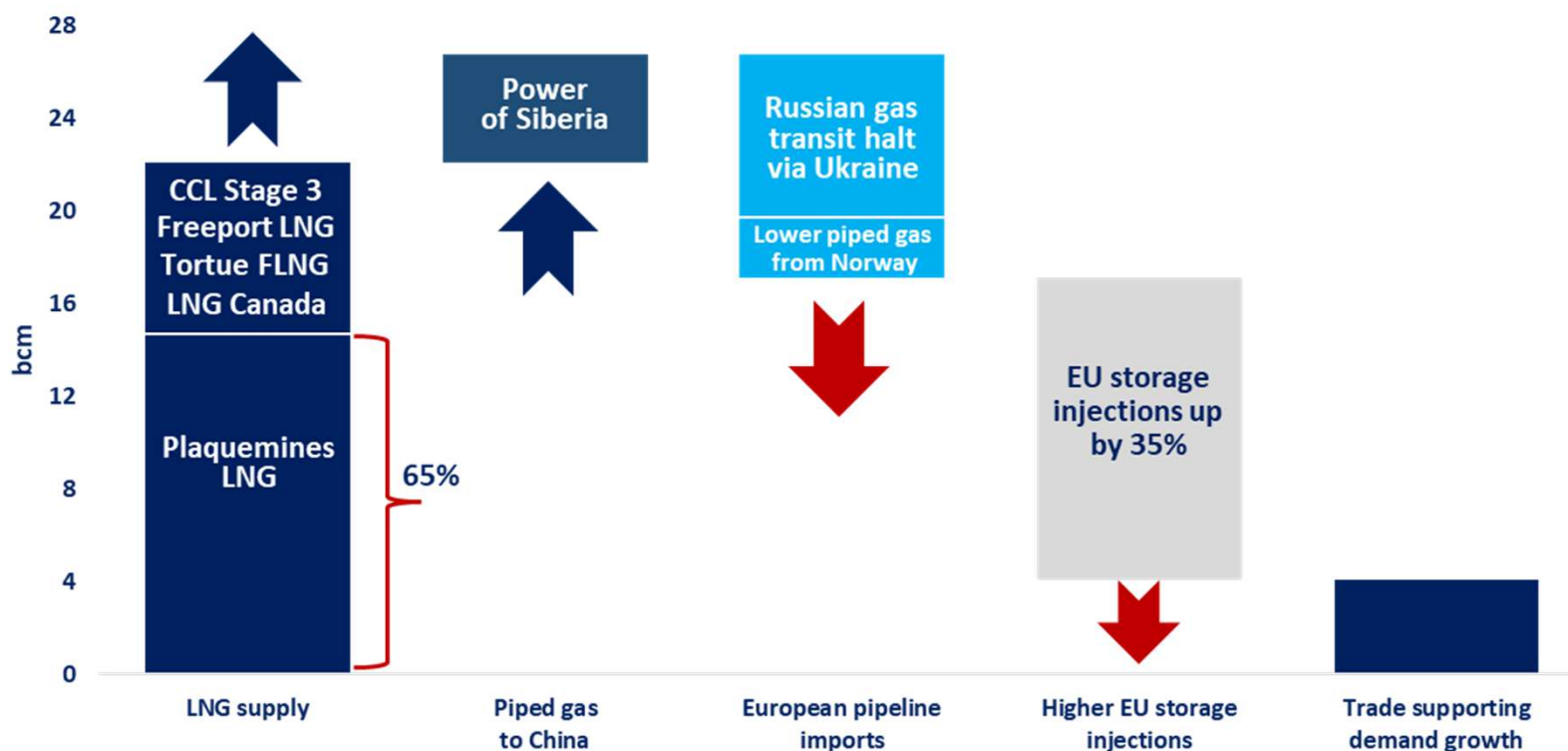
# 2025: a year of transition for natural gas markets

The evolution of TTF month-ahead and JKM prices, January 2024 – October 2025



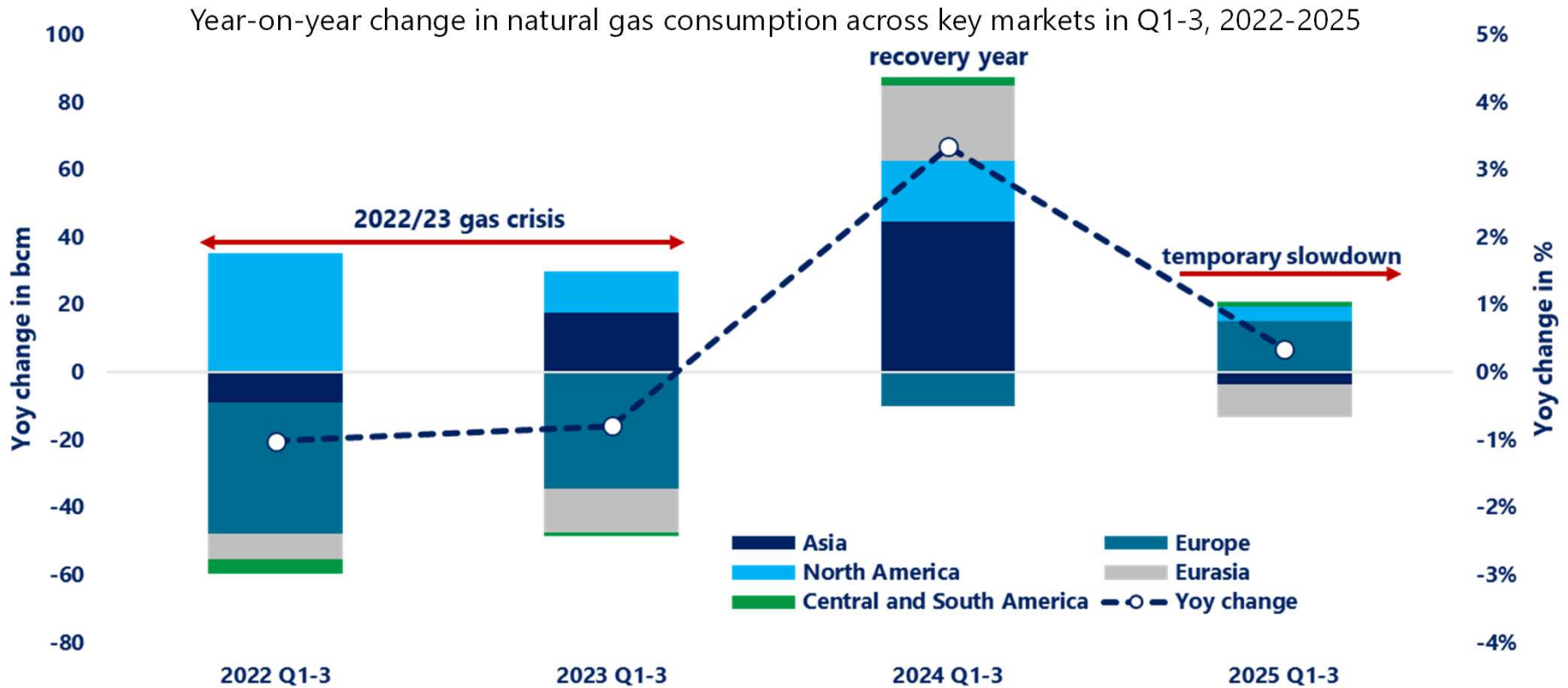
# The global gas market remained fundamentally tight in 2025...

