X-LNG CASE STUDY · MAY 2024

ADNOC and NextDecade

+$225M

portfolio uplift from 18 Rio Grande cargoes

20 vessels · Gulf book   **Nov 2026 to Nov 2027** delivery window   **Prices** of 5 May 2024

Does the Atlantic hub pay?

ADNOC's Rio Grande offtake, valued inside the whole portfolio

01 **Greater access to the Atlantic markets**
A US supply hub serves European demand directly, without crossing Suez.

02 **Reduced exposure to price volatility**
A second basin spreads the book across TTF and JKM instead of one lane.

03 **Reactivity to force-majeure events**
Canal closures and outages can be rerouted around, not just absorbed.

04 **Portfolio flexibility**
More supply points mean more ways to rewire flows as markets move.

Modelled with X-LNG on public deal data plus own assumptions; results may differ from the real portfolio.

A Gulf-heavy twenty-vessel book

The base portfolio, before Rio Grande

20
vessels, all Panama and Suez capable

231
firm supply cargoes from the Gulf

9.5%
Brent slope on Ruwais and Das Island

13
months: Nov 2026 to Nov 2027

FIRM SUPPLY

- **Ruwais**, 142 cargoes, 3-day loading windows
- **Das Island**, 89 cargoes, 2-day loading windows
- 3.0 to 4.2M MMBtu per cargo

SPOT ACCESS

- **Asia**, priced at 90% JKM
- **Europe**, priced at 95% TTF
- Charter rate $46,500/day in both basins

What Rio Grande adds

Eighteen Atlantic cargoes, layered onto the same book

18

Rio Grande cargoes over the window

9%

Brent slope, half a point below the Gulf supply

2 days

average loading window, same vessel class

Everything else stays untouched: **same fleet, same firm demand, same prices**. The only change is a new loading port on the US Gulf Coast, so any difference in the result is attributable to the Atlantic hub alone.

The engine then re-optimises the whole book, **every cargo, ship and slot**, once without and once with the new supply.

The uplift

Total FOB profit, with and without Rio Grande

01

A quarter more profit

CALYPSO COMMODITIES

Identical demand, identical fleet, only the Atlantic hub differs

WITHOUT RIO GRANDE

$879.9M

total FOB profit, 13 months

Total value	$7,453.1M
Total cost	$6,573.2M
Beihai spot cargoes	24
Panama transits	0

→ **+25.6%**

WITH RIO GRANDE

$1,105.1M

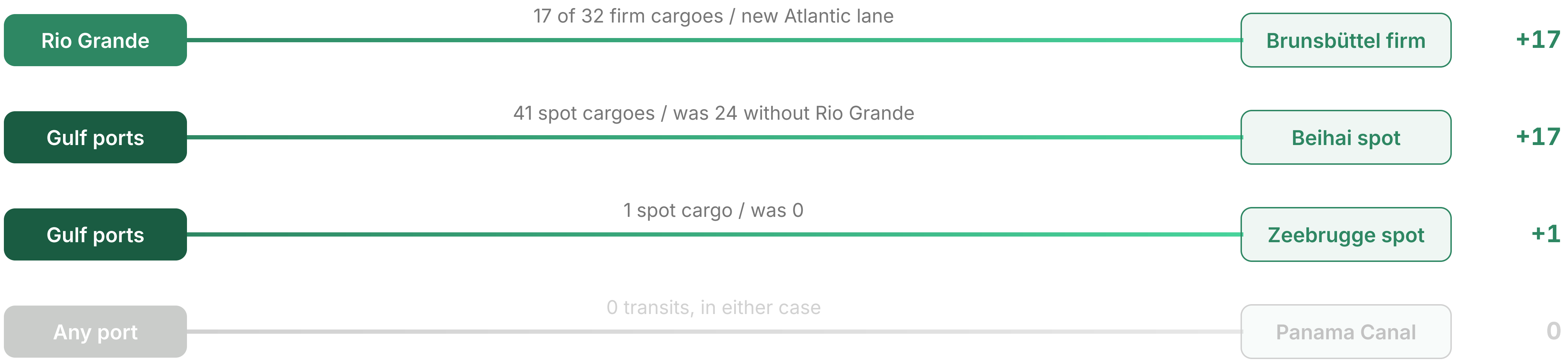
total FOB profit, 13 months

Total value	$7,930.2M
Total cost	$6,825.2M
Beihai spot cargoes	41
Panama transits	0

