

## SMALL SCALE LNG

Il contesto internazionale e le eccellenze italiane: stato dell'arte e sviluppo  
delle infrastrutture

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**MBS Consulting**

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**BolognaFiere, 9-11 ottobre 2024**

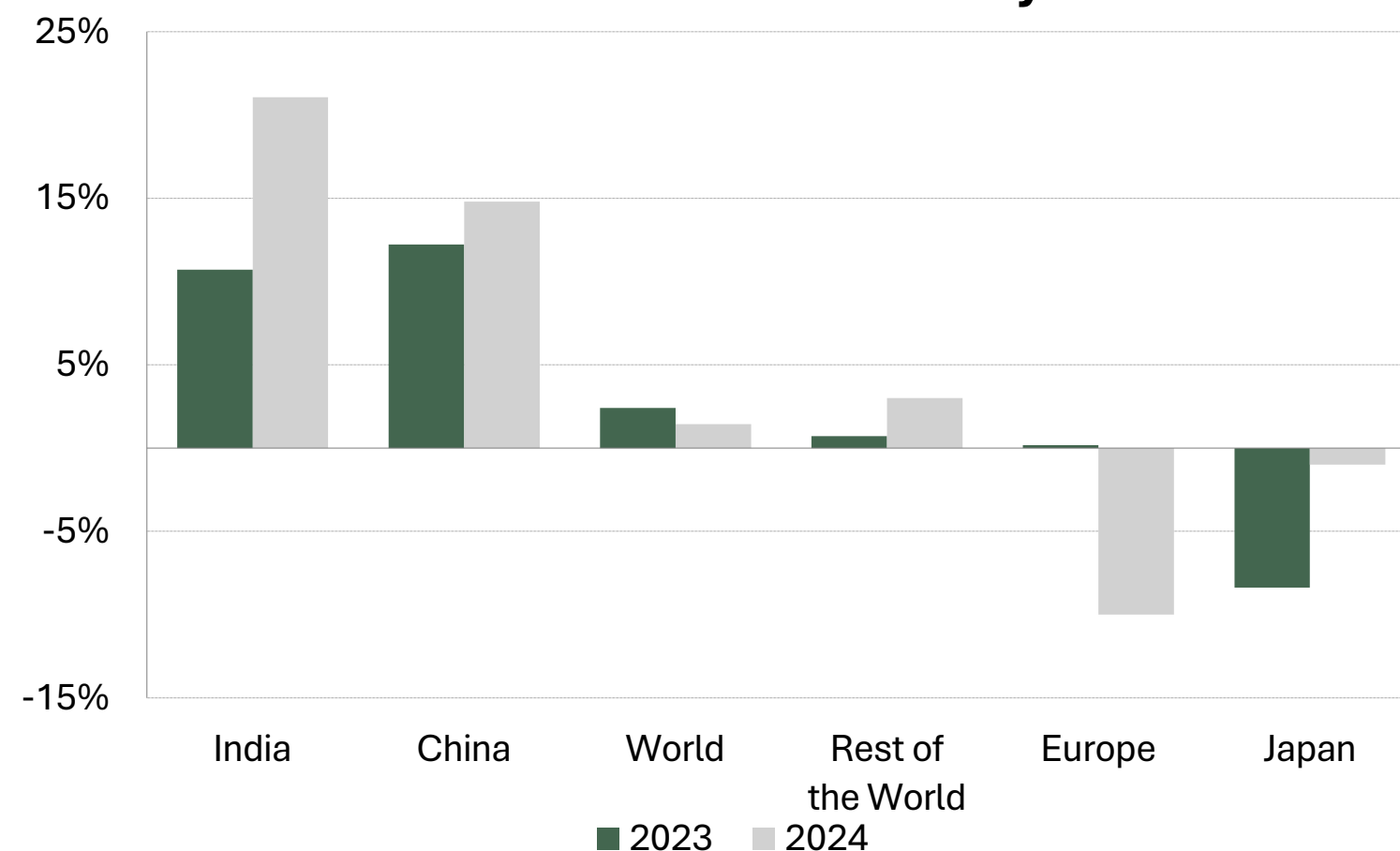
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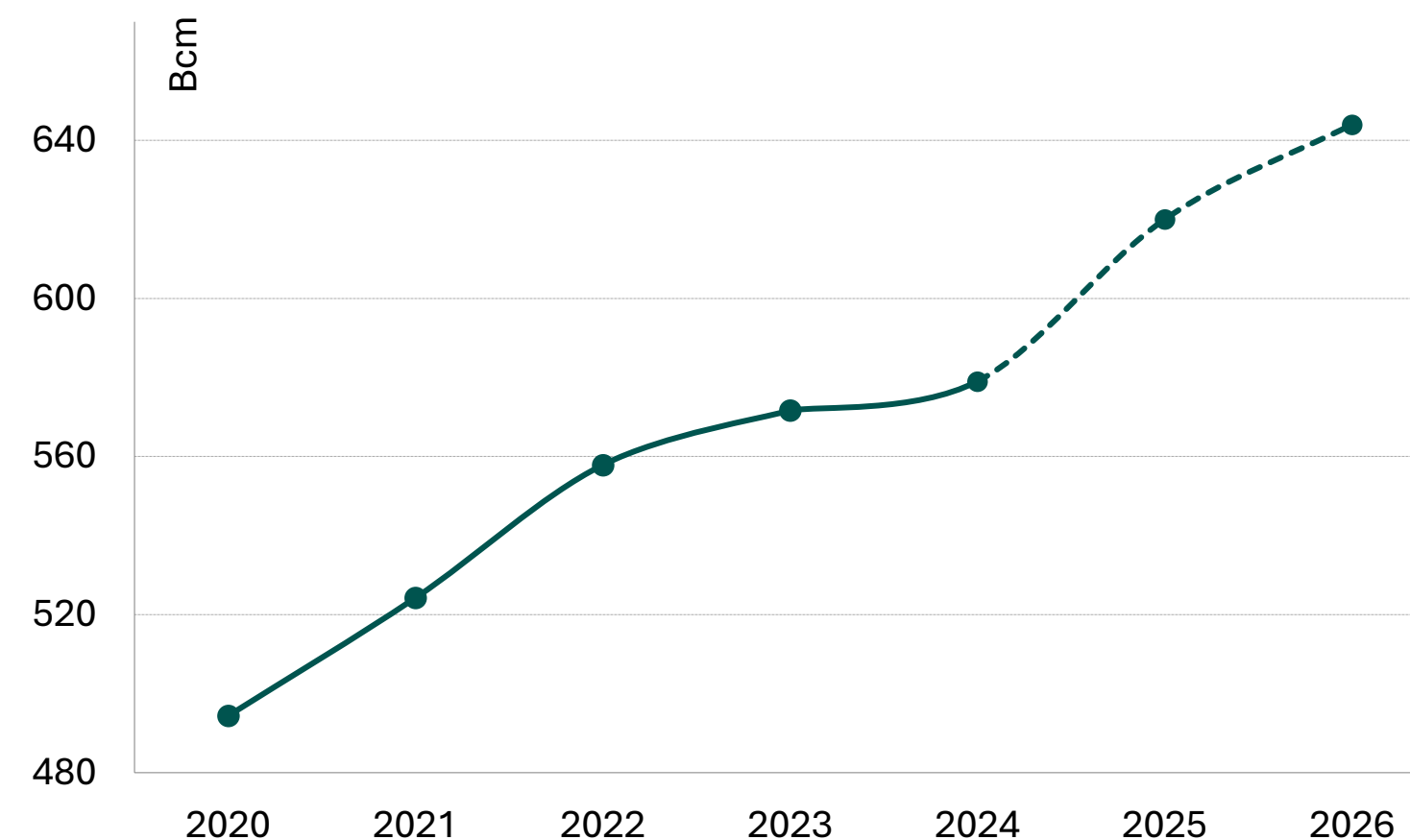
## Asia Drives 2024 Global LNG Demand Growth

- Asia drives 2024 LNG demand trend, with **China** leading the overall growth, compensated by European slow down
- LNG will continue to be needed to sustain power generation and gradually phase out coal: global LNG demand grows to 650 Bcm in 2026, driven by developing Asian markets and the recovery of the Chinese economy.

