X-LNG CASE STUDY · OCT 2024

Chartering, Q4 2024

+$4.1M

what the third vessel earns in November 2024

6 cargoes · Sabine Pass   **2 vessels** + 1 TC-in offer   **Spark 30** rate $64,000/day

Six cargoes, two ships, one offer

Does a TC-in third vessel at $64,000 a day capture the Europe-Asia spread?

THE BASE BOOK

- **6 Q4 cargoes** at Sabine Pass, 115% HH + $3.5 tolling
- Spot demand: **Gate at 100% TTF**, **Futtsu at 100% JKM**
- Two 174K vessels, forward curves HH, TTF and JKM

THE OFFER

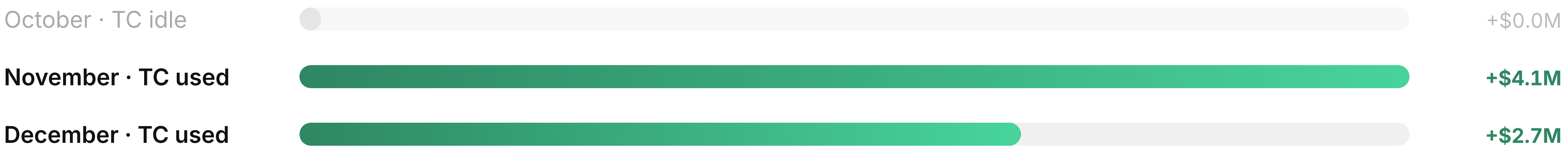
- A broker offers a **third 174K vessel**, TC-in
- At the **Spark 30 rate: $64,000 per day**
- The optimiser stays free to **leave it unused**

One question per charter month: does the extra shipping length pay for itself?

The optimiser only takes it when it pays

Portfolio uplift against the two-vessel base of $130.6M, by charter month

UPLIFT VS BASE · TC USED WHERE PROFITABLE



Exact engine results: base $130,560,786 · November $134,696,454 · December $133,229,865. October equals the base case.

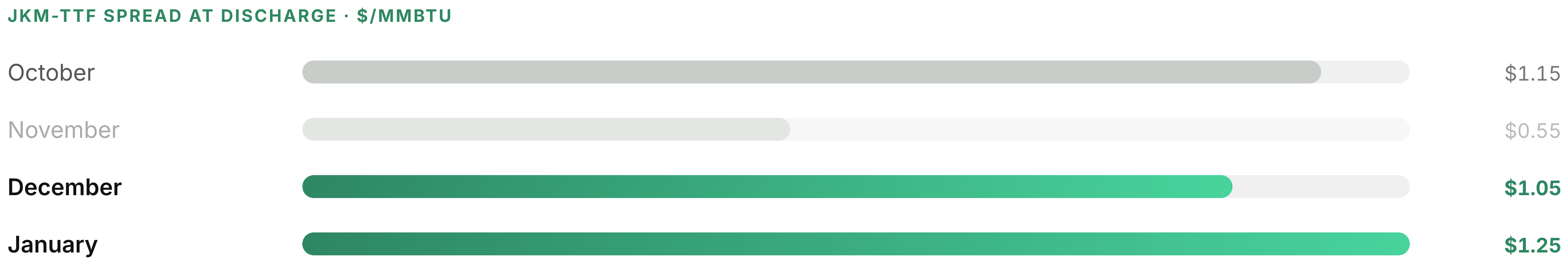
01

The driver

A ship taken in one month discharges into the next

The spread that decides it

JKM minus TTF forwards at the discharge month, October 2024 to January 2025



An October charter discharges into the thin November spread and stays idle; November and December charters discharge into December and January, where the spread pays. TTF 12.90 / 12.65 / 12.80 / 12.90 · JKM 14.05 / 13.20 / 13.85 / 14.15.

The cargo mix flips to Futtsu

With the third ship in play, the book swings from Europe-weighted to Asia-weighted

1. **Base and October: 4 Gate, 2 Futtsu**
   Two vessels favour the shorter European run; the TC offer stays idle and costs nothing.
2. **November: 1 Gate, 5 Futtsu**
   The third ship provides the shipping length to chase the December spread east, +$4.1M.
3. **December: 2 Gate, 4 Futtsu**
   Still Asia-weighted into the January spread, +$2.7M over the base.

