



Methanol from Methanex.

THE EVOLUTION OF MARINE FUEL



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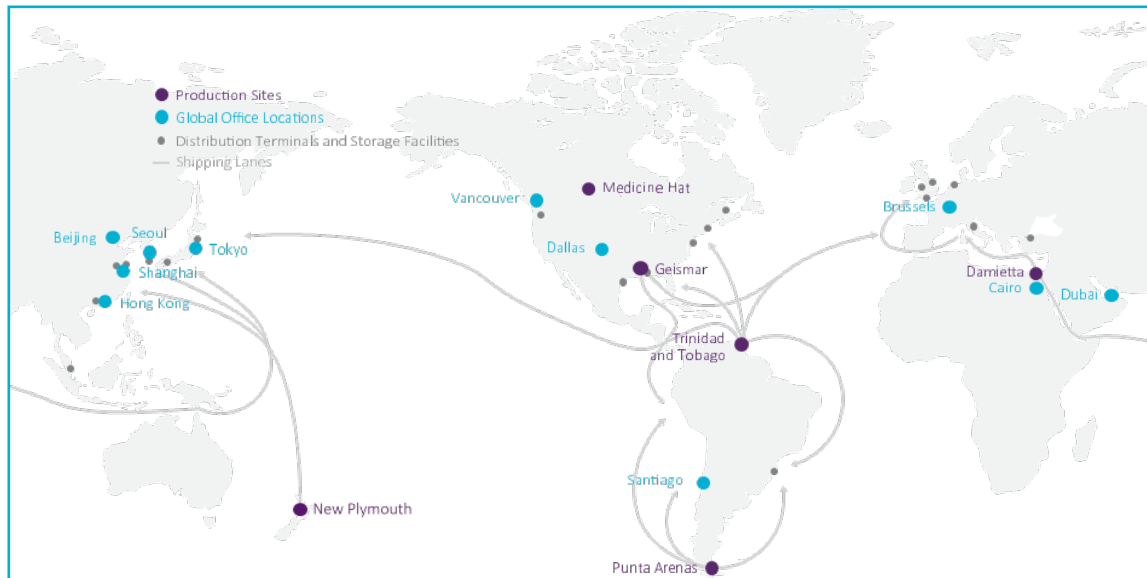




The world's leading
methanol company.



Methanex is the world's largest producer and supplier of methanol.



*Currently building a third 1.8M tonne plant in Geismar, Louisiana which is expected to start up by the end of 2023 and increase the site operating capacity to 4M tonnes

9 Operating Plants



6 Production Sites



1,400+ Employees



~12% Market Share



9.3 MMT total production cap



\$4.3B revenue in 2022





Our integrated global capabilities give us a sustainable competitive advantage.

Responsible Care®

Network of production sites to supply every major global market

Fleet of 30 dedicated ocean vessels with 19 dual-fuel vessels that can run on methanol

Extensive integrated global supply chain and distribution network

In-region customer service to quickly respond to customer needs

Sharing of best practices and expertise with other industry members

Industry-leading customers

EcoVadis gold medal sustainability rating (2022)

We are strongly committed to sustainability¹.



Advancing solutions for a low-carbon future

Protecting people and the environment

Fostering inclusion and community connection



COMMITMENTS

Reduce Scope 1 and Scope 2 GHG emission intensity by 10%²

Invest in lower-carbon methanol solutions

COMMITMENTS

Continuously improve our resource management performance to reduce environmental impact

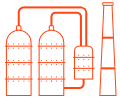
Continuously improve our personal and process safety performance with the goal of Zero Harm

COMMITMENT

Embed a culture of inclusion that leverages diversity across our company and strengthens the connection with our communities.

1. For a full list of our ESG commitments see our 2022 Sustainability Report
2. By 2030 from 2019 levels

We're investing in opportunities and new technologies to reduce emissions and enable lower-carbon methanol solutions.



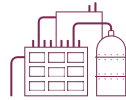
Efficiency Projects

We implemented four projects in 2022 that we anticipate will result in 30,000 tonnes CO₂ avoided per year (absolute reductions).

Estimated combined CO₂ avoided from approved efficiency projects is 100,000 tonnes/year by 2024.