**LNG Demand Growth Rate by Area**



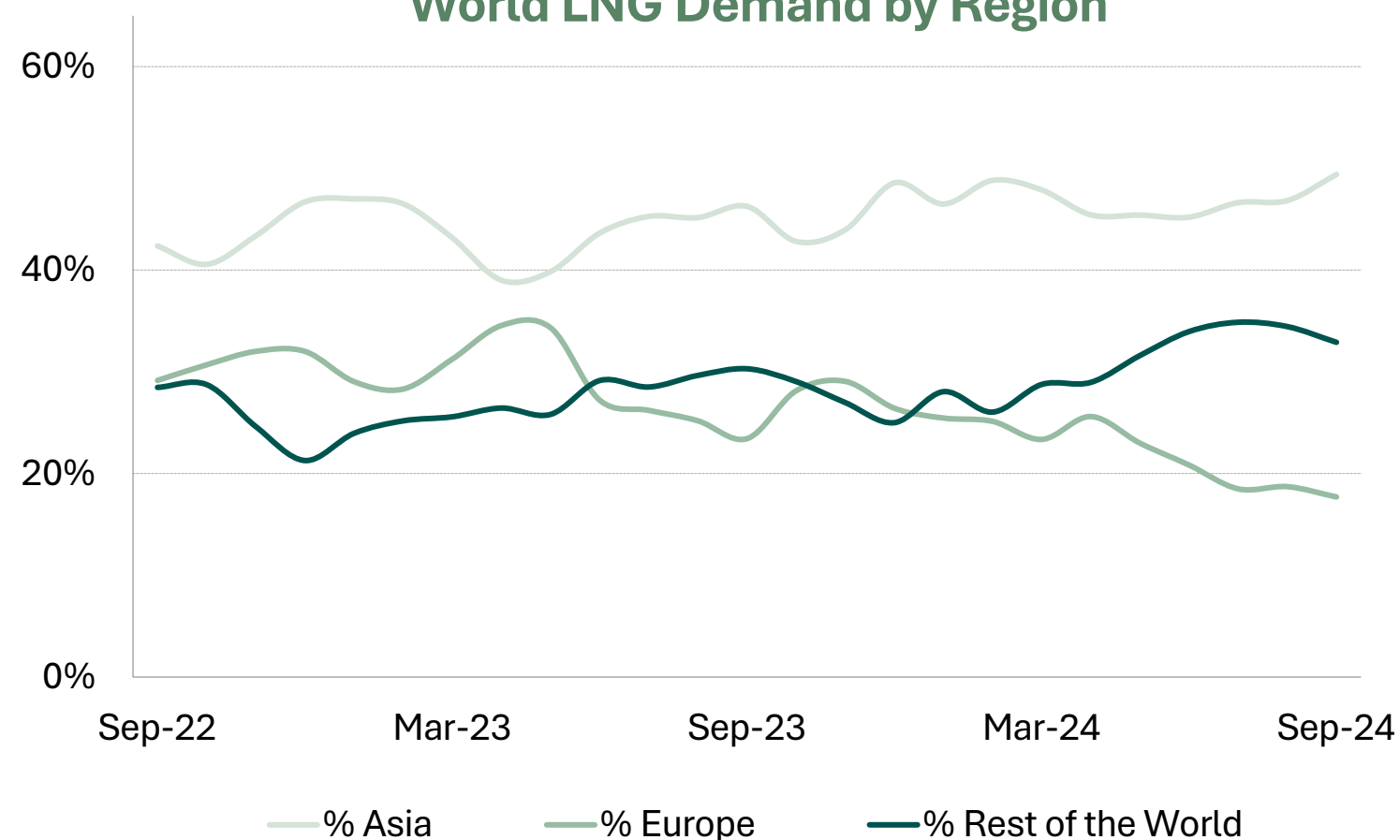
**Global LNG Demand Growth**



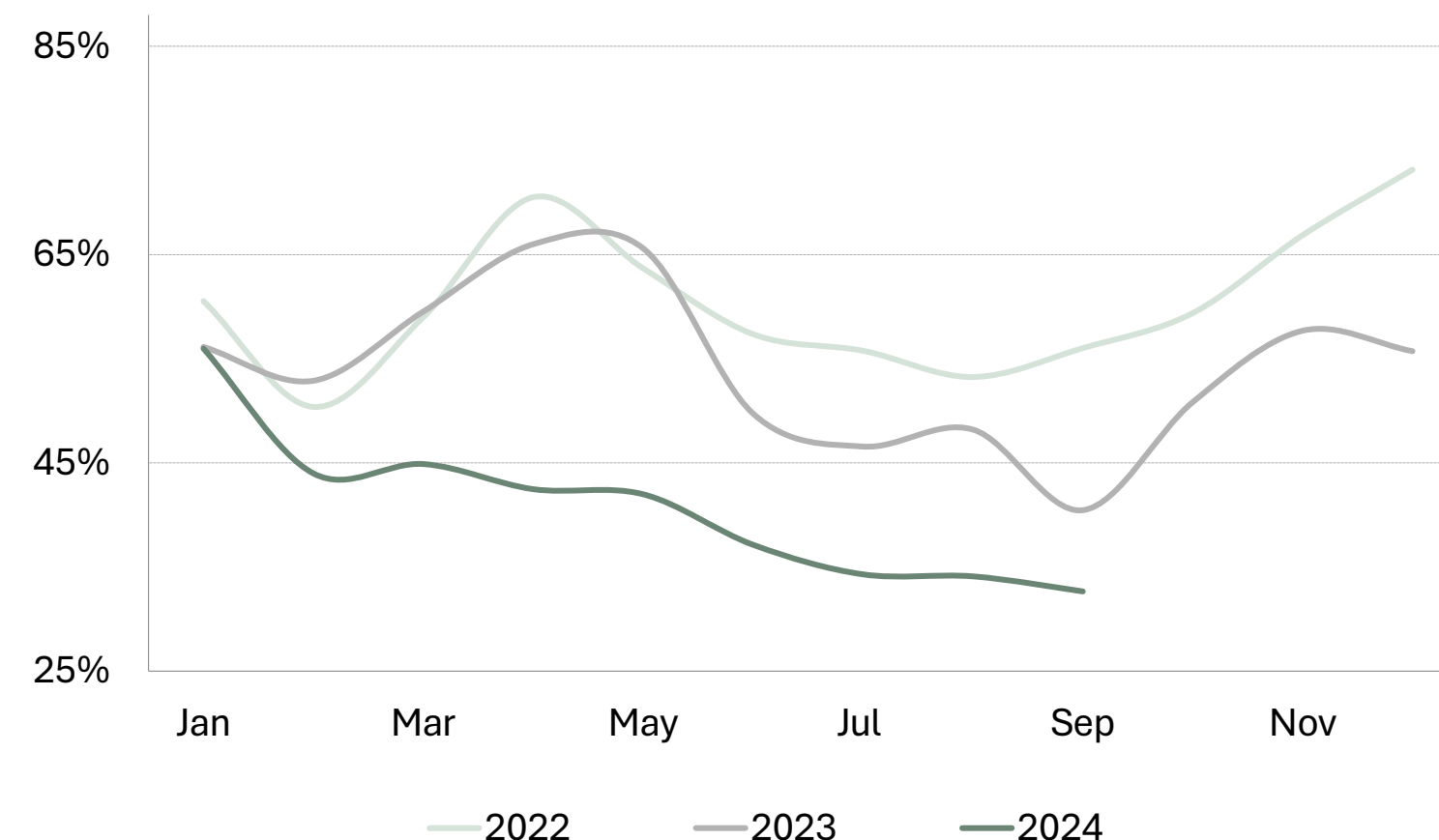
## Low European LNG Demand Keeps Market Balanced

- **LNG demand from Europe remained subdued instead**, with healthy Norwegian supply curbing LNG demand, thereby maintaining equilibrium in the worldwide LNG market

