

X-LNG CASE STUDY · MARCH 2026

The emissions cost of an LNG voyage

Compare routes and vessel engines to see how EU ETS costs change the delivery margin.



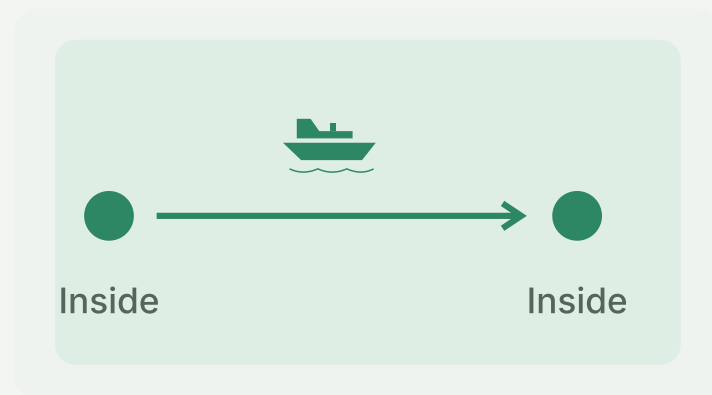
€49K to €196K

PER LADEN VOYAGE · STUDY ASSUMPTION €85
PER ALLOWANCE

The port pair determines the covered share

Coverage inputs used in the March 2026 study

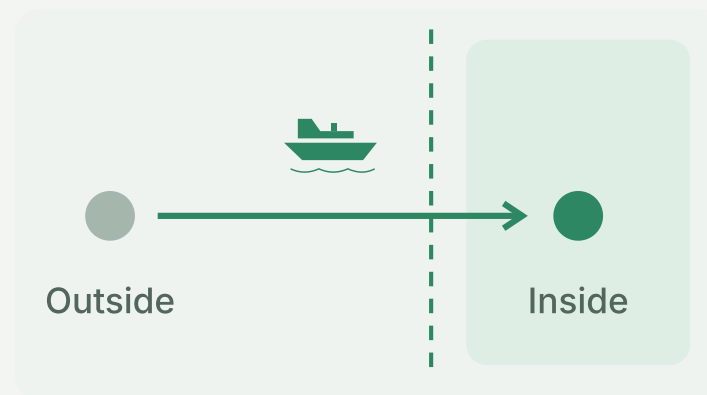
Both ports inside



100%

of voyage emissions counted

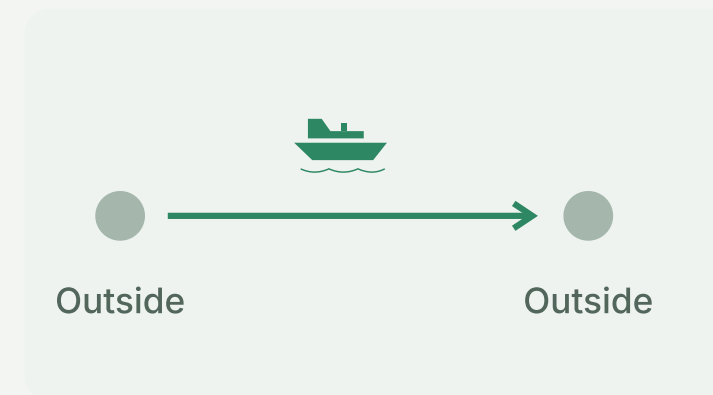
One port inside



50%

of voyage emissions counted

Both ports outside



0%

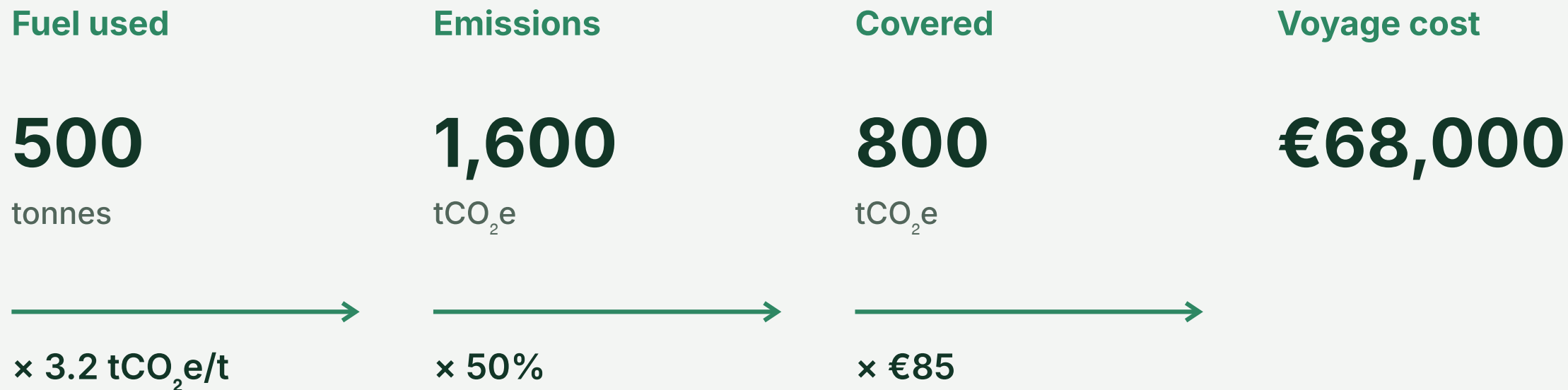
of voyage emissions counted

Apply the percentage to voyage emissions; it does not represent a geographical half of the route.