~100,000

tonnes/year (absolute CO₂ avoided)

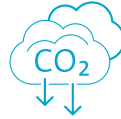


Reduced-intensity Expansion Projects

Construction is on schedule for the G3 plant in Geismar, Louisiana, with first methanol production expected in the fourth quarter of 2023.

<0.40

tonnes of CO₂/tonne of methanol (estimated G3 intensity) which will lower our average emissions intensity



Carbon Capture Feasibility Study

Progressing a feasibility study for carbon capture and storage (CCS) at the Geismar site.

UP TO
\$1M

for economic feasibility study

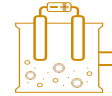


Renewable Natural Gas

Using renewable natural gas or biomass in a conventional methanol process results in a form of green methanol called bio-methanol.



Certified by the ISCC to produce bio-methanol in Geismar



Green Hydrogen Feasibility Study

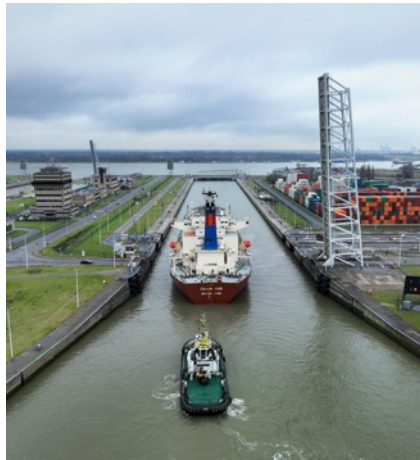
We are conducting a feasibility study of the potential to gradually convert an existing asset to produce lower carbon intensity methanol using green hydrogen.

UP TO
\$1M

for Green Hydrogen feasibility study in 2023



History of industry firsts.



Methanol – Unique, Essential, and Hard to Substitute.

CLOTHING + TEXTILES \ HIGH TECH APPLICATIONS \ MEDICAL EQUIPMENT \ BUILDING MATERIALS

BOILERS \ KILNS \ COOKING STOVES \ MARINE FUEL \ VEHICLE FUEL

Chemical end uses

Methanol is an essential chemical building block for hundreds of consumer and industrial products, including paints, carpets, fabrics, building materials, and a variety of health and pharmaceutical products.

Methanol is difficult to substitute based on its unique chemistry, scale, ease of transport and cost.



Energy-related end uses

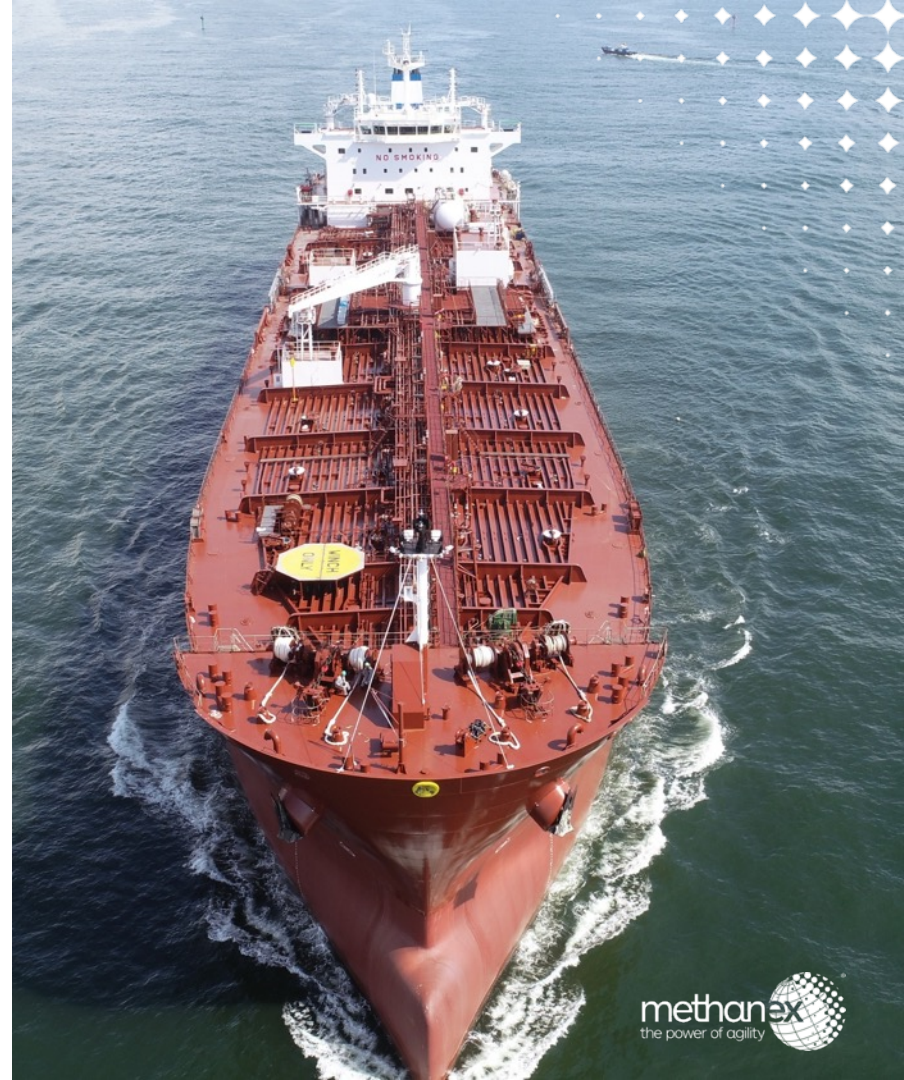
A cleaner-burning fuel, methanol can help improve air quality by reducing emissions compared to traditional fuels such as diesel or coal. As it can be made from renewable sources, methanol fuel can also help society achieve its decarbonization goals.