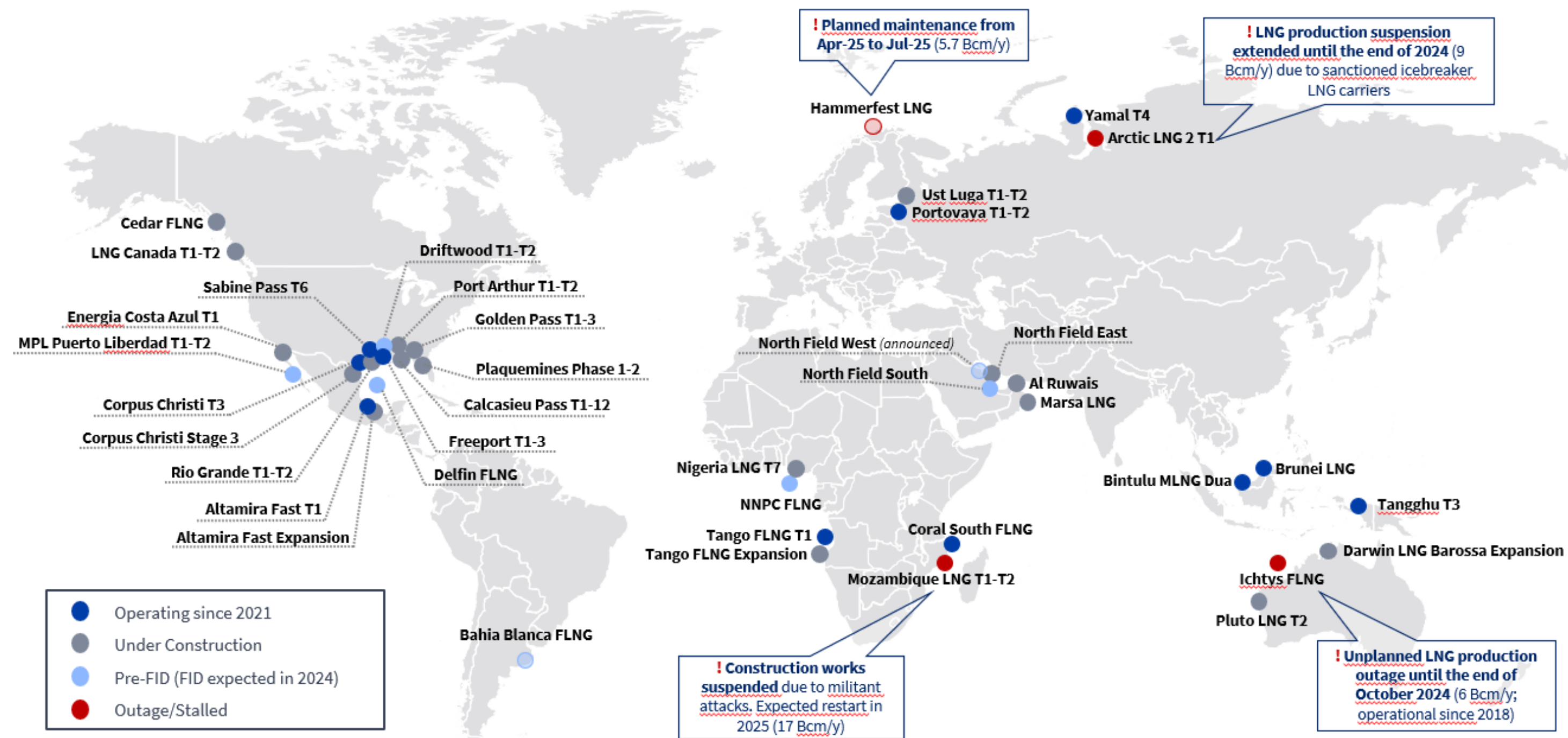
World LNG Demand by Region



EU Regas. Capacity Rate



## Worldwide LNG Liquefaction Projects



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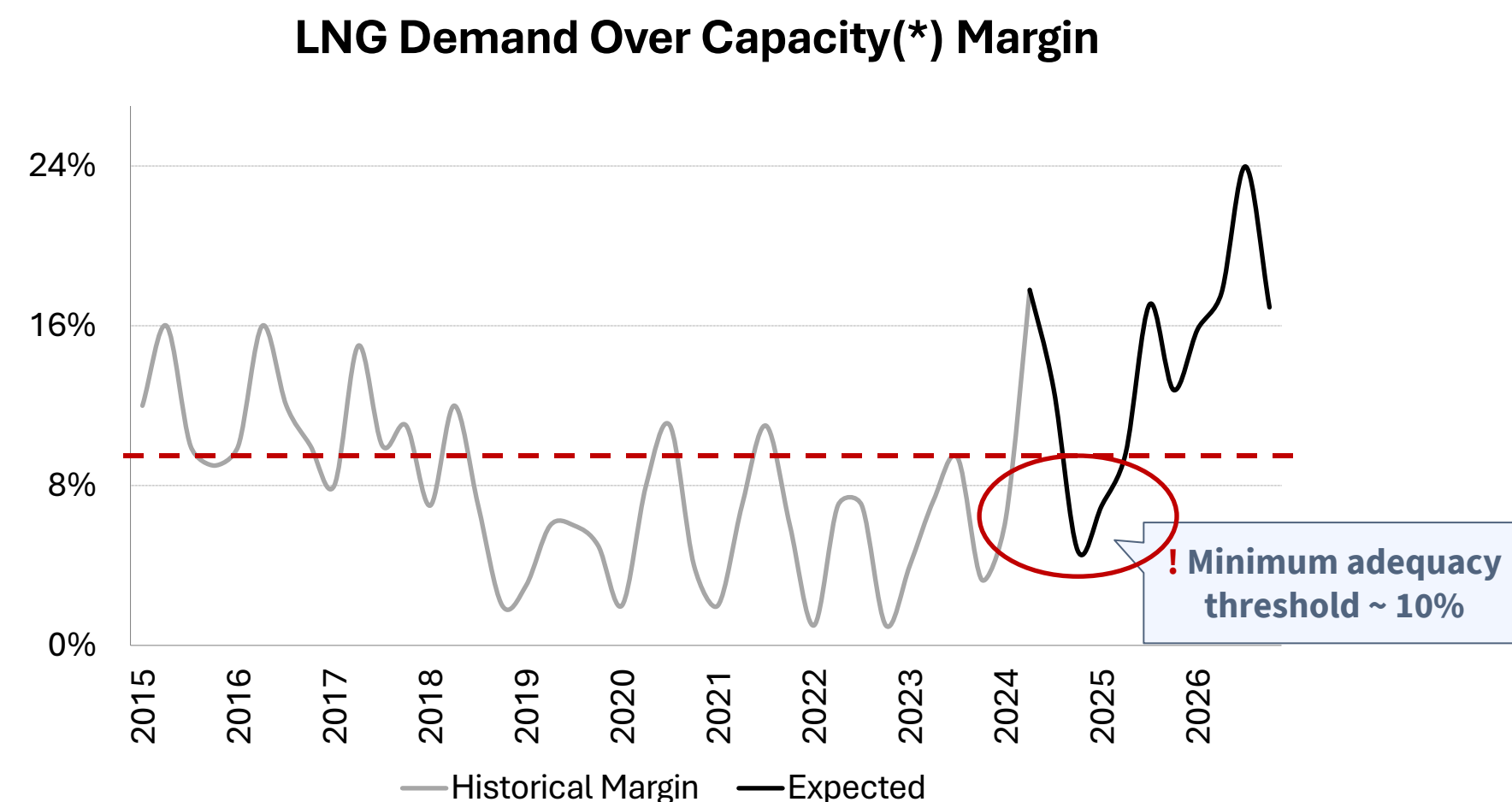
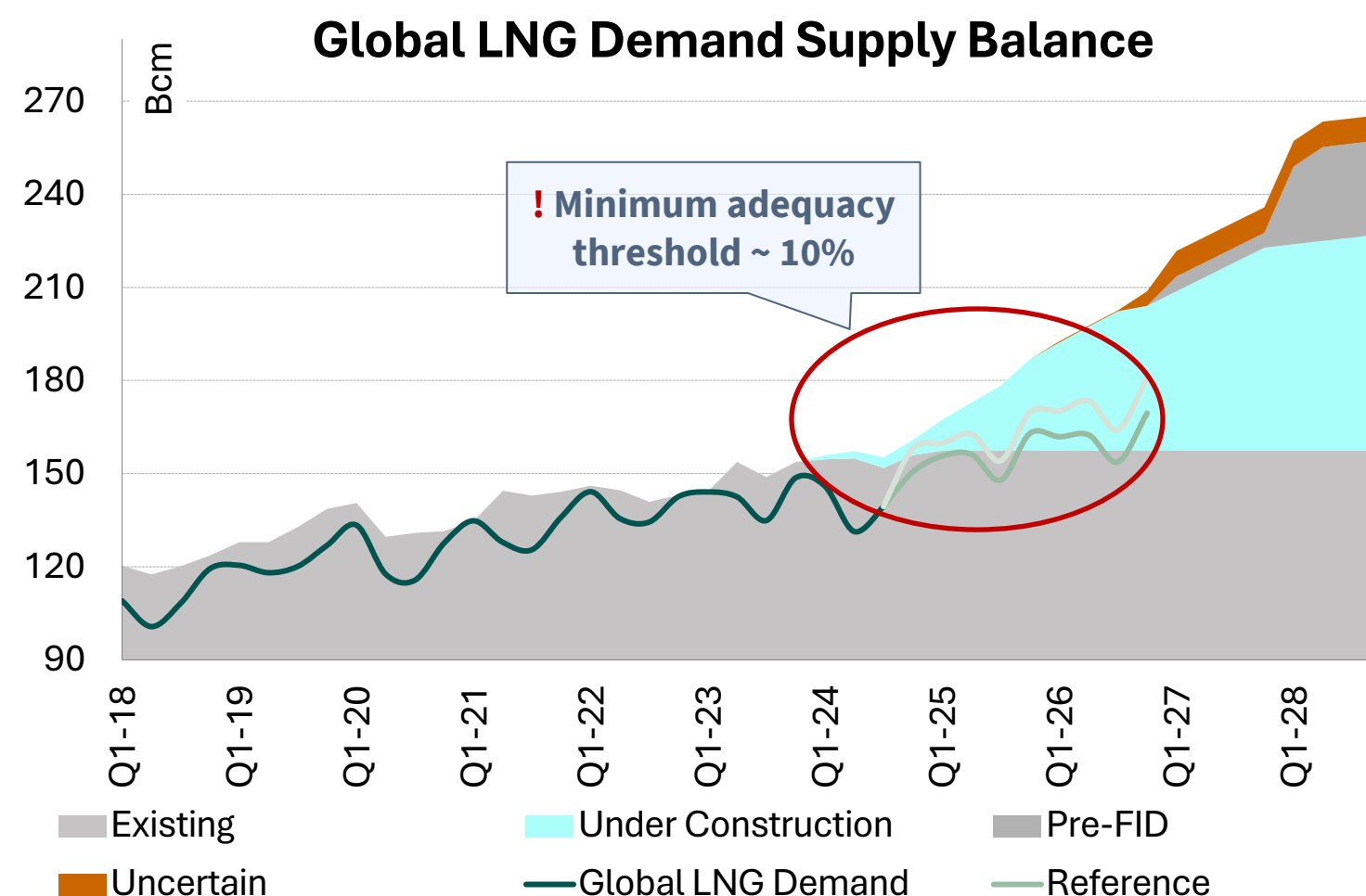
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## Global Demand-Supply Margin Remains at Risk

- Despite limited competition for LNG supplies, the global demand-capacity margin **remains below the 10% threshold** until at least mid-2025.
- **New liquefaction capacity, primarily from the U.S. and Qatar,** is crucial for achieving a structural **stabilization above 15% of the demand-supply margin**