Change in key piped natural gas trade and global LNG supply in Q1-3 2025



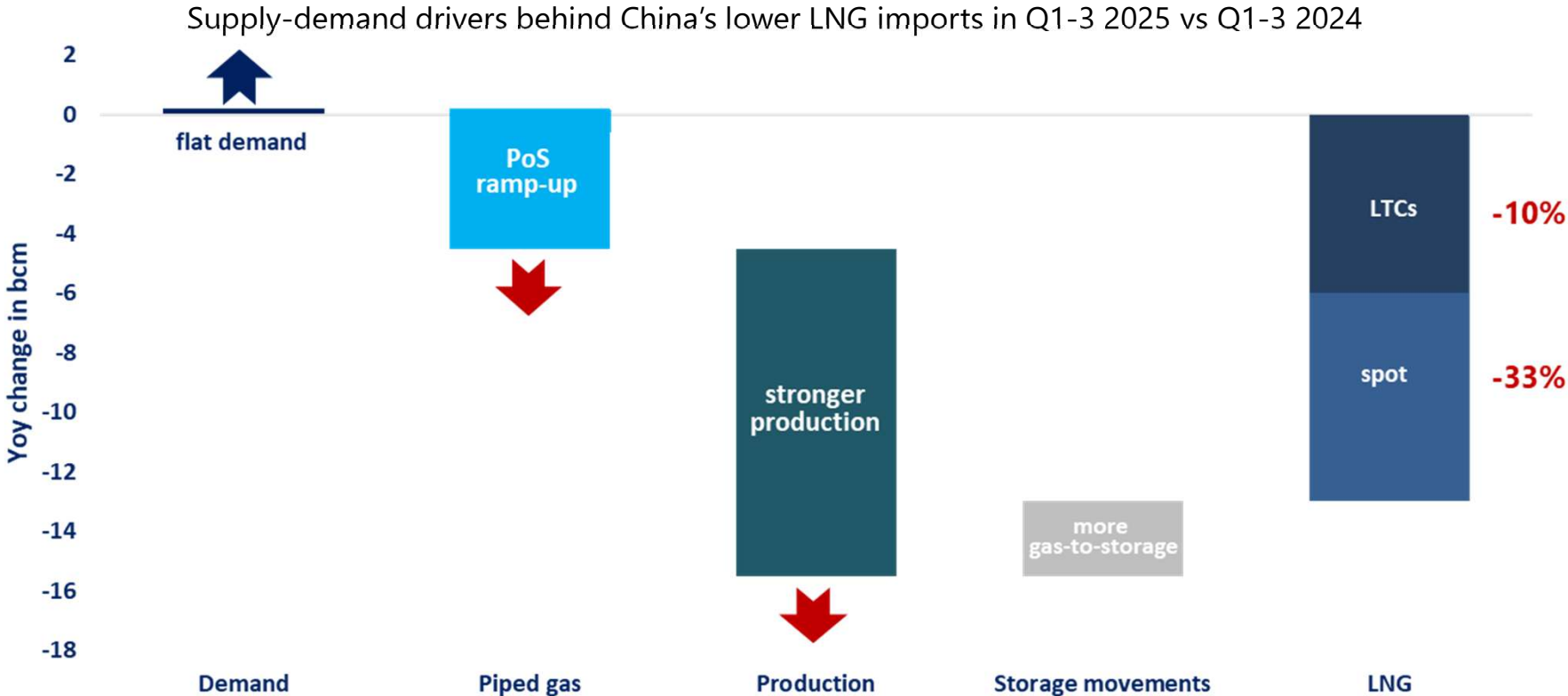
The relatively strong increase in US LNG supply was partly offset by stronger storage injections and lower Russian piped gas deliveries to the European Union, keeping the global gas market tight in Q1-3 2025.

## ...weighing on gas demand growth in Asian markets



Global gas demand growth slowed to an estimated 0.5% in Q1-3 2025, with growth primarily driven by Europe and North America. In contrast, gas demand remained subdued in the key Asian import markets.

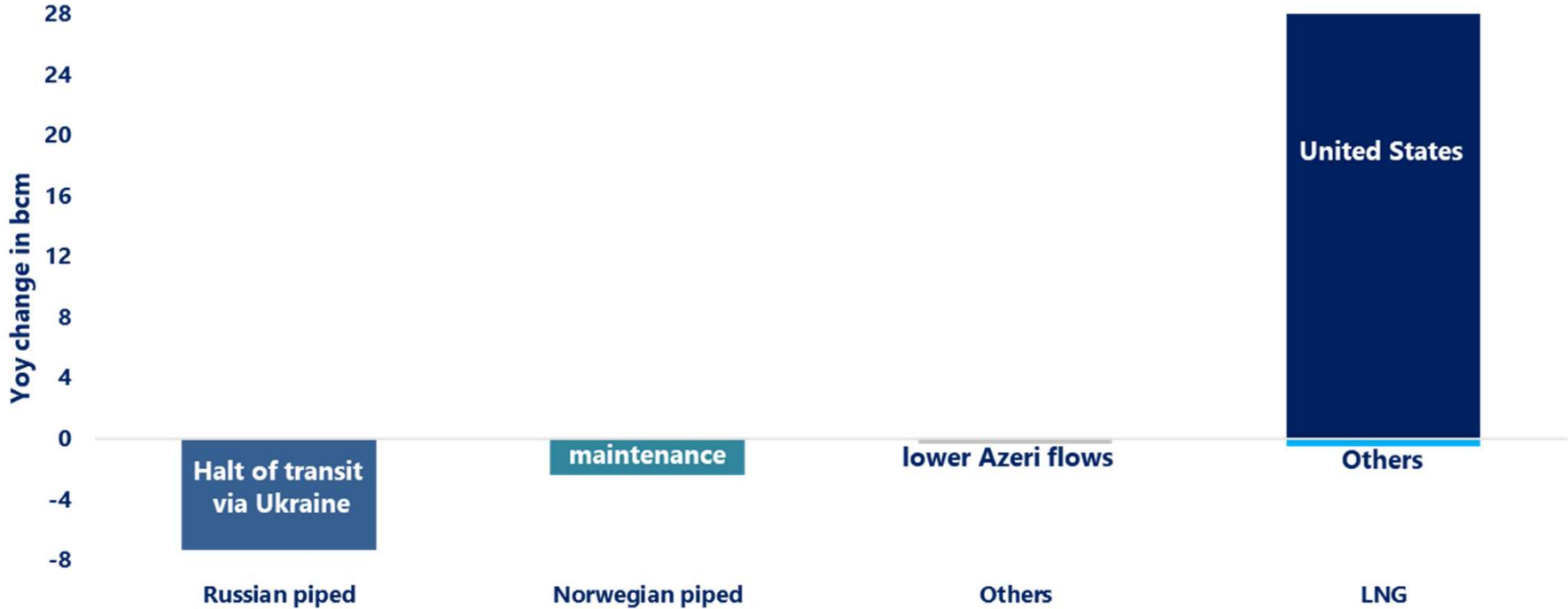
# Year of the Snake: China's LNG imports plummeted in Q1-3 2025



Lower demand, together with the continued ramp-up of Russian piped gas deliveries and higher domestic production weighed on China's LNG imports, which dropped by 17% yoy in Q1-3 2025.

# Europe's LNG imports surged to an all-time high in Q1-3 2025

Estimated year-on-year change in European natural gas imports and deliveries from Norway, Q1-3 2025 vs Q1-3 2024