Methanex is leading the adoption of methanol as a marine fuel transitioning towards a cleaner shipping industry.

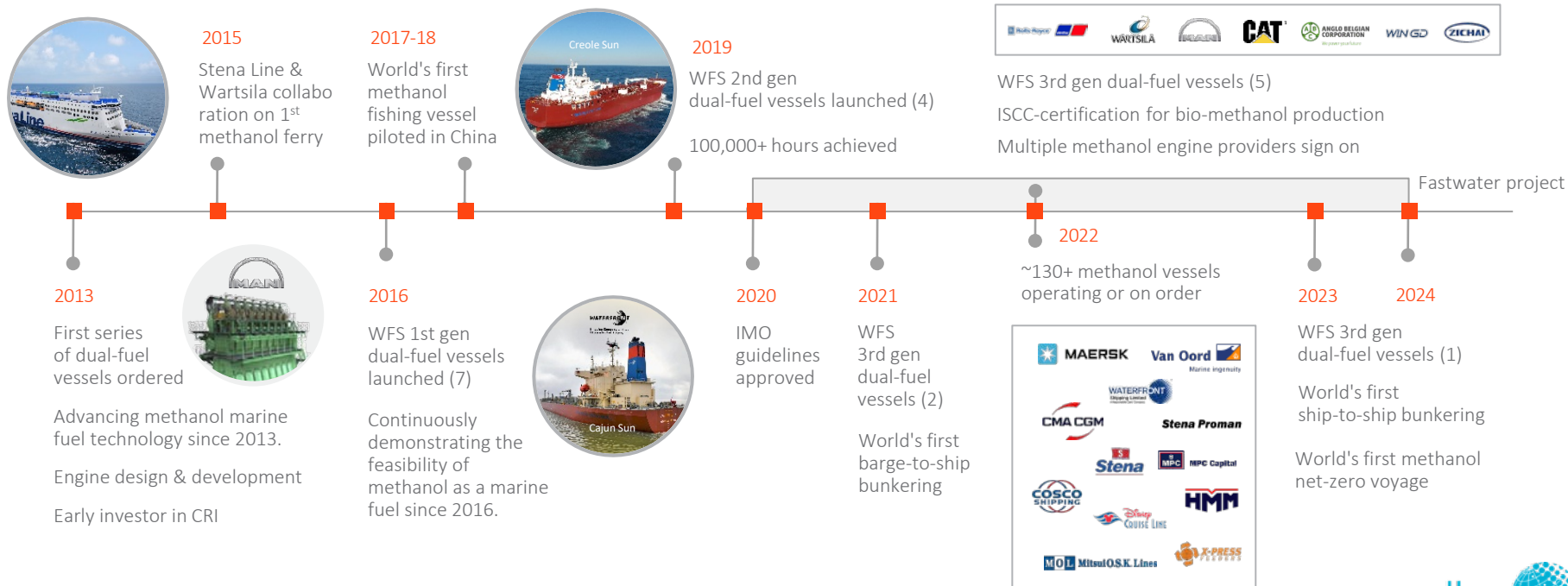
The International Maritime Organization (IMO) has committed to a strategy and timeline to reduce greenhouse gases from international shipping.