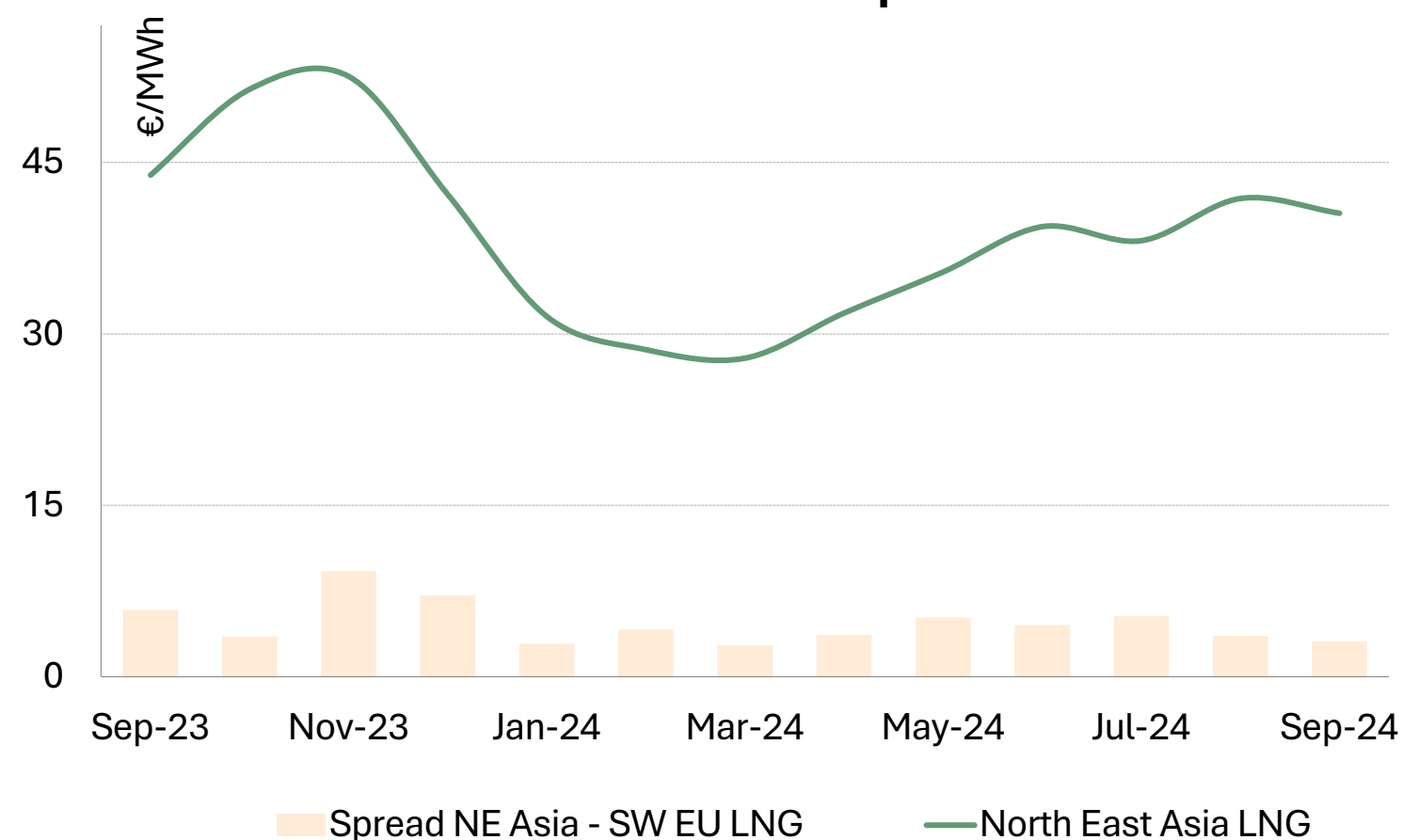
(\*) Existing, Under Construction and Pre-FID capacity.



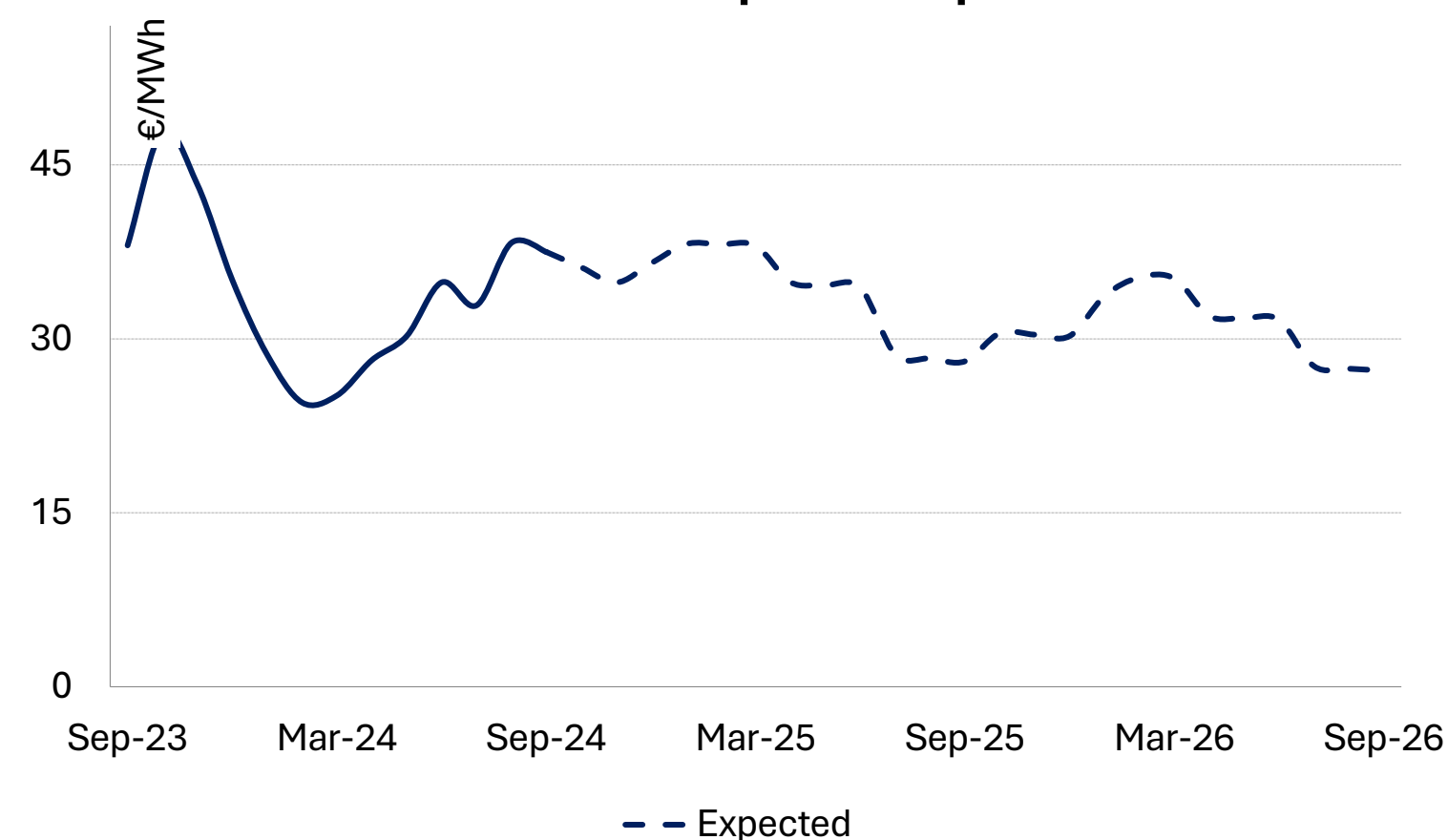
## Demand-Supply Margin Widening Will Normalize Prices by 2026

- Increased geopolitical tensions in Ukraine and the Middle East are keeping spot LNG prices near recent highs, despite limited demand for LNG in Europe.
- The timely completion of new liquefaction capacity remains crucial to ensuring adequate demand coverage and the subsequent normalization of prices.**