CALYPSO COMMODITIES

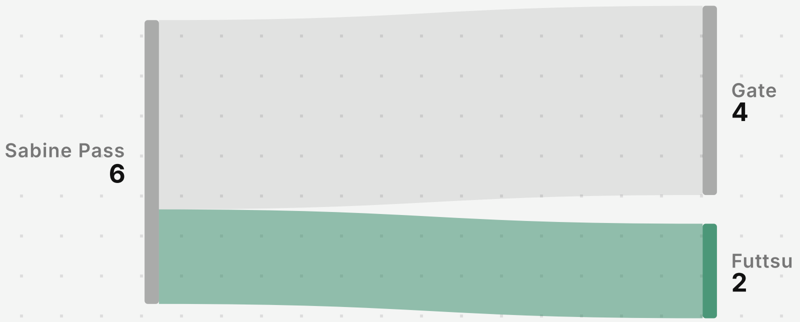
THE VERDICT

In October the third ship adds nothing and costs nothing: in November and December, the spread pays for it.

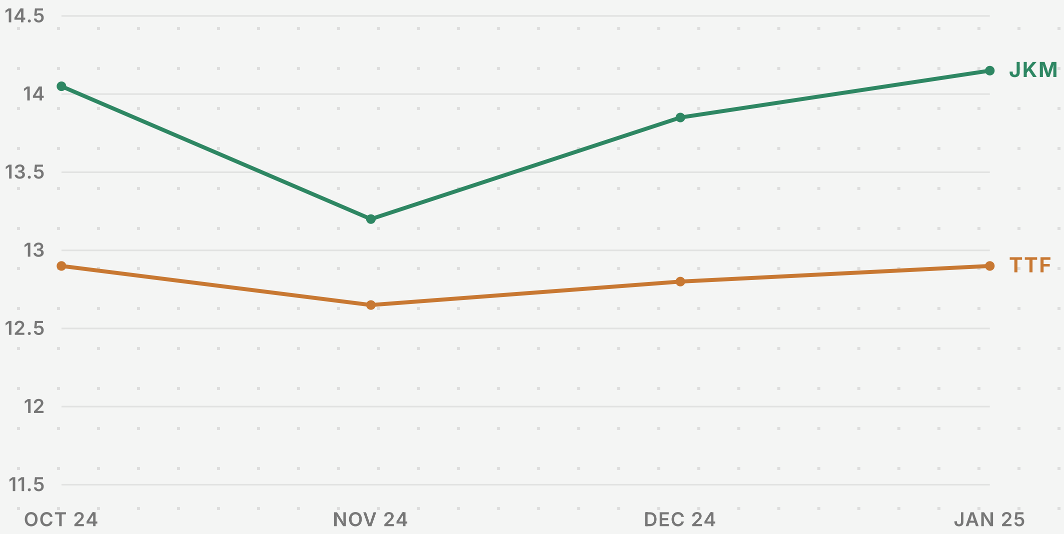
Chartering is optionality priced against the whole book. The optimiser leaves the vessel idle when the discharge-month spread is thin and takes it when the extra shipping length monetises the Europe-Asia arbitrage.

Straight from the engine

The base run as the engine reports it, and the forward curves the decision hangs on



BASE CASE $130,560,786 · 4 GATE, 2 FUTTSU



TTF AND JKM FUTURES · OCT 24 TO JAN 25 · $/MMBTU

Takeaways

What the third vessel buys, and when

CALYPSO COMMODITIES

✓ **The option costs nothing when it is out of the money**
In October the optimiser leaves the TC idle and P&L equals the base case exactly.

✓ **November pays +$4.1M, December +$2.7M**
The extra shipping length flips the mix to Futtsu and monetises the discharge-month spread.

! **It is a spread trade, not a freight trade**
Whether $64,000 a day pays depends entirely on the JKM-TTF spread at discharge, so the answer changes month by month.

Modelled with X-LNG

Whole-portfolio optimisation for LNG books

CALYPSO COMMODITIES

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.

Price your next charter against the whole book

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