As the world's largest producer of methanol, Methanex and our subsidiary Waterfront Shipping (WFS) have pioneered the development of cleaner-burning methanol as a marine fuel, making Methanex the clear global leader in supporting the shipping industry to meet IMO emission reduction requirements.



With Methanex leading the way, fleets can stay on course to decarbonization.

Methanex has been there from the beginning, developing methanol as a marine fuel. We are well-positioned to help transition the shipping industry to a low-carbon future. We've been leading the way in the marine fuel industry for over a decade.



Methanol is safe to transport, store and bunker. And we were the first ones to prove it.

Methanol is handled using procedures similar to those for conventional marine fuels. Only minor modifications and minimal incremental costs are required.

- Since 2016 we've been bunkering methanol from most of our production sites.
- In 2021, we demonstrated the first-ever barge-to-ship methanol bunkering in the Port of Rotterdam.
- In 2023, we demonstrated the first non-tanker ship-to-ship methanol bunkering in the Port of Gothenburg.



Methanol offers a pathway for complete decarbonization. The first ever net-zero voyage.

In a first for the industry, we demonstrated that the transition to decarbonization of marine shipping is possible with methanol.

In February 2023, the dual-fuel vessel *Cajun Sun*, completed a net-zero voyage fuelled by bio-methanol.

- 18-day trans-Atlantic voyage.
- Using mass balance process, ISCC-certified bio-methanol (~80%) with negative carbon intensity was blended with conventional methanol (~20%) by volume.
- Bio-methanol produced by our ISCC-certified plant in Geismar.
- Net-zero emissions on a lifecycle basis were achieved and verified by independent third-party.