North East Asia LNG Spot Price

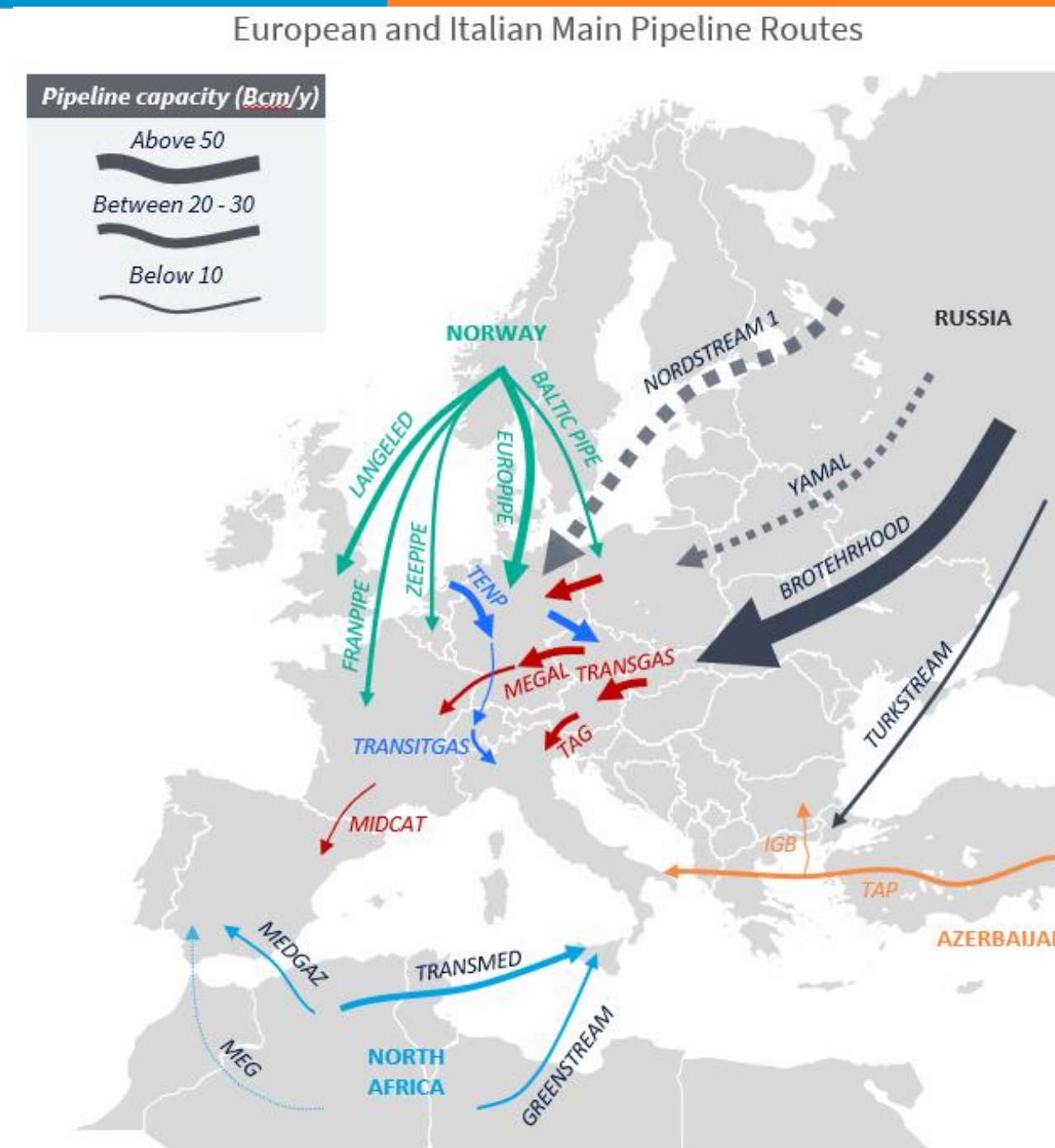


South West Europe LNG Spot Price



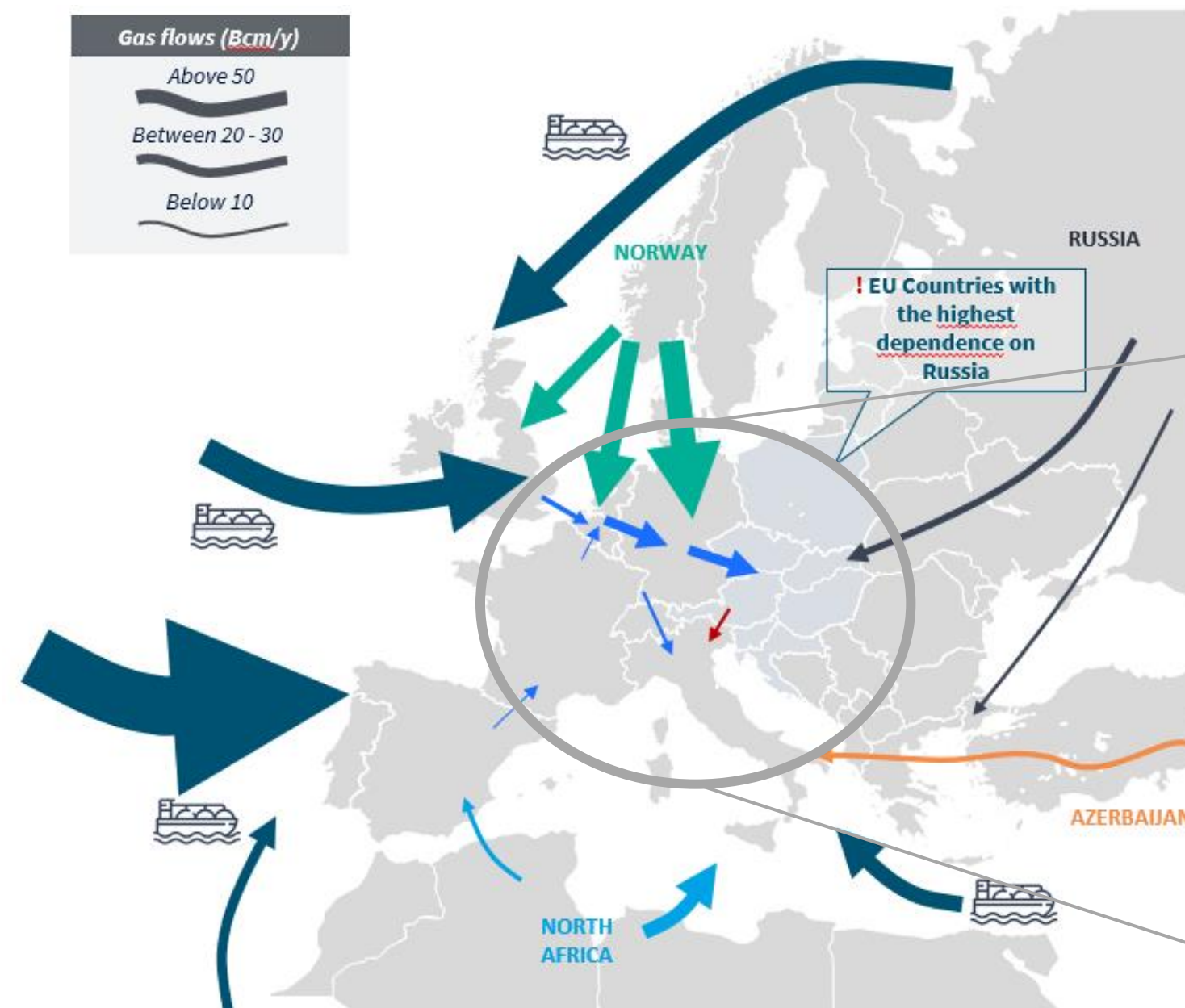
## 2025: A Breakthrough After the Russia-Ukraine Transit Deal Ends

- Historically, flows in Europe followed a **north-east to south-west direction**
- Since mid 2021** and especially after the war outburst between Russia and Ukraine, **flows from Russia sharply declined** (12 Bcm in 2023 and 11 Bcm in the first nine months of 2024, almost 90% lower than the historical 130 Bcm imported every year before the conflict)
- Norway has developed several gas fields** in the North Sea directly connected to some North European countries. In 2022 the pipelines towards Denmark and Poland started working
- Algerian gas flows** reach Spain through the Medgaz pipeline and Italy through the Transmed pipeline crossing Tunisia. The MEG pipeline is closed since Oct-21 instead, due to political tensions between Algeria and Morocco. The Greenstream pipeline conveys natural gas from coastal facilities in **Libya** to Italy
- South-East Europe and the Iberic Peninsula remain relatively isolated from Central Europe, with limited gas transport capacity