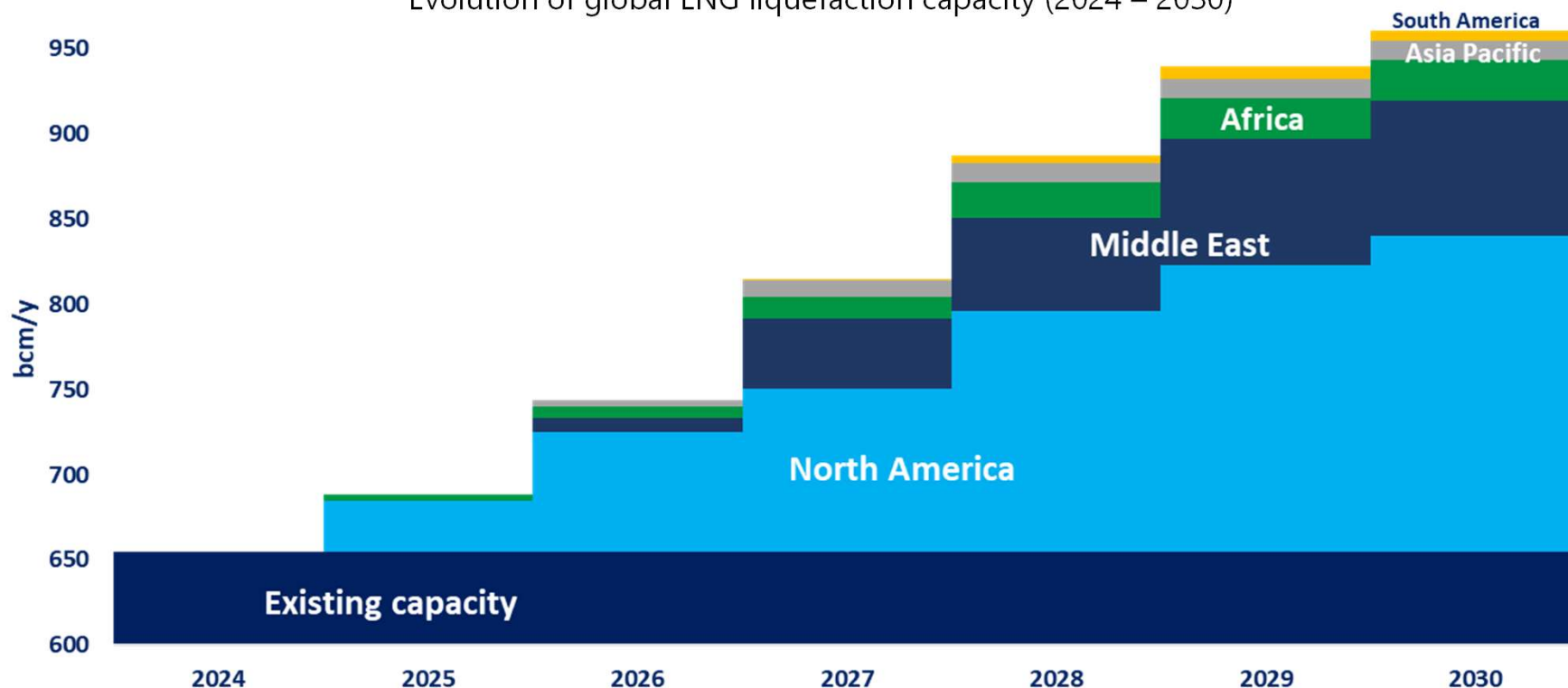


Europe's LNG imports rose by more than 25% yoy and reached an all-time high of 127 bcm in Q1-3 2025, amid stronger domestic demand, lower piped gas imports and higher storage injections.

# Medium-term outlook

# The global LNG market is set for an unprecedented growth

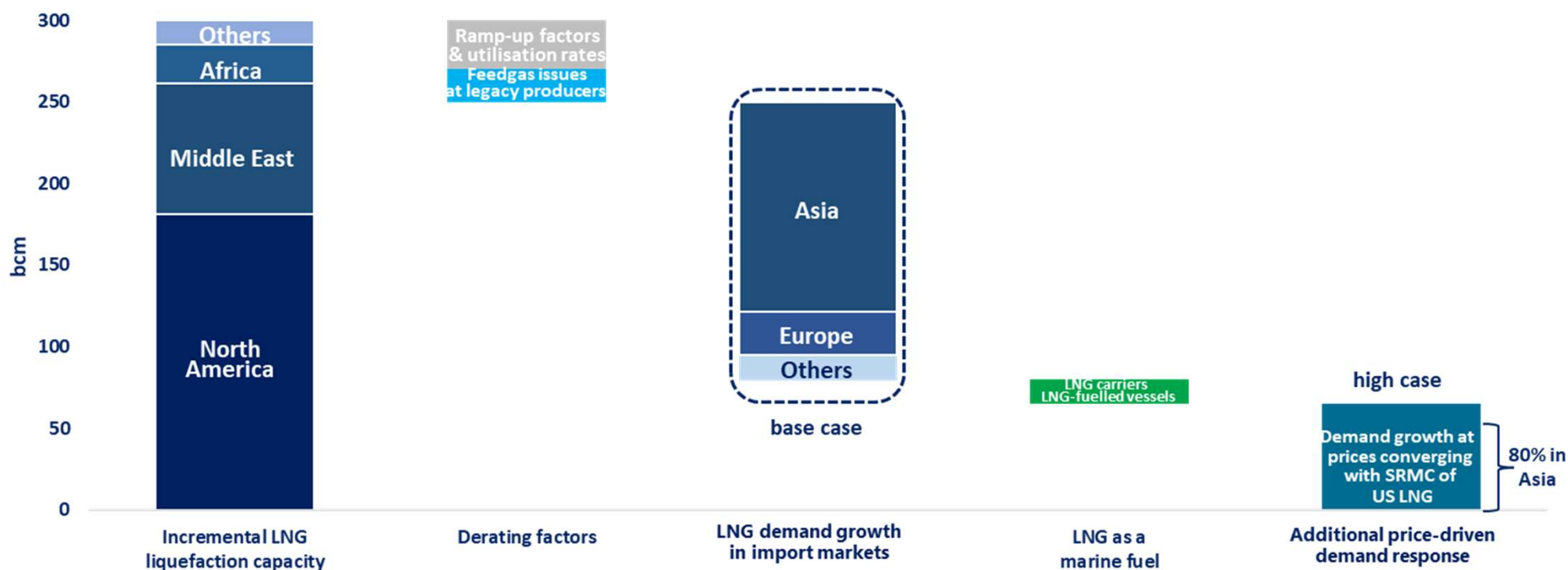
Evolution of global LNG liquefaction capacity (2024 – 2030)



Global LNG capacity is set to expand by around 300 bcm/y by 2030 –primarily driven by the United States and Qatar. This strong growth is set to ease market fundamentals and stimulate demand growth.

# Strong LNG supply growth could foster additional gas demand

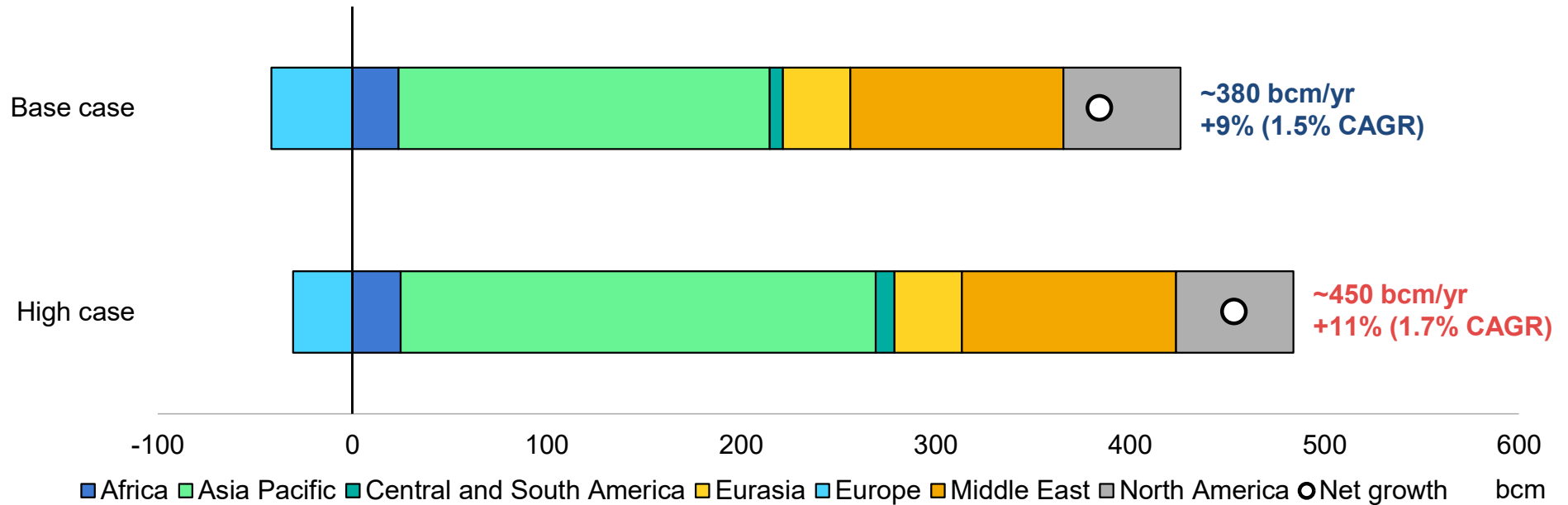
Forecast global LNG balance including price-adjusted demand response, 2030 vs 2024



The unprecedented LNG supply growth could put downward pressure on LNG import prices and stimulate additional demand over the medium-term, especially in the price sensitive Asian markets.