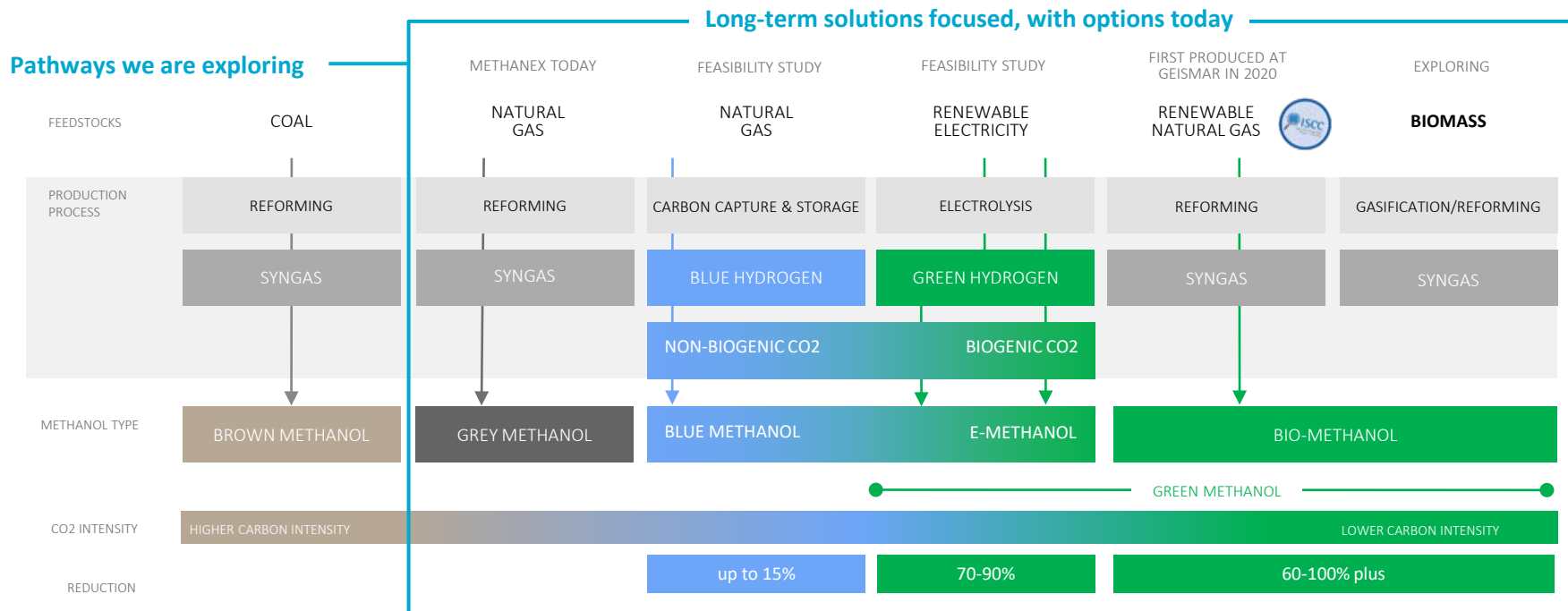


Methanol is the
clear choice.



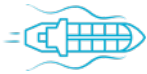
Our methanol products, from grey to green, can help fleets transition.

Using our conventional (grey), blue and renewable green methanol, or a mix of these, can help meet both current and future greenhouse gas emission reduction targets.



Methanol is a leading alternative fuel choice.

Proven technology, easily transportable with existing infrastructure, liquid at room temperature, and cost-competitive.



Methanol is a cleaner-burning fuel and can reduce SOx and particulate matter emissions **by more than 95%**, and NOx **by up to 80%** compared to conventional marine fuels.¹

>95%

Reduction in air emissions from combustion



Methanol provides a pathway to reducing CO₂ emissions as renewable methanol supply develops.

Compared to conventional marine fuels renewable methanol **can be carbon neutral** on a life cycle basis.

Carbon Neutral Potential

Reduction in CO₂ when using renewable methanol



Methanol is available at more than 125 of the world's largest ports.