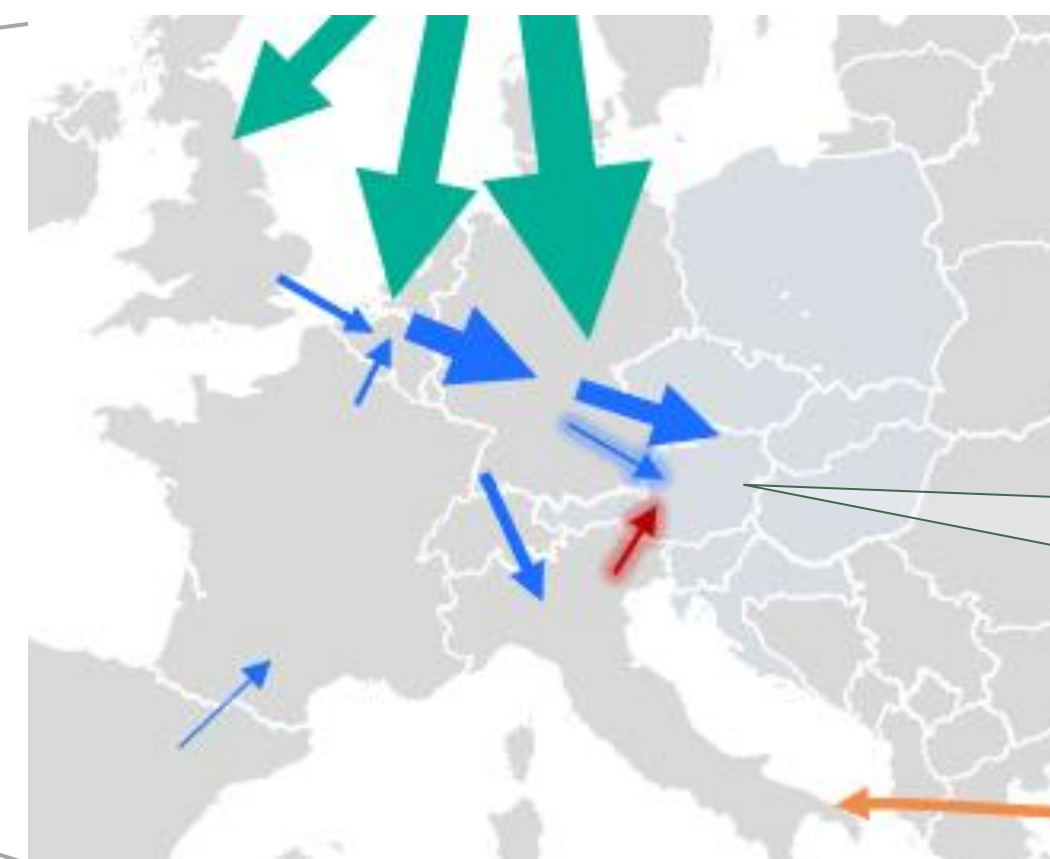


## Italy Could Play a Key Role Supporting Central-East Europe

### Main Gas Flows to Europe - 2024

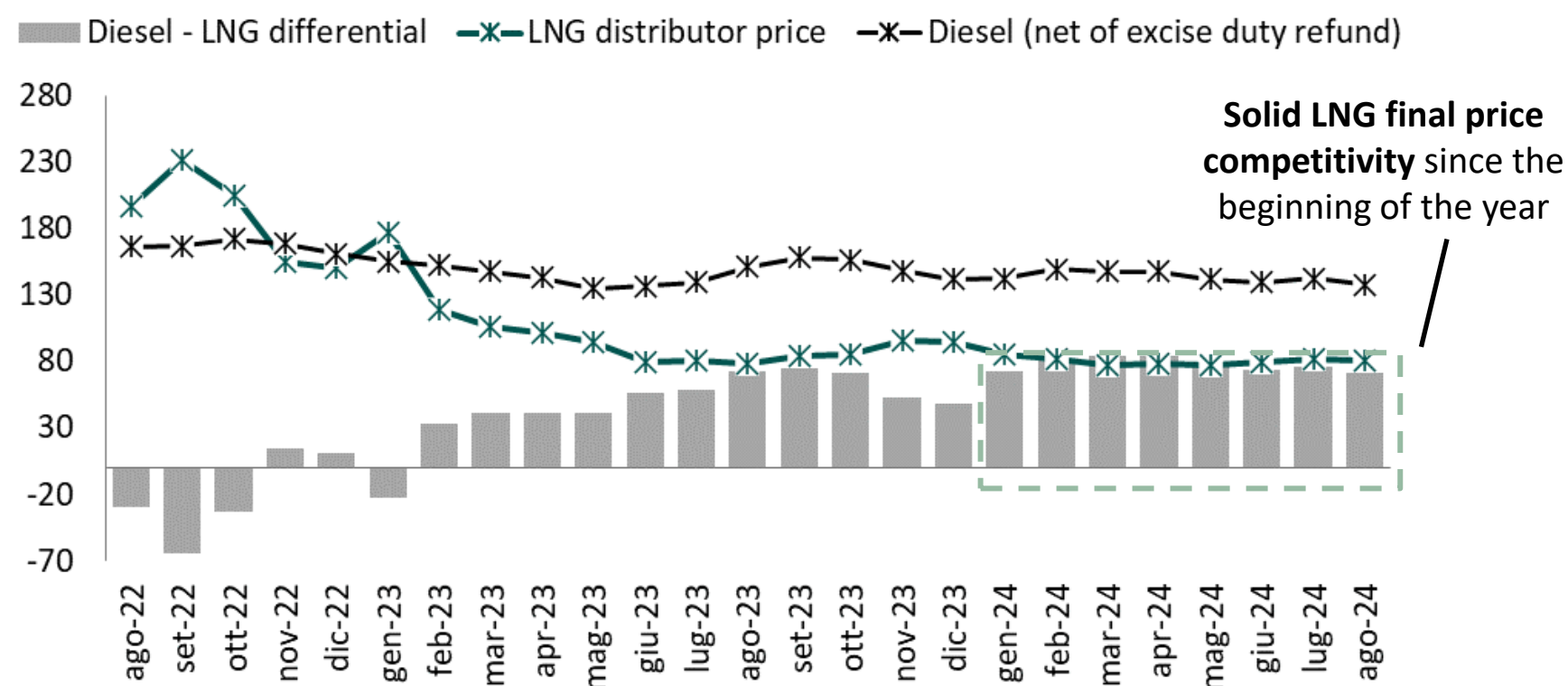


- Following the end of the Russia-Ukraine transit deal by the end of 2024, **gas flows in Europe are expected to reverse, moving from west to east**
- **Germany and Italy** could provide up to almost 10 Bcm of natural gas to Austria if needed, which could be diverted to other eastern European countries