# Global gas demand could expand by 9-11% by 2030, led by Asia

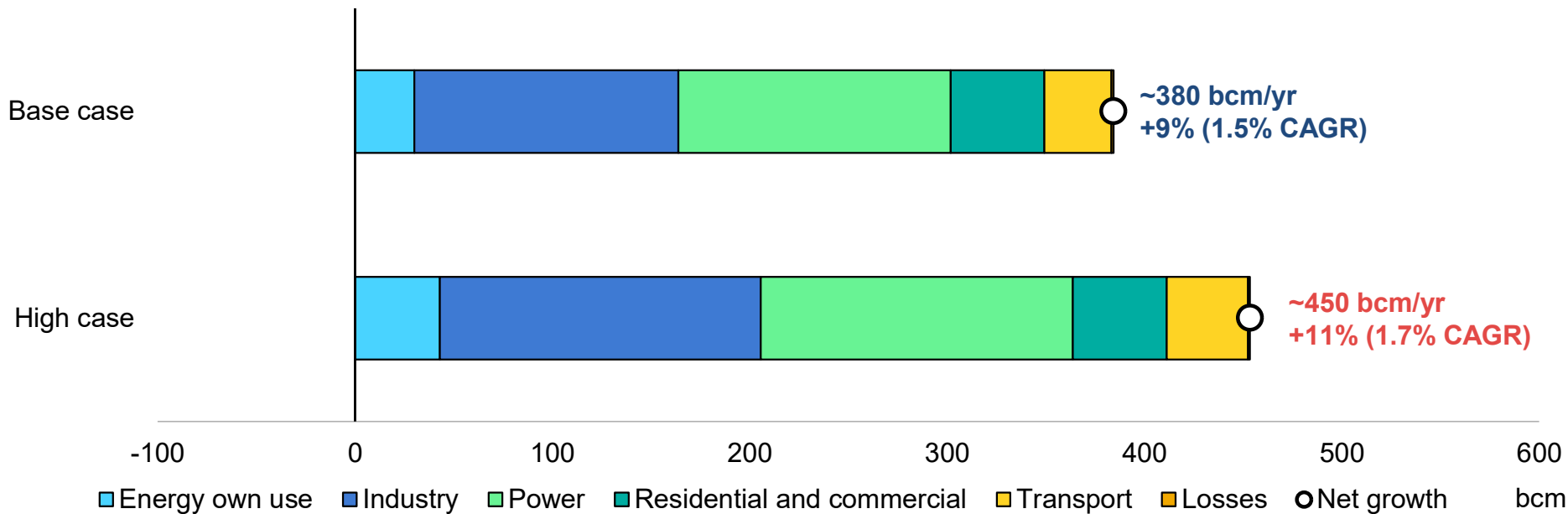
Global gas consumption growth by region, 2030 vs. 2024



Asia accounts for about half of incremental gas demand to 2030. Most of the remaining growth comes from the Middle East and North America, while Europe is on course to decline.

# Industry and power generation drive the demand growth through 2030

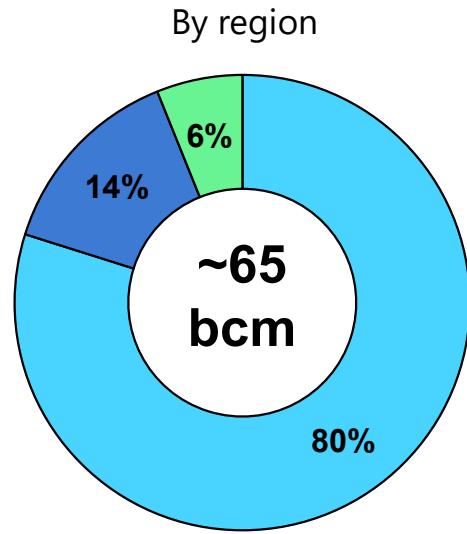
Global gas consumption growth by sector, 2030 vs. 2024



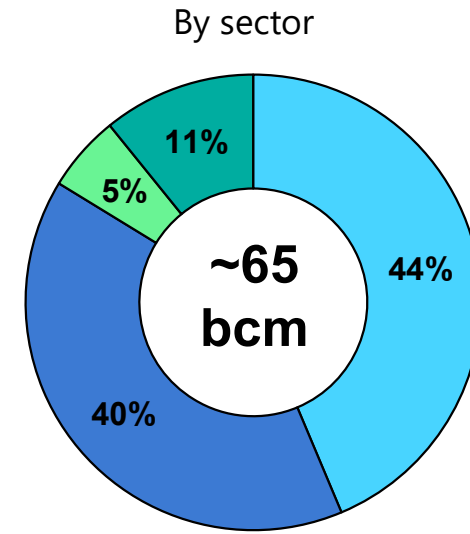
Industry and the energy sector together account for 45% of incremental growth to 2030, while the power sector is the second-largest contributor, responsible for about 35% of the net increase in both cases.

# Demand response is concentrated in Asia and in power and industry

Breakdown of additional price-driven demand response in LNG importing countries, 2030 vs. 2024



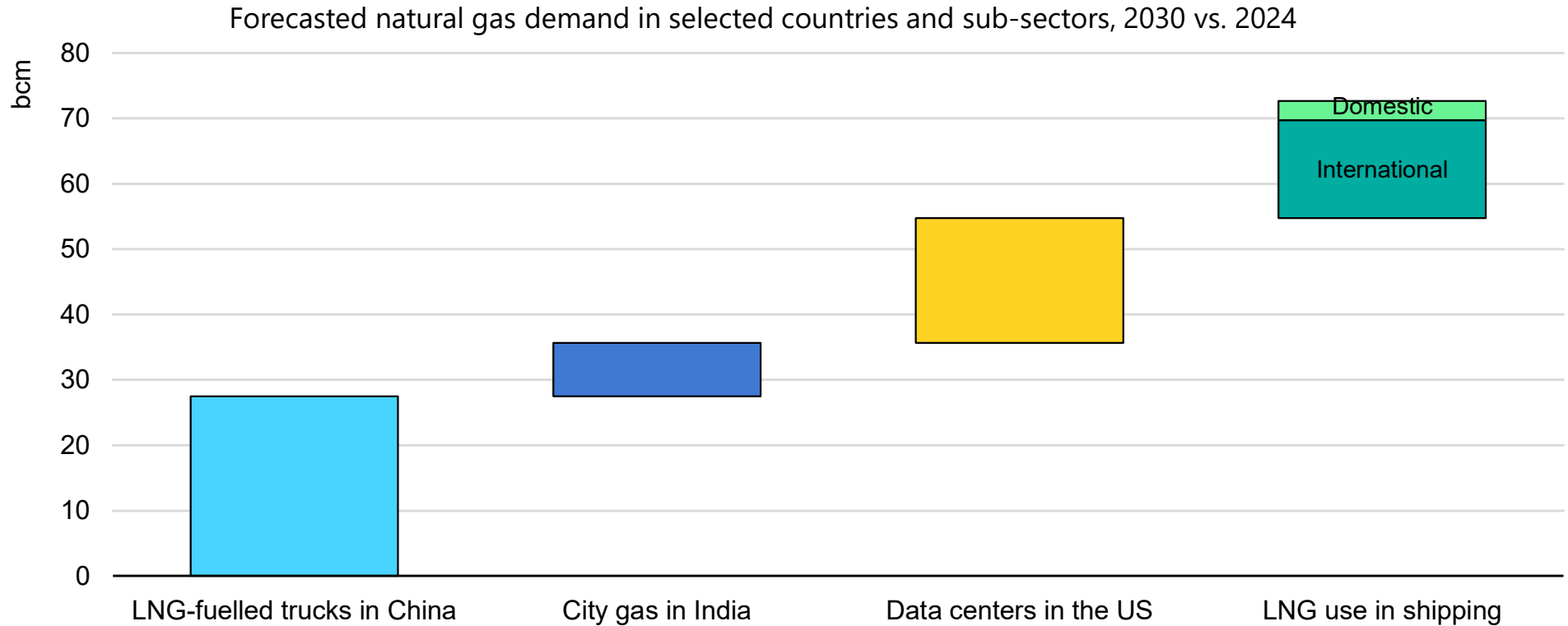
■ Asia Pacific ■ Europe ■ Others



■ Power ■ Industry ■ Energy own use (refining) ■ Transport

Asia alone accounts for 80% of the additional price-driven demand response. Power and industry together represent more than 80% of the upside in LNG importing countries and regions.