As a liquid fuel, methanol is **safe and easy to store and handle.**

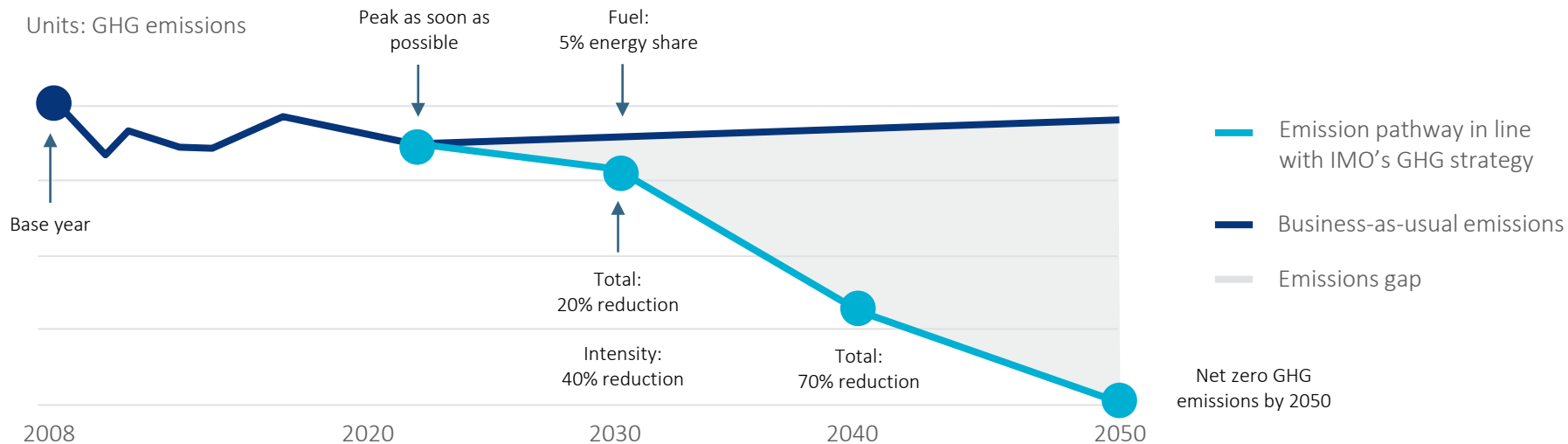
125+

Easily supplied via existing landside storage or supply infrastructure



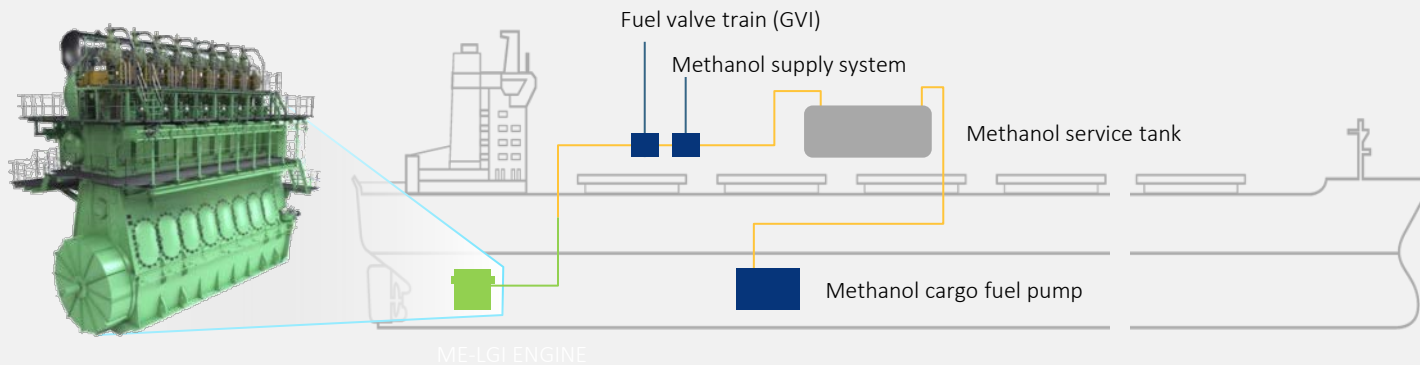
Decarbonizing the marine industry with methanol.

Methanol has the potential to effectively support the transition to carbon neutrality in compliance with regulations.



Mature technology makes adoption straightforward.

Methanol has minor modification requirements and modest incremental costs.



- Double-walled pipes
- Single-walled pipes

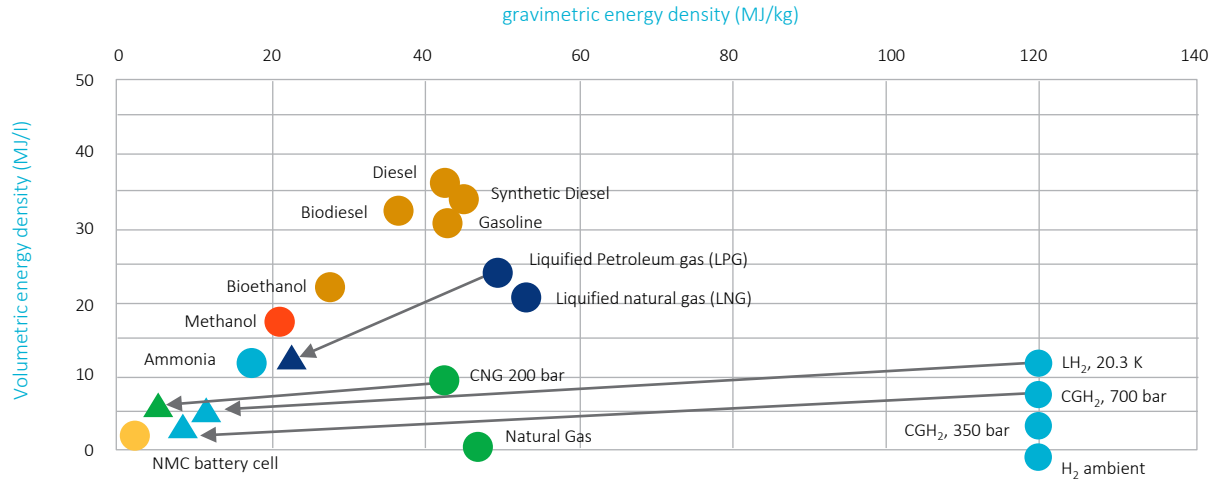


Qualities that give methanol the competitive edge.