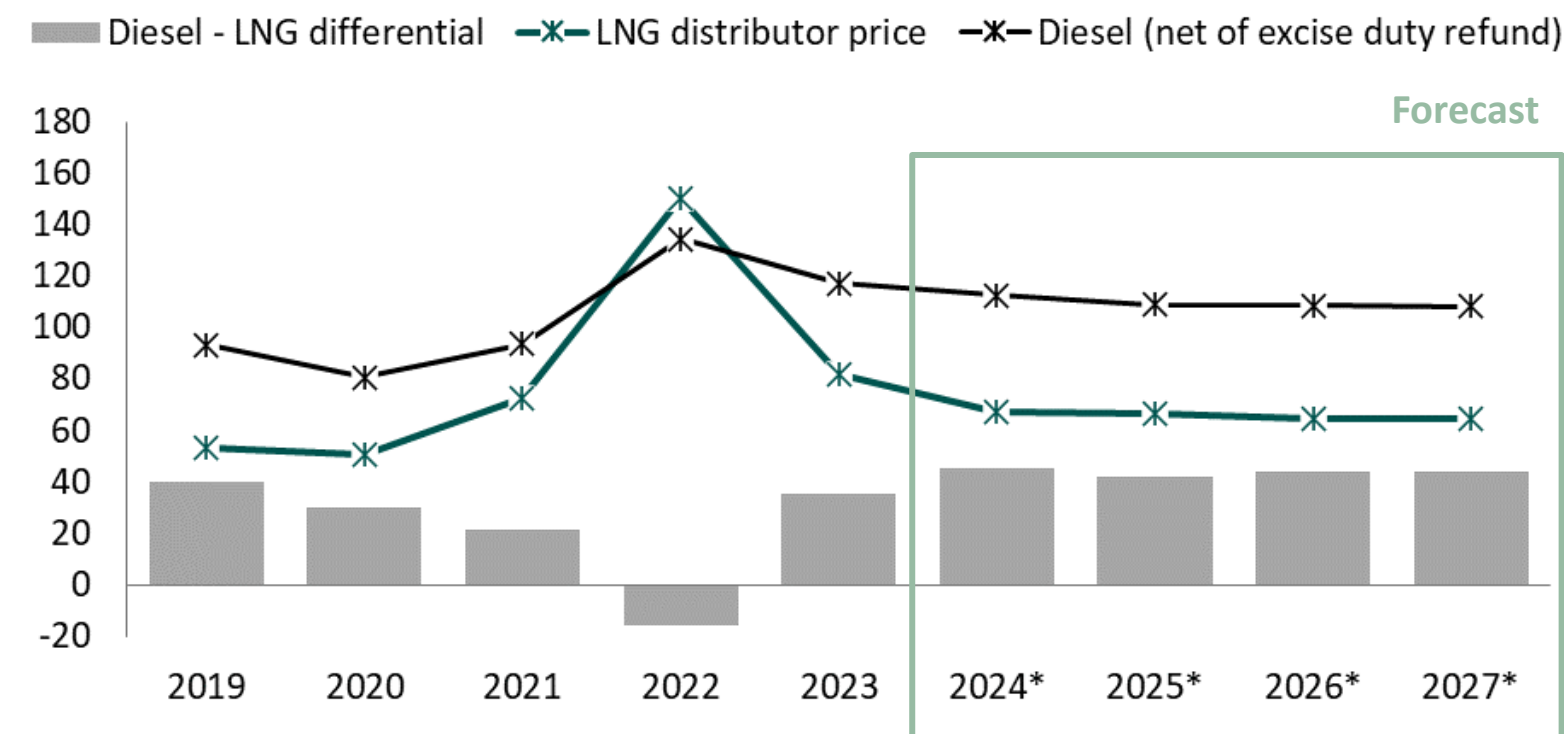


## Monthly diesel-LNG cost differential for road transport companies (€/MWh)



Source: MBS Consulting elaborations

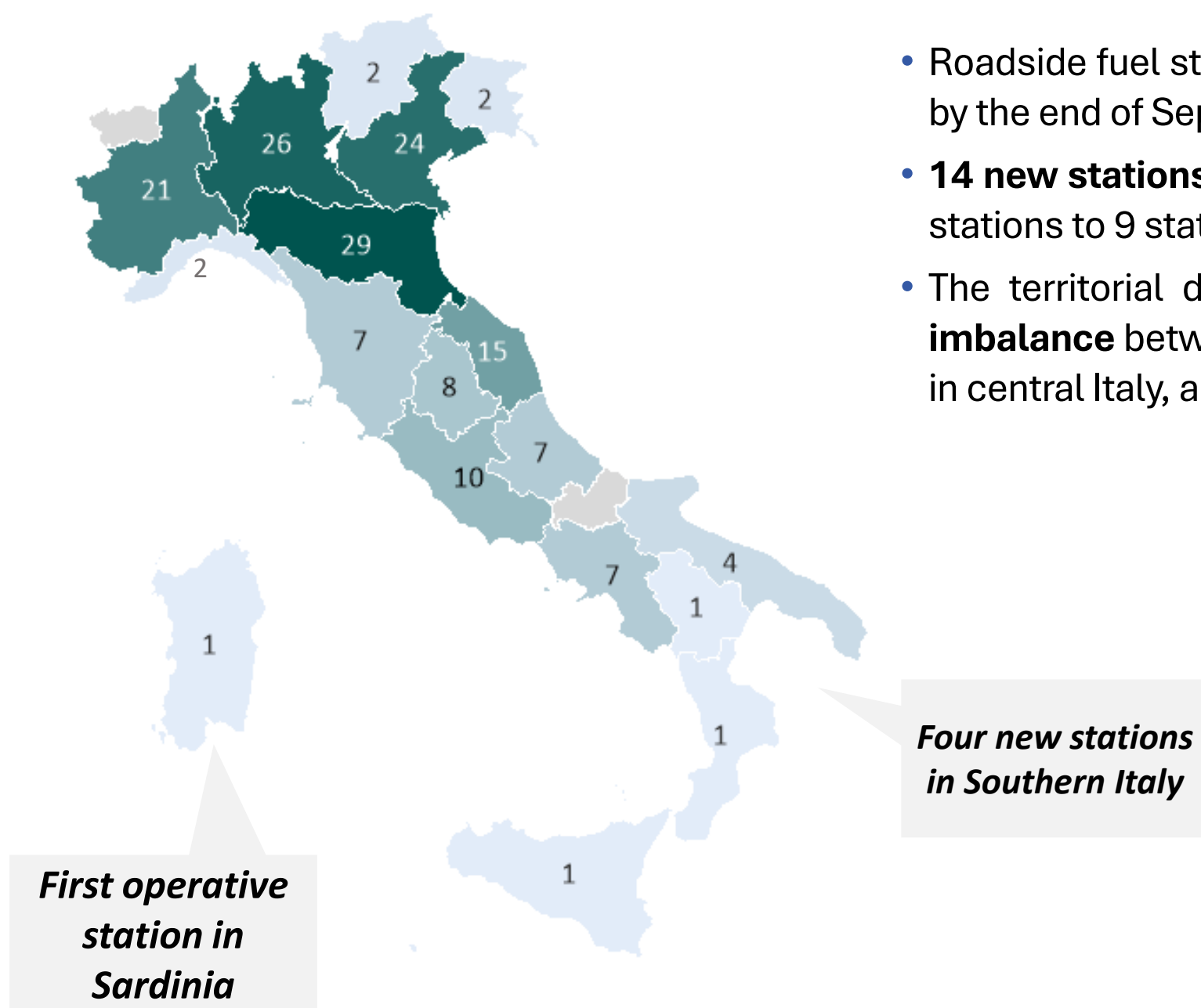
## Historical and Outlook figures (€/MWh)



Source: MBS Consulting elaborations

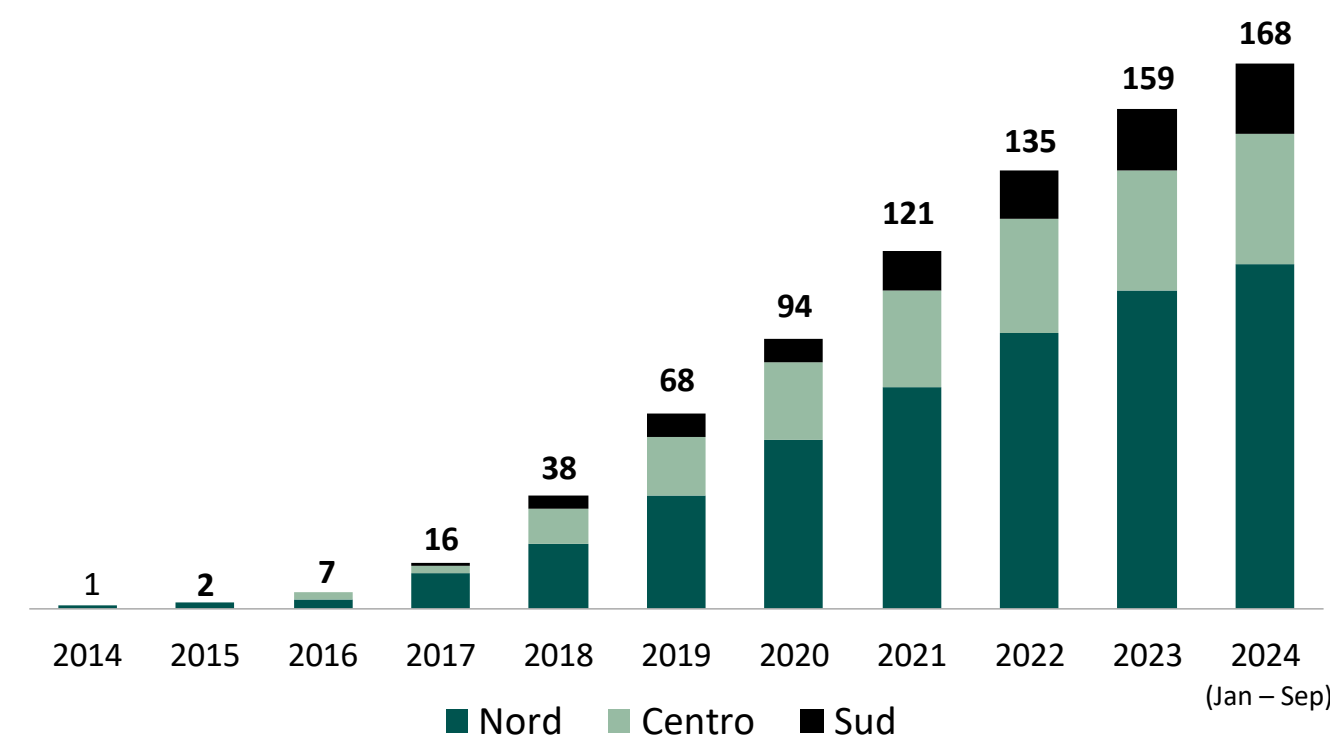
- From January to August 2024, the average **cost of diesel** for road transport companies remained **fairly stable**, registering only a slight average **decrease of -2%** compared to the same period in 2023, while **the cost of LNG** saw a more substantial average **reduction of -23%** compared to the same period in 2023
- The drop in gas prices during the year led to a significantly **positive cost differential between diesel and LNG** in all months since the beginning of 2024, averaging **75 €/MWh**, in line with pre-crisis levels of 2019. According to MBS estimates, the competitiveness of LNG compared to diesel is expected to stabilize at decidedly positive levels in the 2024-2026 period, exceeding pre-crisis levels of 2019