# New frontiers in global demand: Trucks, ships, city gas and data centers

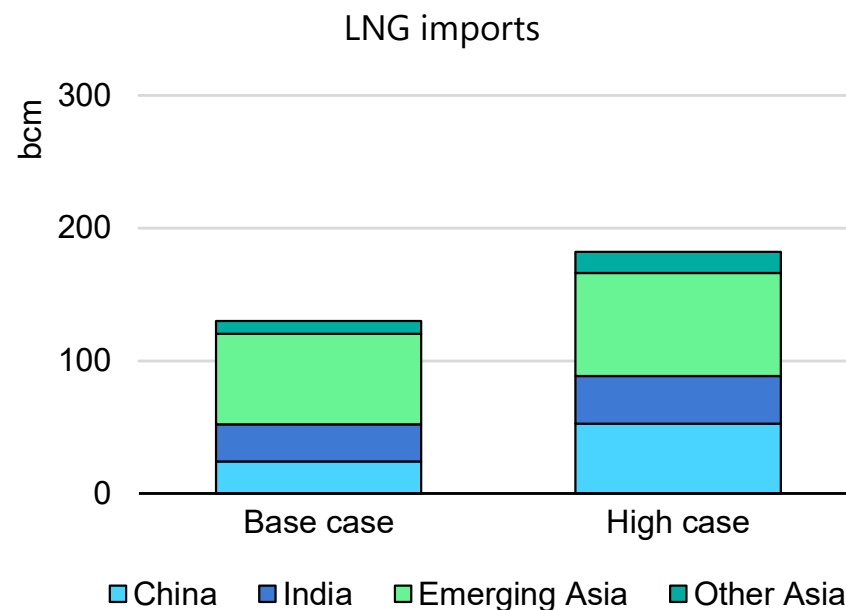
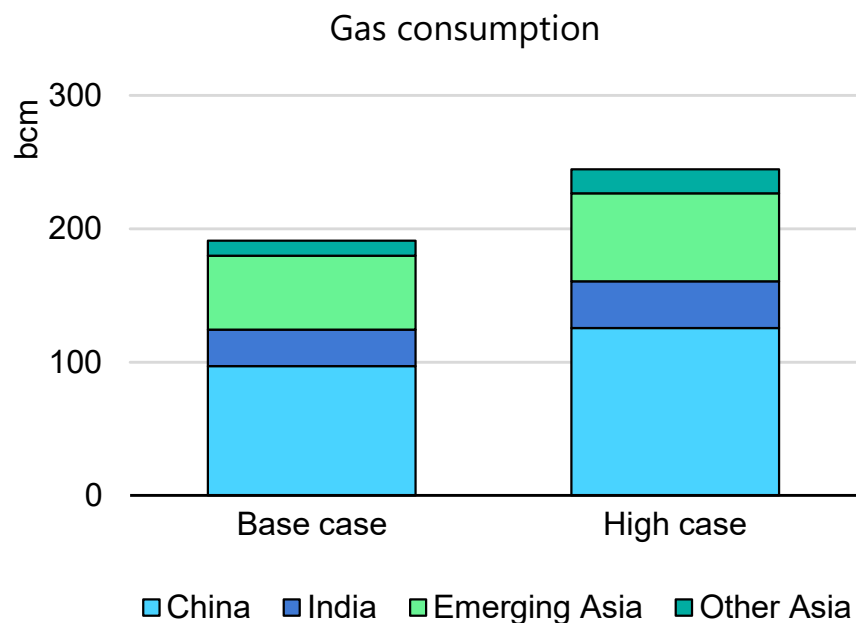


China's LNG-fuelled trucks, India's city gas customers, US data centers, and LNG use in shipping together can add more than 70 bcm/yr of gas demand by 2030.

# Focus on Asia

# Asian gas and LNG growth is led by China, India and Emerging Asia

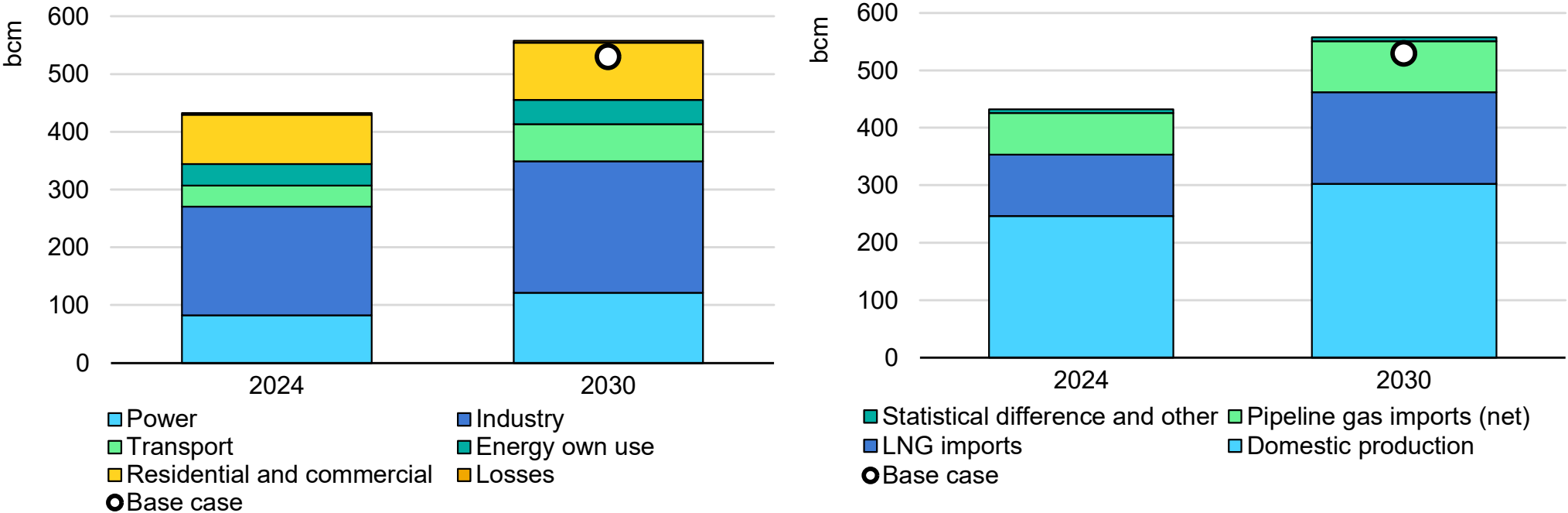
Forecasted natural gas demand growth in Asia by case, 2030 vs. 2024



Asia returns as the dominant driver of global demand, with gas use rising by 20–25% by 2030. China, India and Emerging Asia account for most of this growth, while the rest of the region sees more modest gains.