Uplift: **+$225.2M** · exact engine results $879,914,321 → $1,105,073,371

Where the cargoes go instead

The Atlantic hub serves Europe; the freed Gulf cargoes chase Asian spot



Brunsbüttel switches from 21 Das Island + 11 Ruwais to **17 Rio Grande cargoes**; the freed Gulf supply nearly doubles the **Beihai spot programme**. Flow changes apply to spot and optional positions only; all firm cargoes deliver in both runs.

Stress tests

Canal closure and adverse price moves

02

FORCE-MAJEURE SCENARIO · RE-OPTIMISED UNDER A FULL CLOSURE

Shut the Panama Canal: nothing moves.

The optimal plan never touches Panama. All Rio Grande supply ships east to Europe, so a closure leaves P&L and flows unchanged. Suez exposure shrinks too: with Rio Grande, the majority of European supply arrives from the US instead of the Middle East. The canal only becomes relevant if JKM rallies pull Rio Grande cargoes toward Asia, or if new US supply exceeds European demand.

TTF up, JKM down: the cushion holds

Adverse price scenario: TTF +10%, JKM -10%, re-optimised

Base prices

Without Rio Grande **$879.9M**

With Rio Grande **$1,105.1M**

Uplift +$225.2M

TTF +10% · JKM -10%

Without Rio Grande **$697.9M**