## The Growth of LNG Fuel Stations Has Slowed Down Significantly

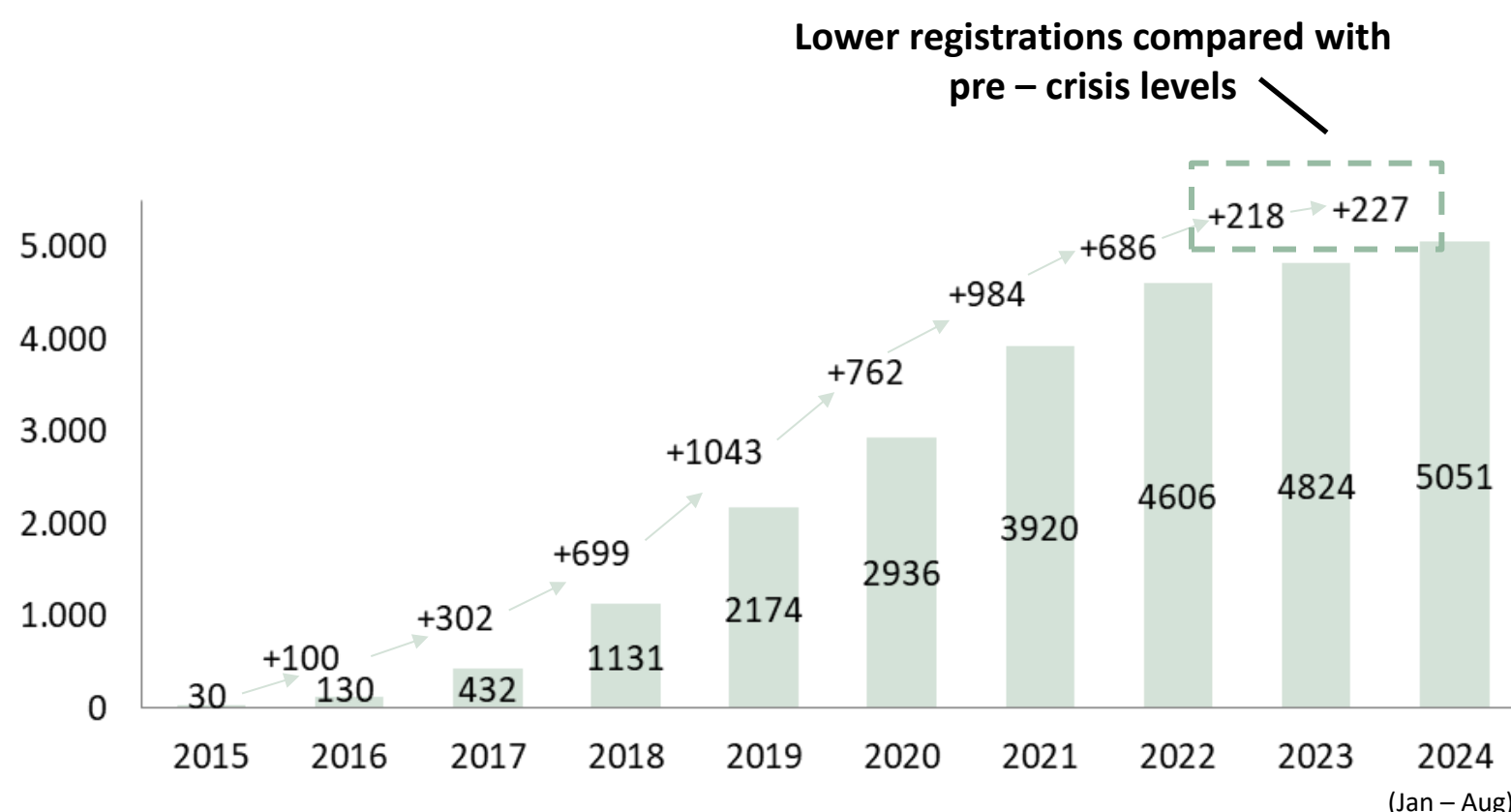


- Roadside fuel stations **continue to grow** but at significant lower pace, with a **total of 168** in operation by the end of September 2024
- **14 new stations** have been added, but the number of **inactive stations** has increased as well, from 5 stations to 9 stations
- The territorial distribution of distributors in the peninsula remains unchanged, with a **persistent imbalance** between the north and the south. **63%** of satellite depots are located in northern Italy, 24% in central Italy, and 13% in southern Italy

**Cumulative growth of LNG distributors in Italy (Number)**



## LNG-powered heavy vehicles in Italy 2015 – August 2024 (Number of vehicles)

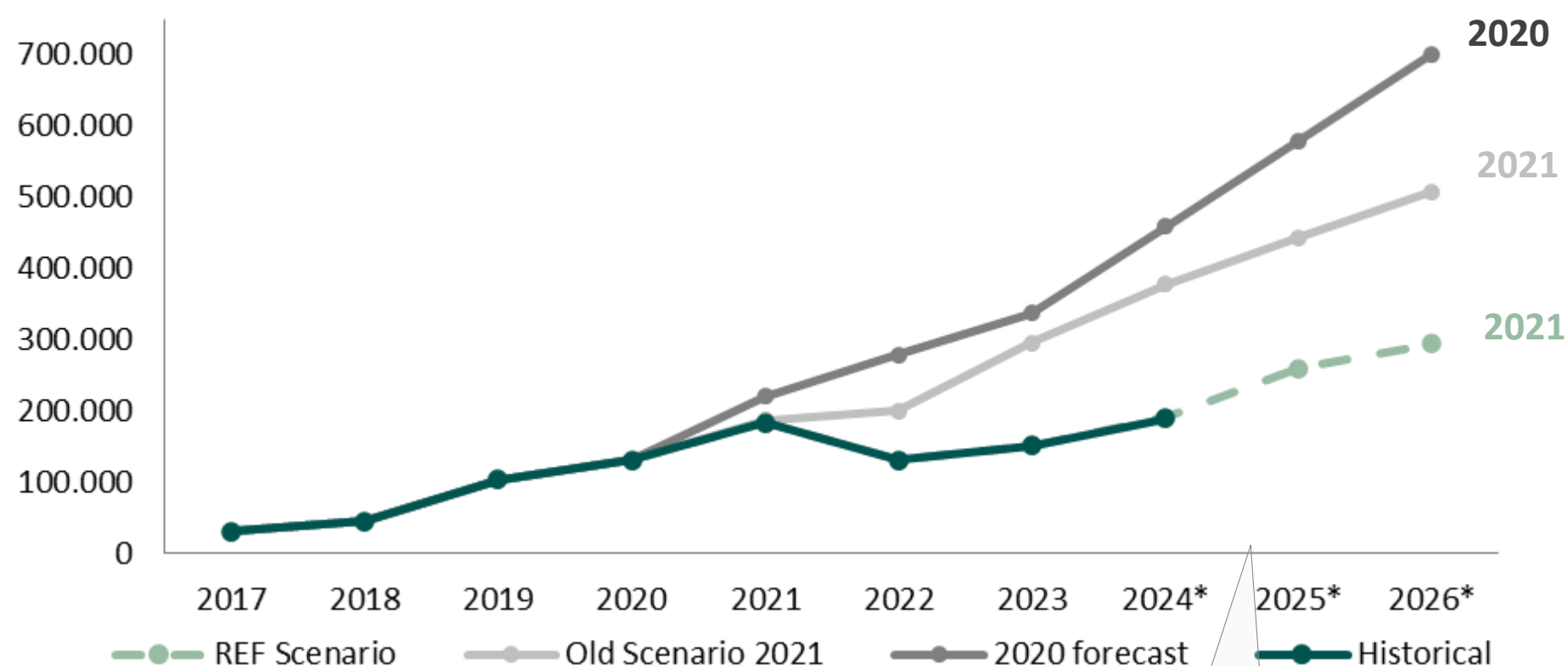


Source: MBS Consulting elaborations

**New registrations are quite stable, with increases still lower than pre-crisis levels**

- **Registrations** of LNG-powered trucks **remained stable** in the first months of 2024, with a total of **227 new registrations** between January and August,
- A modest recovery is seen in 2024, with registrations in August already surpassing the total recorded for all of 2023. Last year's low registrations were the result of missed orders in 2022, due to uncertainty in the gas market, which was characterized by high prices in 2022 that deterred many operators in the sector.
- During 2024, the gas market showed some easing, generating greater confidence among operators, which is also reflected in the road transport sector. Registrations of diesel-powered vehicles recorded a slightly positive change in the January-August 2024 period compared to the same period last year (+2.5%)

## Forecasts comparison for LNG demand for end-use in Italy (t)



Source: MBS Consulting elaborations

LNG volumes still under pre – crisis levels in 2024 (190 000 tons)

- **Modest Recovery in LNG Demand:** In the first nine months of 2024, demand for small-scale LNG increased by 25% compared to 2023, driven by LNG's stronger price competitiveness over diesel
- **Growth Below Pre-Crisis Levels:** Despite the increase, demand remains below pre-crisis projections, with registrations still struggling to recover to pre-crisis levels. The existing fleet is operating at full capacity, benefiting from LNG's price advantage over diesel, but overall growth is limited by the slow uptake of new heavy vehicles
- **Future Outlook:** LNG's price competitiveness is expected to continue, but the market's future will also depend on factors like the development of **bunkering** and **Bio-LNG**

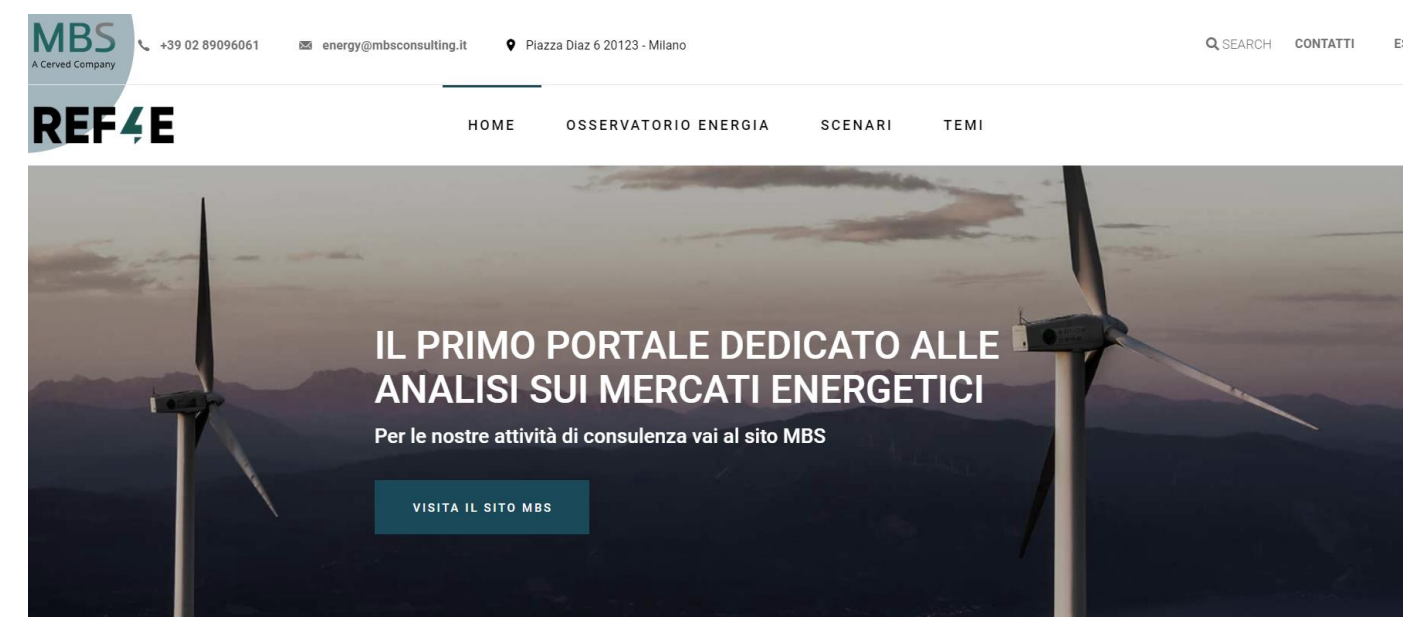


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**Grazie per l'attenzione!**

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