# China's gas demand could grow by close to 30% by 2030

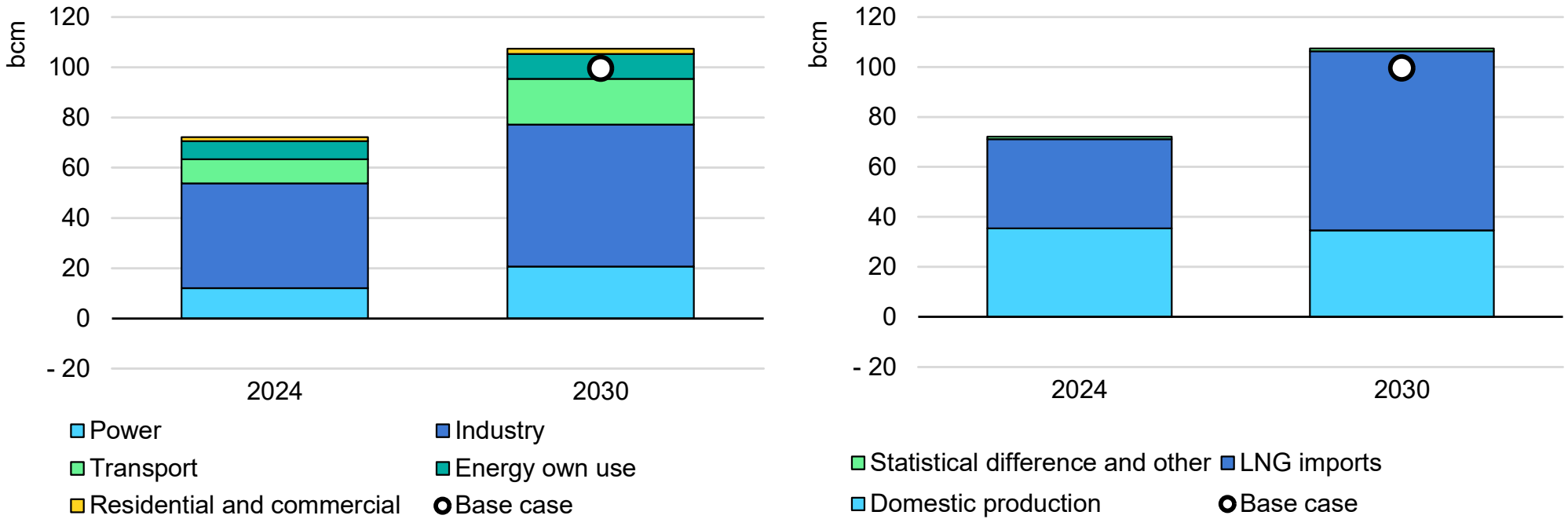
Natural gas demand and supply in China, 2024-2030



Industry, power and transport could boost China's annual demand by up to 125 bcm by 2030, driven in roughly equal parts by domestic production and LNG imports.

# India's gas demand is expected to shift to a higher gear through 2030

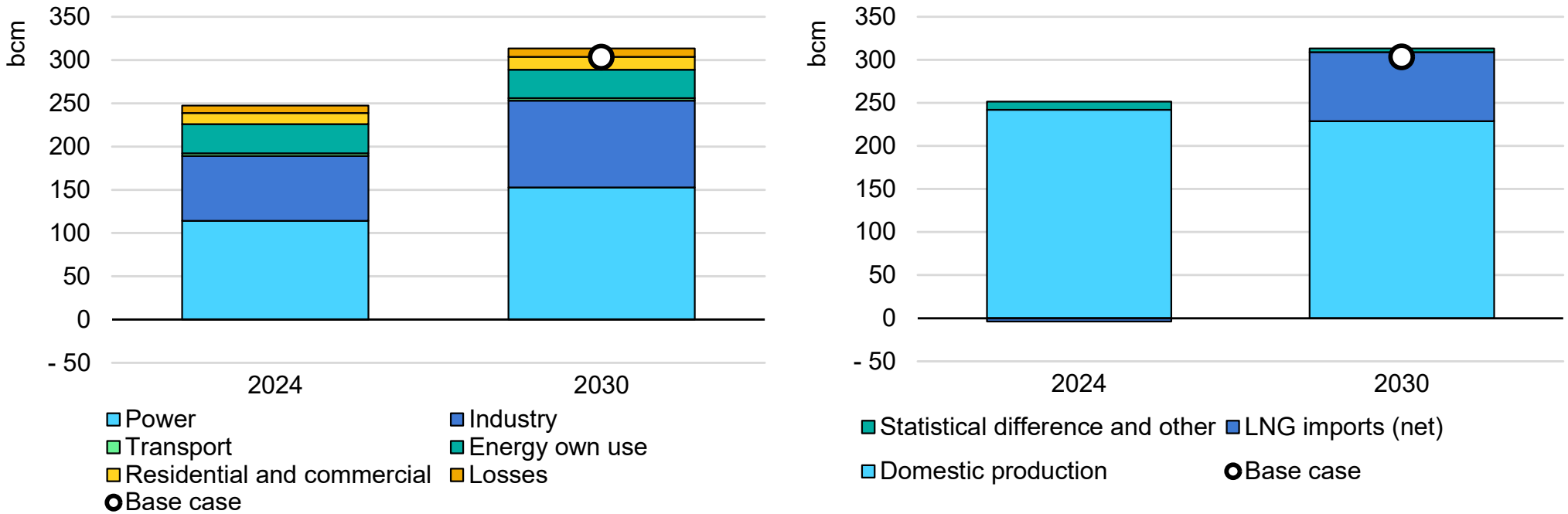
Natural gas demand and supply in India, 2024-2030



India's gas demand could increase by 50% by 2030, led by industry and fueled by LNG imports, even as domestic production goes into decline.

# Emerging Asia can once again be a key driver of global LNG demand

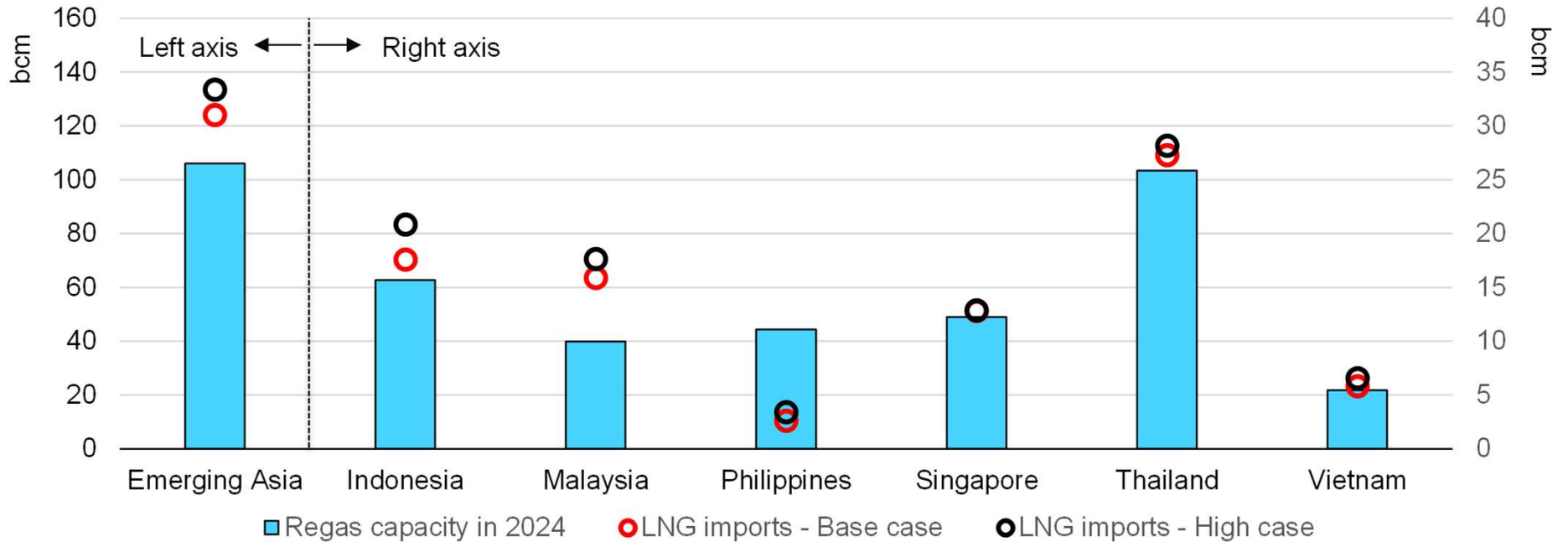
Natural gas demand and supply in Emerging Asia, 2024-2030



Emerging Asia is the third pillar of growing gas use in Asia, with strong economic growth, rising energy demand, declining domestic production and lower LNG prices boosting LNG imports.