Methanol offers among the best volumetric energy densities of the mainstream alternatives.

In addition, as methanol is biodegradable, it opens up more storage options in some vessel types (i.e. tank design, stored in ballast of Stena Germanica) reducing impact of lower energy density versus diesel.

Comparison of gravimetric and volumetric storage density for fuels



- Fuel only
- △ Including storage system
- ← Arrows show shifting energy density when storage is required

- CGH₂**: compressed gaseous hydrogen
- CNG**: compressed natural gas
- H₂ ambient**: Hydrogen at ambient temperature
- LH₂ 20.3 K**: Liquefied hydrogen at 20.3 kelvin
- NMC**: Lithium nickel manganese cobalt oxide

Source: DNV

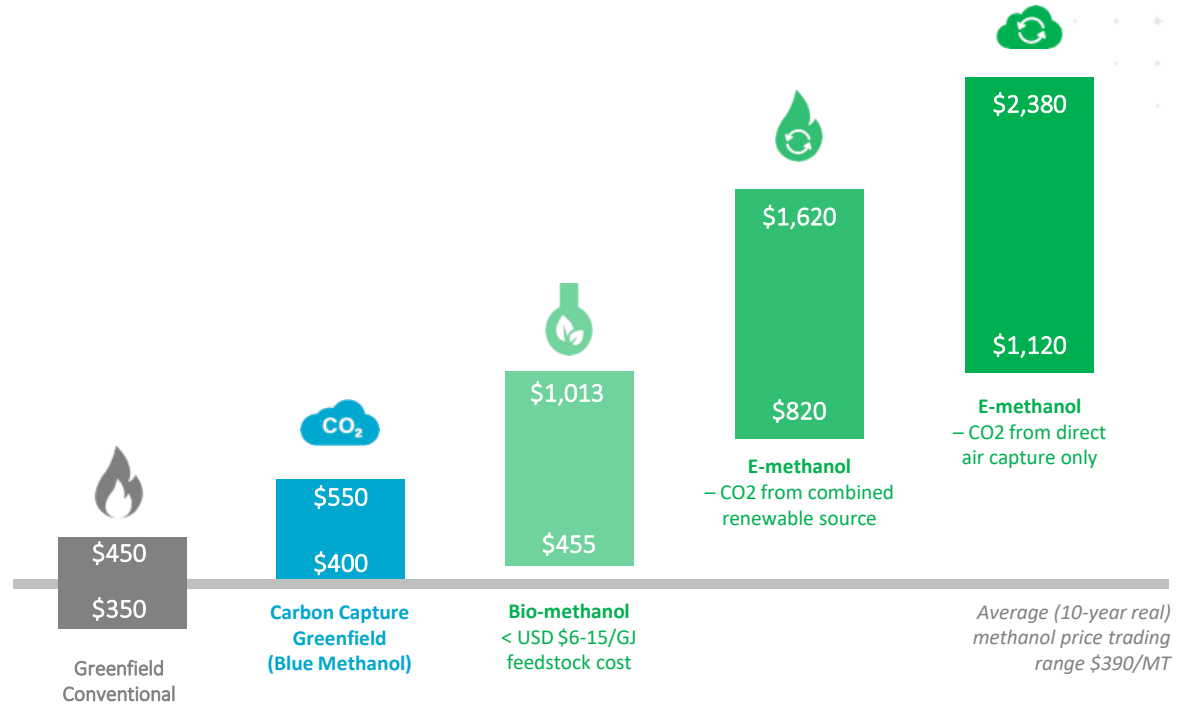
Incentivizing low-carbon methanol production.

We expect government policies and regulations to lead to increased investment and demand for low and zero carbon methanol. Greater production of lower or zero carbon methanol can be incentivized through various means including customers' willingness to pay a higher price and new technology that reduce production costs.

