X-LNG CASE STUDY · JUL 2025

Predicting Global LNG Flows

50.0%

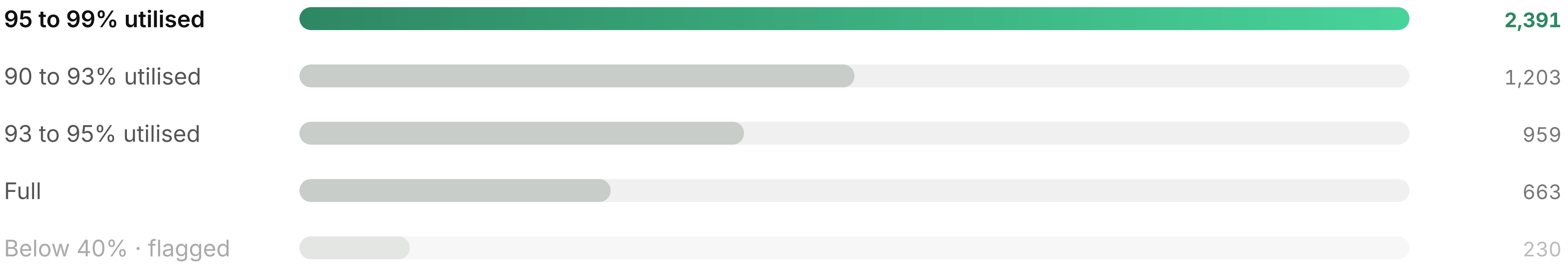
of 2023 LNG imports landed in East Asia

2023 full voyage dataset **30K tonnes** commercial threshold **13** regional clusters

Two tests separate trade from noise

Cargoes below 30,000 tonnes and voyages below 40% utilisation are excluded

VOYAGES BY CAPACITY UTILISATION · COUNT



What remains is the commercial market: most voyages sail near full; sub-40% legs are repositioning, testing or domestic loops.

Every parameter stays customisable

From tonnes to cargoes, clustered for the engine

30K T	3.6M	13	2023
commercial threshold	MMBtu per standard cargo	regional clusters	full voyage dataset

Volumes are standardised from tonnes to MMBtu with **IGU conversion factors** and clustered into thirteen regions, so the same machinery can simulate **any what-if on future flows**.

The filtered dataset becomes the input of a global X-LNG run: number of commercial cargoes, both demand and supply, per month per country.

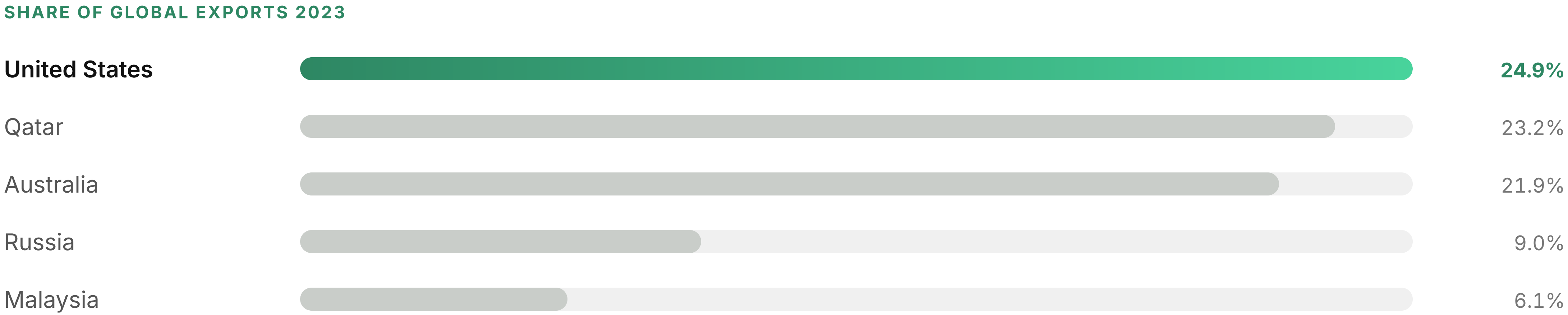
The trade, rebuilt

2023, cargo by cargo, after the filter

01

A three-way race at the top

The US edges out Qatar and Australia in a near-tie that towers over everyone else