# LNG infrastructure could be a significant bottleneck for Emerging Asia

Current import capacity and forecasted LNG imports in Emerging Asia and selected ASEAN economies, 2030



Emerging Asia currently has only around 75% of the LNG regasification capacity needed in the high case, highlighting the need for new terminals and infrastructure to unlock price-sensitive demand.

# CCUS applications along LNG value chains

# Reducing LNG Supply Chain Emissions: Where CCUS Fits



## Supply Chain Emissions

### Largest share in Upstream

- CO<sub>2</sub> removed from raw gas
- Methane leakage
- Flaring

### Emissions linked to liquefaction

- Fuel gas for compressors
- Indirect power generation emissions

## Where CCUS Adds Value

### Upstream (feedgas CO<sub>2</sub>)

- One of the few scalable, low-cost abatement options (20-50 USD/t)
- Proven pathway: reinject separated CO<sub>2</sub> instead of venting

### Liquefaction (combustion CO<sub>2</sub>)

- Enables deeper cuts, but higher costs
- Best when combined with electrification + efficiency

## Proven Examples

- **Snøhvit (NO)**: CO<sub>2</sub> reinjection and storage since 2007
- **Gorgon (AU)**: 11 Mt stored into a saline aquifer
- **Qatar Ras Laffan**: 2.1 Mtpa; foundation of a CO<sub>2</sub> storage hub
- **Tangguh Ubadari (ID)**: 15 Mt planned: combined CCUS/EGR



## Emerging Pathways to Cut Liquefaction Emissions

**Now:** Electrification (low-carbon power): LNG Canada (hydropower), Freeport LNG (grid power), QatarLNG (renewable power)

**Future:** Direct CCUS at liquefaction: Venture Global (plan to integrate CCUS); Equinor (exploring link to Northern Lights)



## Strategic Benefits for LNG Producers

**Market differentiation:** Carbon intensity beginning to influence contracting (EU/JP/KR)

**License to operate:** Supports corporate and national climate commitments

**Technology and infrastructure synergies:** CCUS hubs (Ras Laffan, US Gulf Coast, Northern Lights), third-party storage



## Cost & Policy Signals

**US and Europe:** Relatively mature regulatory frameworks, focus on viability gap funding

**APAC:** Nascent regulatory regime (esp. transboundary storage), challenge for commercial structuring and financing

**Wide ranging costs:** Feedgas (20-50\$/t), post-combustion (\$110-140/t), transport & storage (up to \$150/t) vs. EU ETS of \$60-80/t



## Outlook

CCUS likely to become a core feature of new LNG supply

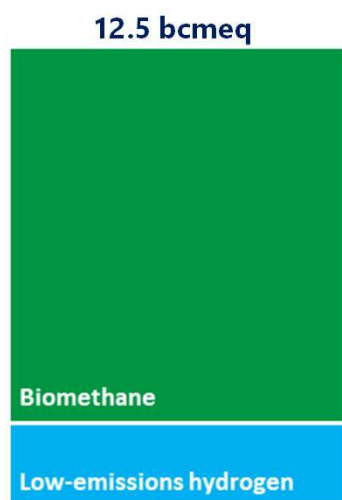
Important for securing long-term market access and financing

Works best in combination with methane abatement, flaring reduction and electrification

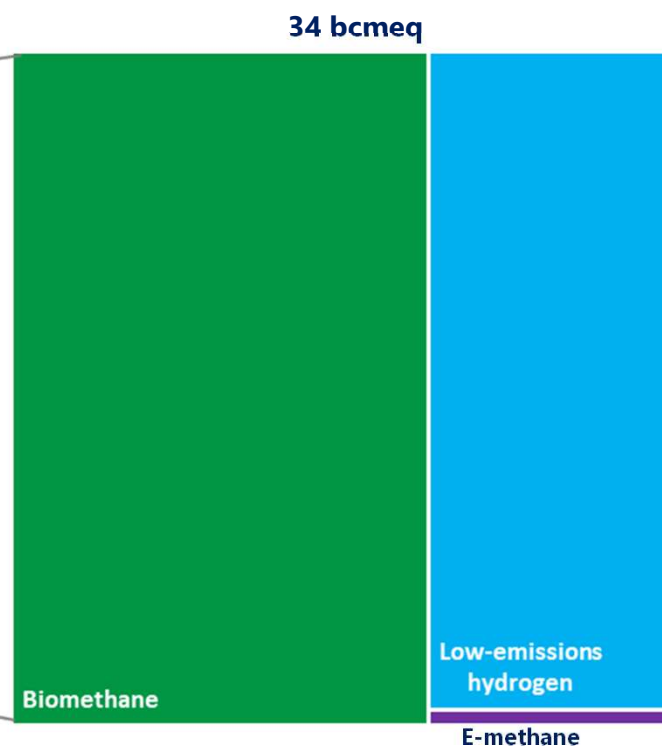
# Low-emissions gases

# Low-emissions gases are set for a rapid expansion

Estimated supply of low-emissions gases by type in 2024



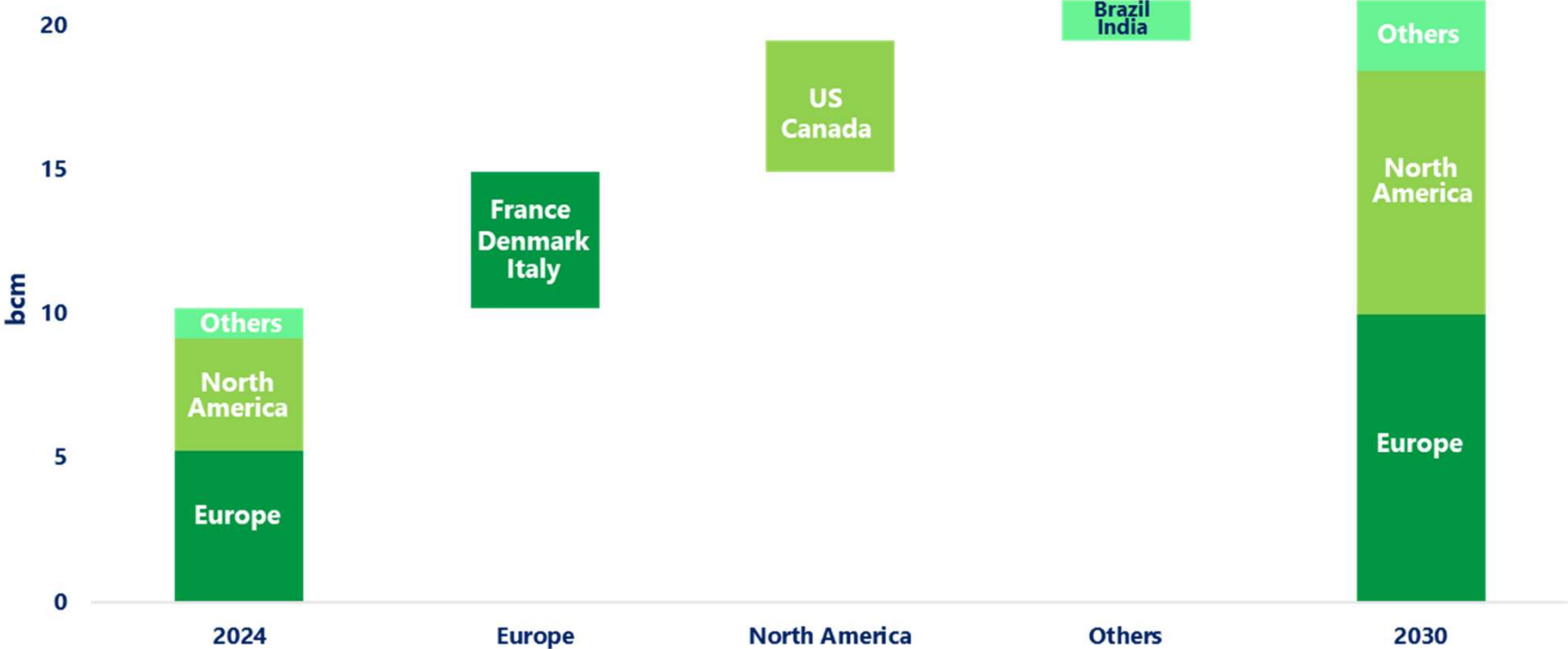
Forecast supply of low-emissions gases by type in 2030



The supply of low-emissions gases is expected to increase by two-and-half times by 2030, driven by biomethane and hydrogen. Despite this, they would for less than 1% of global gaseous fuels by 2030.