The cost for lower emission methanol is expected to decrease as technologies mature and become scalable.

Range of current capital and production costs for different forms of methanol

USD \$/tonne of methanol*



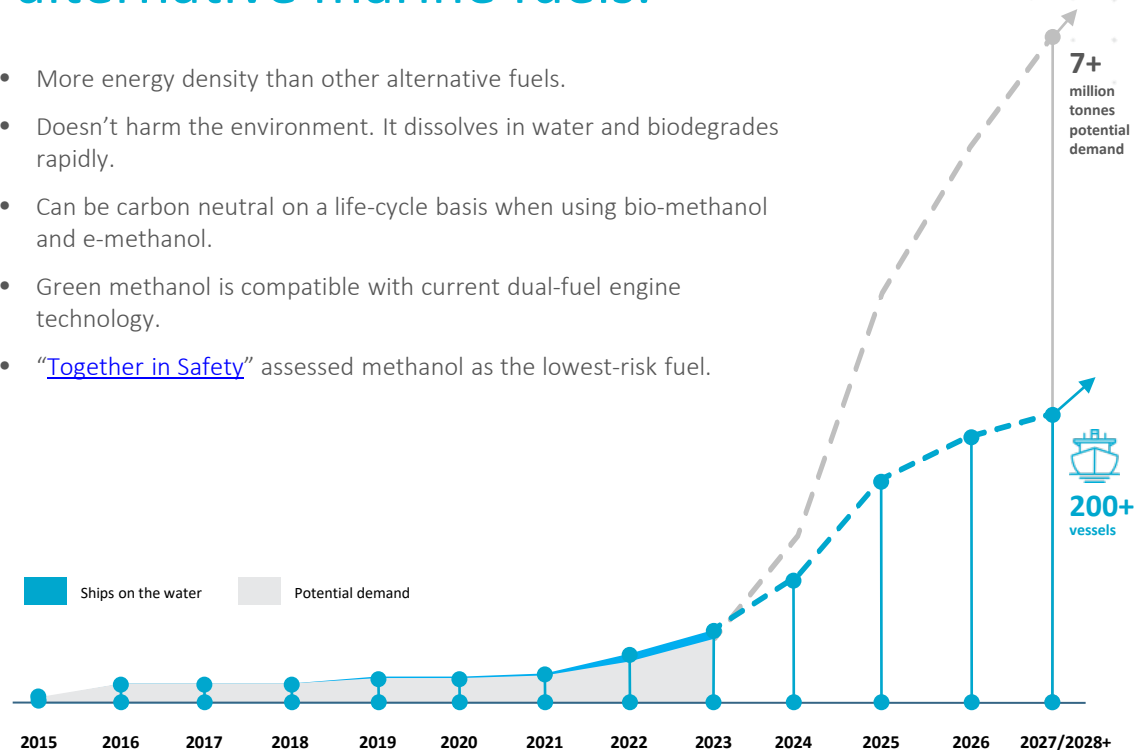
Source: 2021 Irena Report and internal estimates. * Exchange rate used USD 1 = EUR 0.9

Tomorrow's marine fuel is here, now.

Unlike other alternative marine fuels, methanol can be put to work immediately, transitioning the shipping industry from conventional fossil fuels to a low-carbon future.

Methanol versus other alternative marine fuels.

- More energy density than other alternative fuels.
- Doesn't harm the environment. It dissolves in water and biodegrades rapidly.
- Can be carbon neutral on a life-cycle basis when using bio-methanol and e-methanol.
- Green methanol is compatible with current dual-fuel engine technology.
- ["Together in Safety"](#) assessed methanol as the lowest-risk fuel.



When you think methanol, think Methanex.

For over a decade, Methanex has championed the use of methanol in the shipping industry. And with ongoing innovations and partnerships we intend to stay at the forefront.

- We are the world's largest methanol producer.
- We operate the world's largest dedicated fleet of methanol ocean tankers.
- We are the only global methanol supplier with logistics and supply chains across both the Atlantic and Pacific.
- We remain committed to pioneering methanol as a marine fuel to bring low-carbon solutions in collaboration with the shipping industry.





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