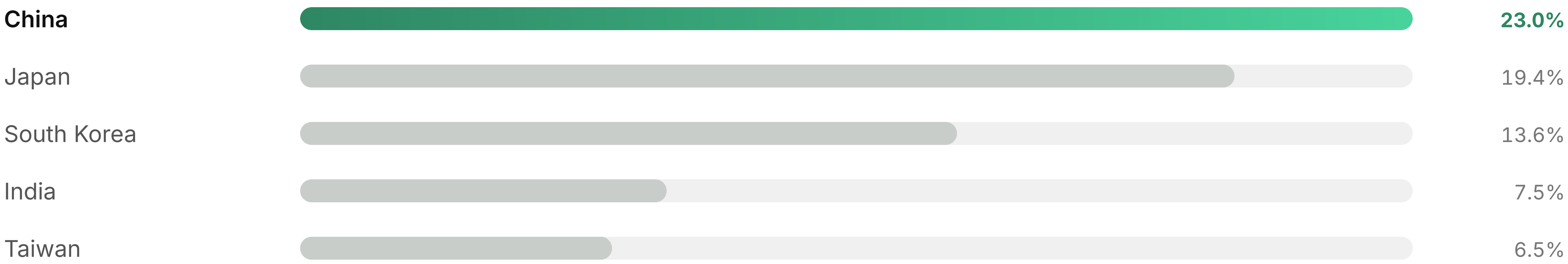


Russia holds nine percent despite sanctions, reoriented toward Asia.

East Asia takes half of everything

China, Japan and South Korea alone account for over 55% of global imports

SHARE OF GLOBAL IMPORTS 2023



Regions: East Asia 50.0% · NW Europe 17.4% · South Europe and Med 11.7% · producing regions import almost nothing.

THE VERDICT

Strip the noise and 2023 resolves into a three-way export race feeding an East Asia that takes half of everything.

India emerges as the price-sensitive spot buyer, European imports reflect the post-2022 pipeline substitution, and producing regions import almost nothing.

From dataset to what-if machine

The same machinery simulates any scenario on future flows

01 **Supply disruption scenarios**
Remove any source and re-optimise the global fleet: geopolitical and operational constraints, simulated.

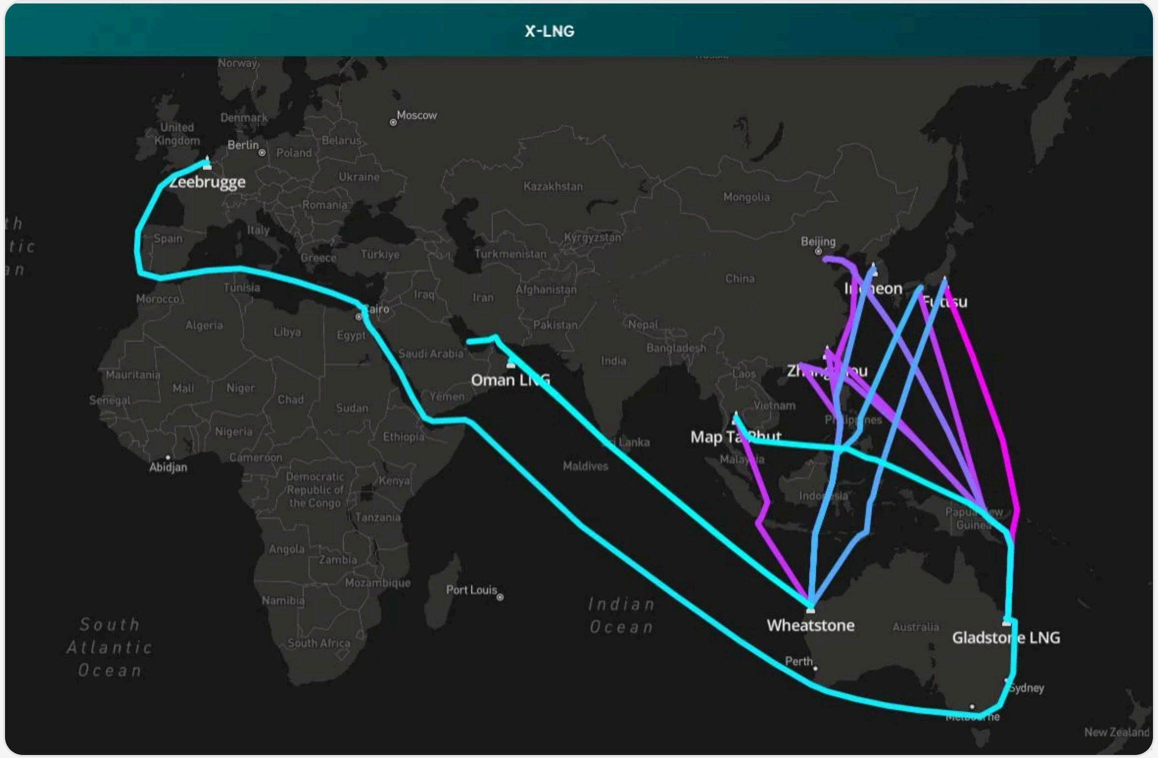
02 **Every assumption adjustable**
Price indexation, shipping constraints and terminal parameters, tailored to the scenario.