# Biomethane production is expected to more than double by 2030

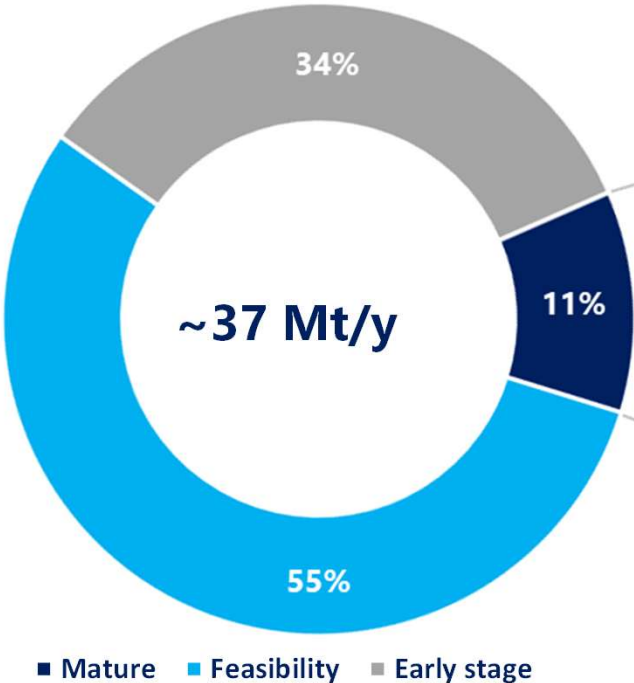
Biomethane production by region, 2024 – 2030



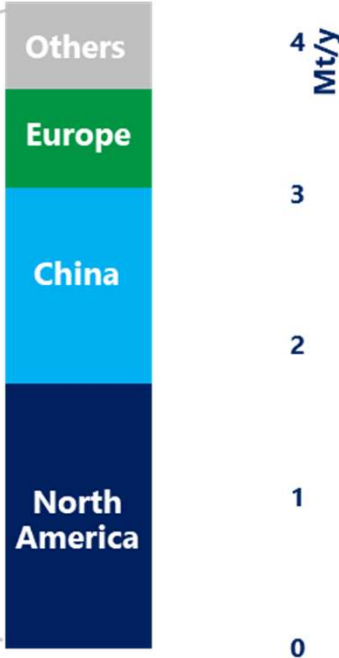
Biomethane production is projected to more than double between 2024 and 2030, primarily supported by projects undertaken in Brazil, Europe, India and North America.

# Low-emissions hydrogen is expected to increase by fivefold by 2030

Potential low-emissions hydrogen production by current project status, 2030

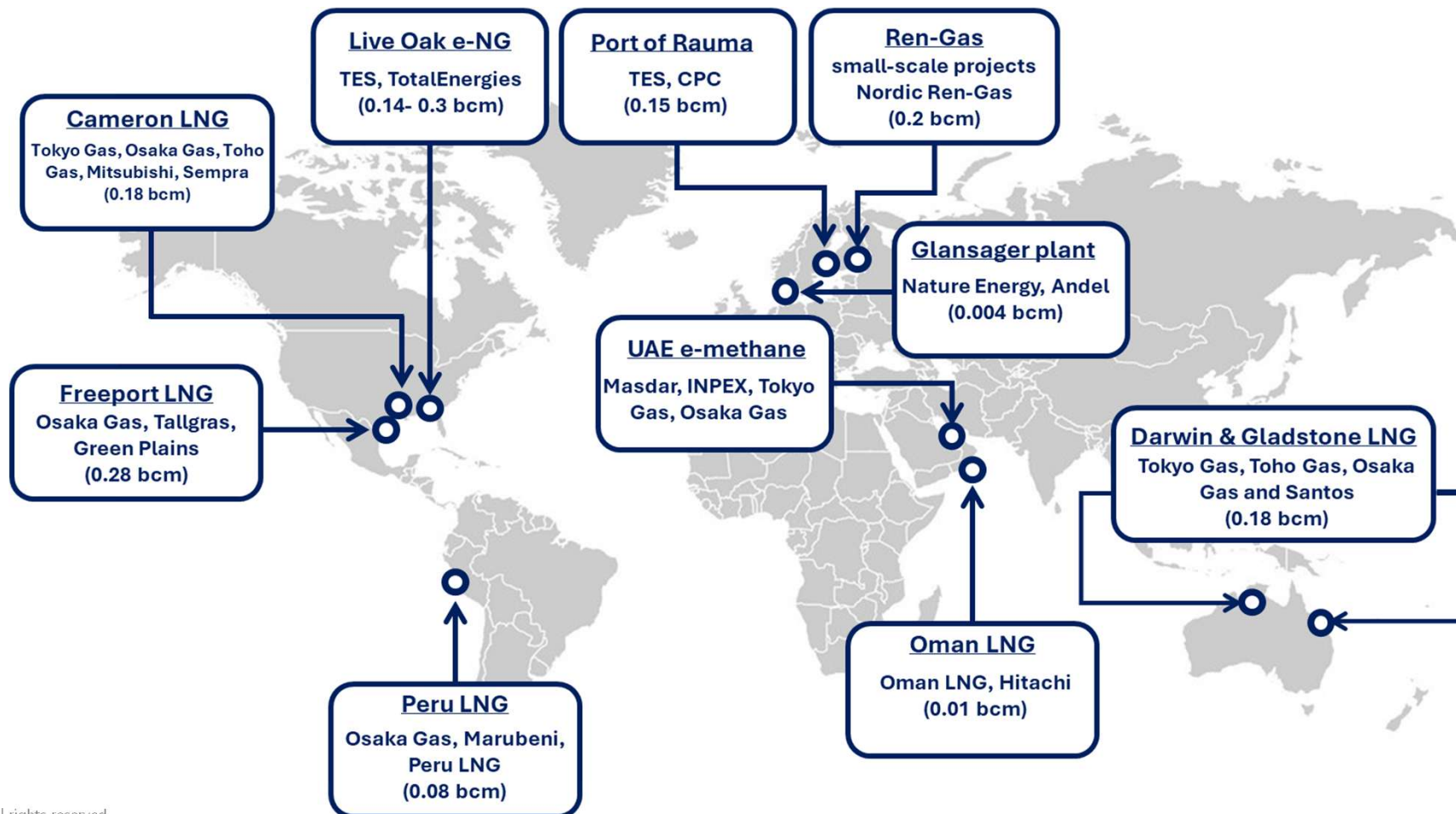


Expected low-emissions hydrogen production by region and market, 2030



Just over 10% of low-emissions hydrogen projects are in mature phase of development. North America, China and Europe are set to account for 85% of low-emissions hydrogen supply by 2030.

# International partnerships drive e-methane projects



## Key takeaways

- **Natural gas markets remained tight** in H1 2025 as higher LNG supply was partially offset by lower piped gas deliveries and higher storage injections. Markets **started to gradually ease** in Q3 2025.
- **Global LNG capacity is set to expand by 300 bcm/y by 2030** –primarily driven by the United States and Qatar. This strong growth is set to **ease market fundamentals** and **enhance energy security**.
- **Global gas demand could increase by around 10%** under the high case trajectory –with lower prices fostering additional demand growth. **Asia** alone would account for **half of incremental gas demand**.
- **Southeast Asia's** LNG imports are set to expand, driven by growing gas demand and declining domestic production. Addressing **infrastructure constraints** will be crucial to enable higher imports.
- Momentum is building behind **LNG+CCUS-solutions**, recognising their potential to reduce emissions.
- **Low-emissions gases are set for a rapid expansion** over the medium term, with their supply increasing by two-and-half times by 2030, largely driven by biomethane and low-emissions hydrogen.

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