Study assumptions shown. Entering and leaving voyages use the same 50% share. The shaded area represents coverage schematically.

From fuel consumption to the allowance bill

Illustrative calculation using the study assumptions

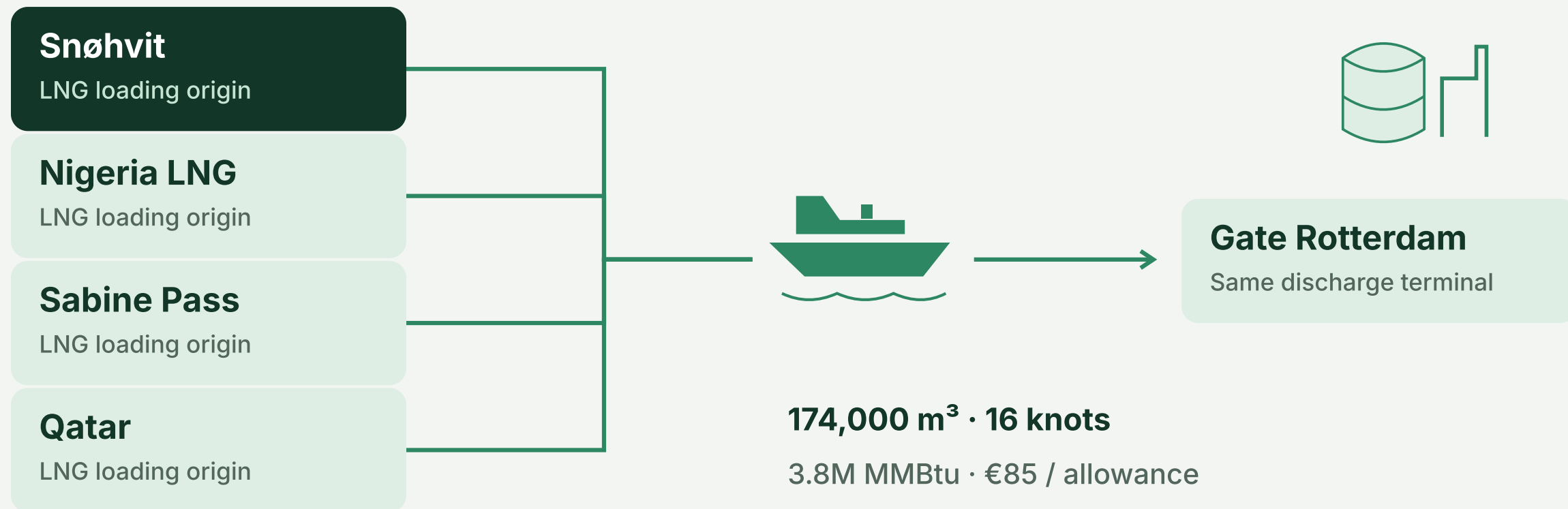


500 tonnes of fuel produces a modelled €68,000 allowance cost in this example.

Fuel input: 50 tonnes/day for ten days. Use the emissions factor, coverage and allowance price appropriate to the voyage.

Four LNG origins, one destination

Change the origin and engine; keep the shared inputs fixed



Compare each route on the same cargo volume, vessel size, speed and allowance price.

Schematic connections. Distance and engine assumptions change the modelled emissions bill.

Engine choice changes the bill on every route

Allowance cost per laden voyage · identical chart scales

Snøhvit



Sabine Pass



Nigeria LNG



Qatar



On the Qatar route, the modelled costs range from €120K to €196K across the four engines.

Study allowance price: €85. Bars start at zero on a common €0 to €200K scale.