03 **Stress tested at +20% demand**
Fleet utilisation, terminal congestion and spot exposure under a high-stress demand shock.

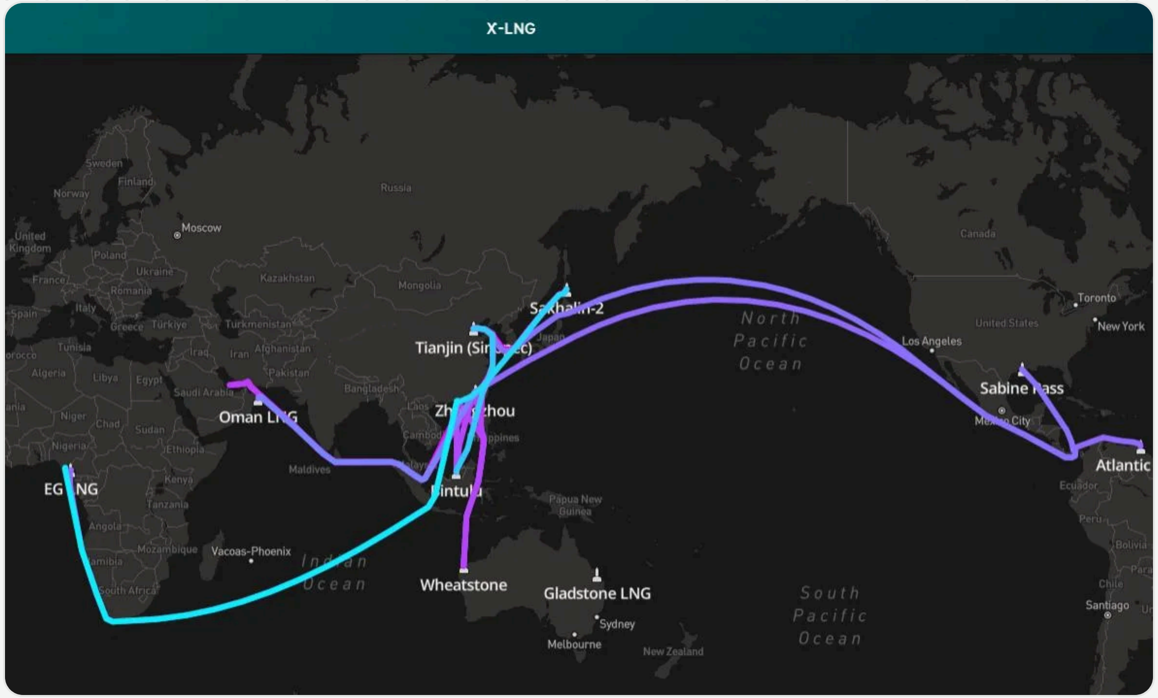
04 **Rapid recalculation**
Global flows re-solved when assumptions change, for deep iterative analysis.

Straight from the engine

The optimised 2023 flows from the global run, under real market prices



AUSTRALIAN SUPPLY UNDER 2023 PRICES



CHINA DEMAND, DIVERSIFIED SUPPLY

Takeaways

What the filtered 2023 trade actually says

✓ **A three-way race feeds the market**
The US (24.9%), Qatar (23.2%) and Australia (21.9%) tower over everyone else; Russia holds 9.0% despite sanctions.

✓ **East Asia takes half of everything**
50.0% of global imports; China, Japan and South Korea alone account for over 55%, India is the price-sensitive spot buyer.

! **Raw voyage data misleads**
230 sub-40%-utilisation voyages and sub-30K-tonne cargoes are noise; forecasts built on unfiltered data inherit it.

Modelled with X-LNG

CALYPSO COMMODITIES

Whole-portfolio optimisation for LNG books

1

Your world goes in

Contracts, vessels, charter rates, prices, spot assumptions and constraints, the full book, not a slice.

2

One optimal plan comes out

Feasible, P&L-maximising and constraint-compliant, re-solved for every scenario in minutes.

3

Every number checks out

Each result can be recalculated by hand, transparency your risk committee can audit.

Cloud-based, any portfolio size · built and advanced daily by ~25 mathematicians, physicists and computer scientists.

Model the flows your strategy depends on

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