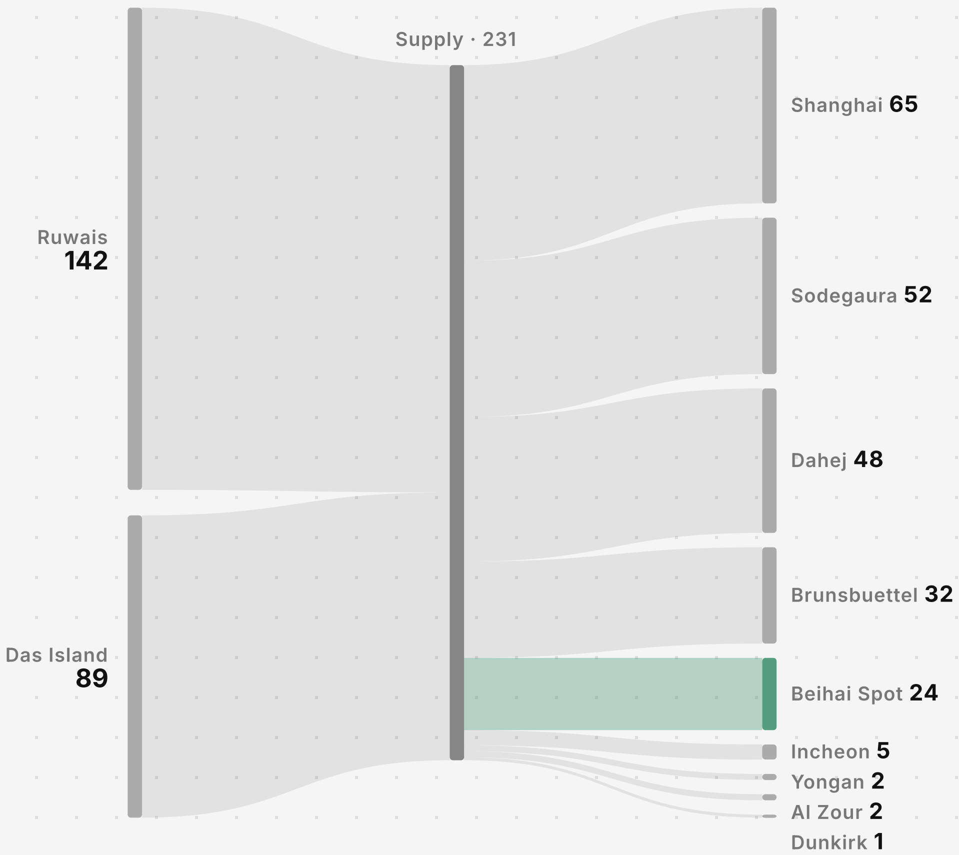
With Rio Grande **$777.7M**

Uplift shrinks to +$79.8M

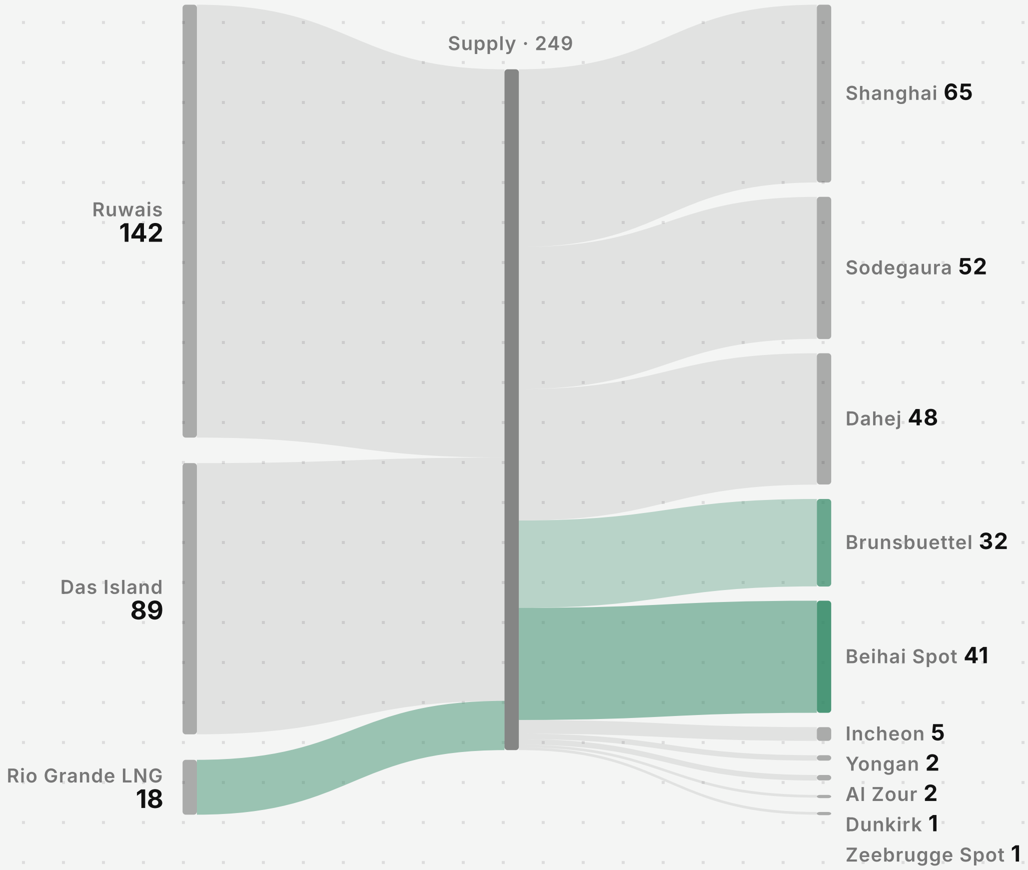
The book stays structurally long JKM: most firm demand prices off JKM, and 18 Atlantic cargoes cushion that exposure without closing it.

Straight from the engine

The cargo-flow Sankeys behind the delta, solved once without and once with the Atlantic hub



WITHOUT RIO GRANDE · SUPPLY 231, BEIHAI SPOT 24



WITH RIO GRANDE · SUPPLY 249, BEIHAI SPOT 41

Takeaways

What the deal buys, and what it does not

The Atlantic hub pays for itself
+$225M over 13 months: Europe served directly, freed Gulf cargoes almost double the Chinese spot programme.

Resilience improves
No Panama dependence in the optimum, and a smaller Suez footprint for European supply.

JKM exposure remains
Eighteen cargoes cushion a JKM slump but cannot hedge it. Next steps: more Atlantic supply (US, Nigeria) and non-JKM firm demand in the EU, UK or Brazil.

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.

See your own book in X-LNG

Calypso Ventures GmbH

www.calypso-commodities.com · ms@calypso-commodities.com

+49 157 769 40574

Bismarckstraße 10-12, 10625 Berlin · HRB 239736 B, Amtsgericht Charlottenburg