A higher price and a faster voyage raise different inputs

Two separate tests · reference emissions cost indexed to 100

ALLOWANCE PRICE

Reference price



100

Price +10%



110

SAILING SPEED

16 knots



100

19 knots



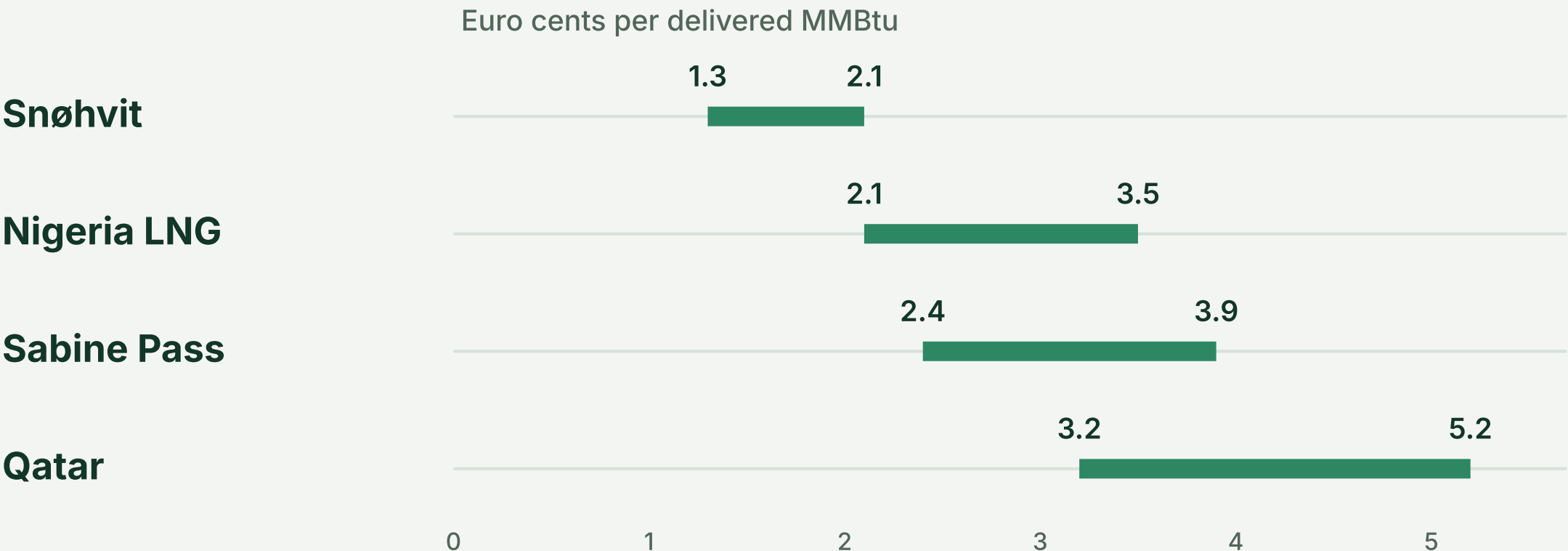
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Price +10% gives cost +10% at fixed emissions. The tested speed change raises cost by about 22%.

Speed comparison: Sabine Pass, 16 to 19 knots, under the study's engine and voyage assumptions.

Compare the allowance cost per unit of LNG delivered

Range across the four engine types on each route

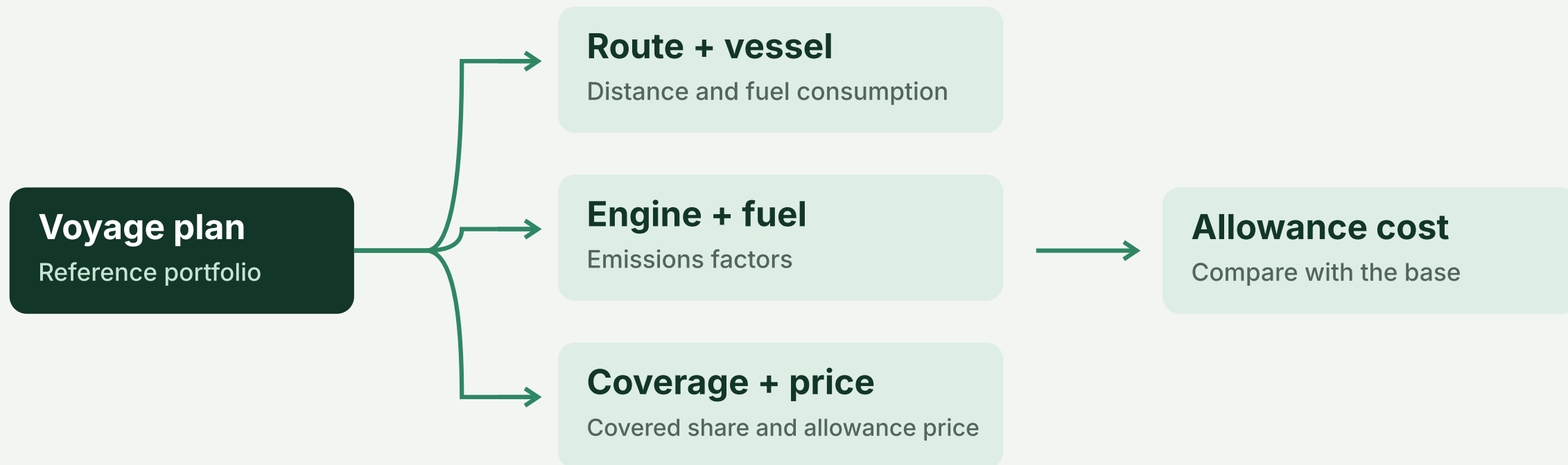


Snøhvit has the lowest unit-cost range in this comparison.

Divide voyage allowance cost by delivered energy. Results use the historical study assumptions.

Include emissions in the voyage comparison

The same LNG sale can have different delivery costs



Recalculate the cost when the route, vessel, fuel or allowance assumptions change.

This deck explains the March 2026 model. It does not state current regulatory requirements or current allowance prices.

Include emissions costs when comparing voyage plans

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