Sustainable fuels for power production

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Decarbonization has increased the uncertainty and business risk

Business risk driven by regulatory, financial, reputational and geopolitical risks

Future proofing through fuel flexibility

Hydrogen| Ammonia| Methanol | Ethanol | Biodiesel

Fuel flexibility through multi-fuel capability as well as conversions

The journey towards zero carbon emissions has already started

H_2

Hydrogen

Our gas engines are already able to blend LNG with up to 25% hydrogen.

Market release of the first W31 H2 power plant with sales release in 2026

MeOH

Methanol / Ethanol

Released products: W9L32 (Marine)

Released conversion packages
W9L32 (Marine)
ZA40 (Marine)

A power plant 20V design for the W32 engine is under development

NH_3

Ammonia

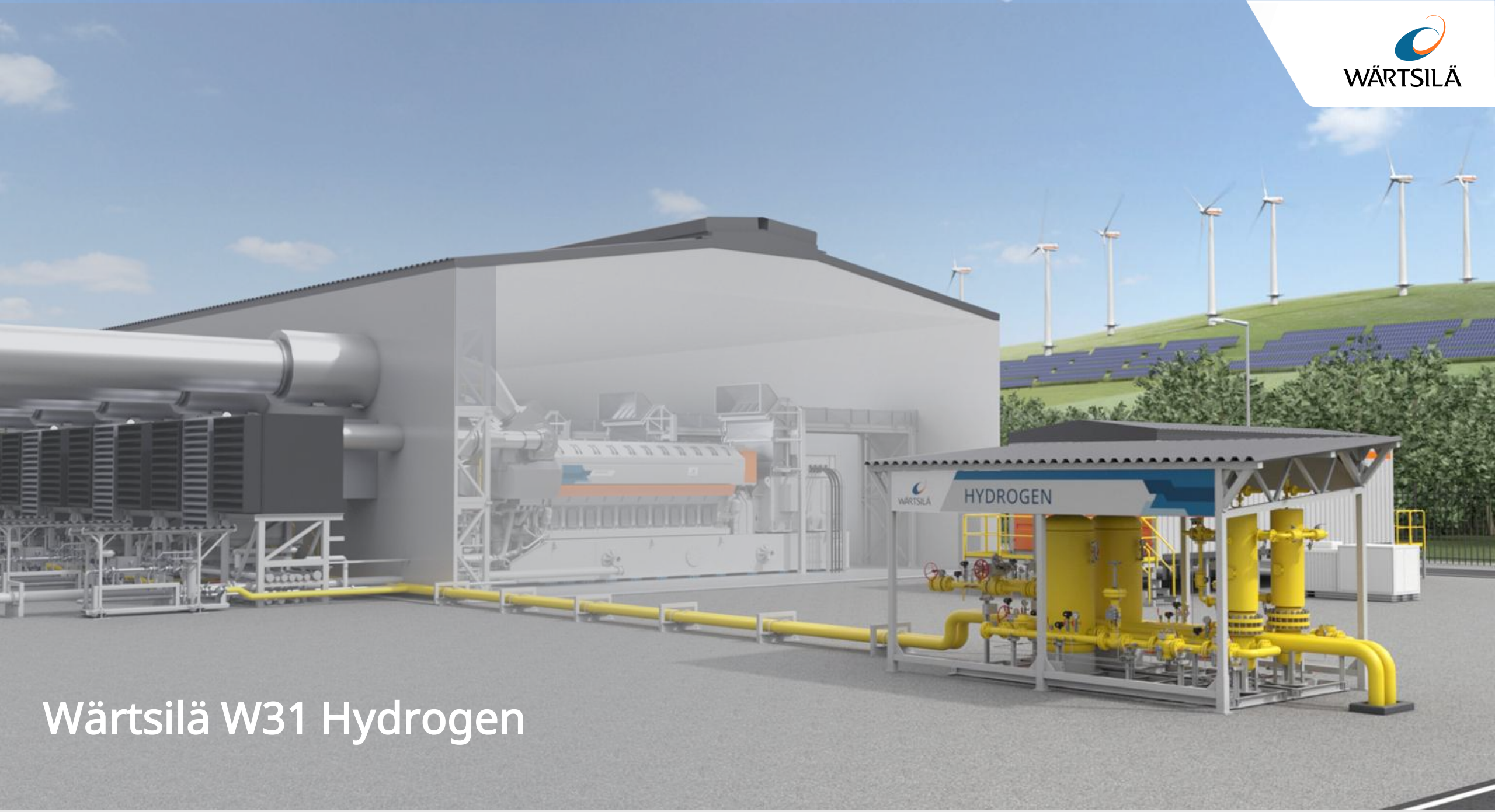
Released products: W9L25DF (Marine)

Same technology can be industrialized for other DF engines and is being currently explored.

CH_4

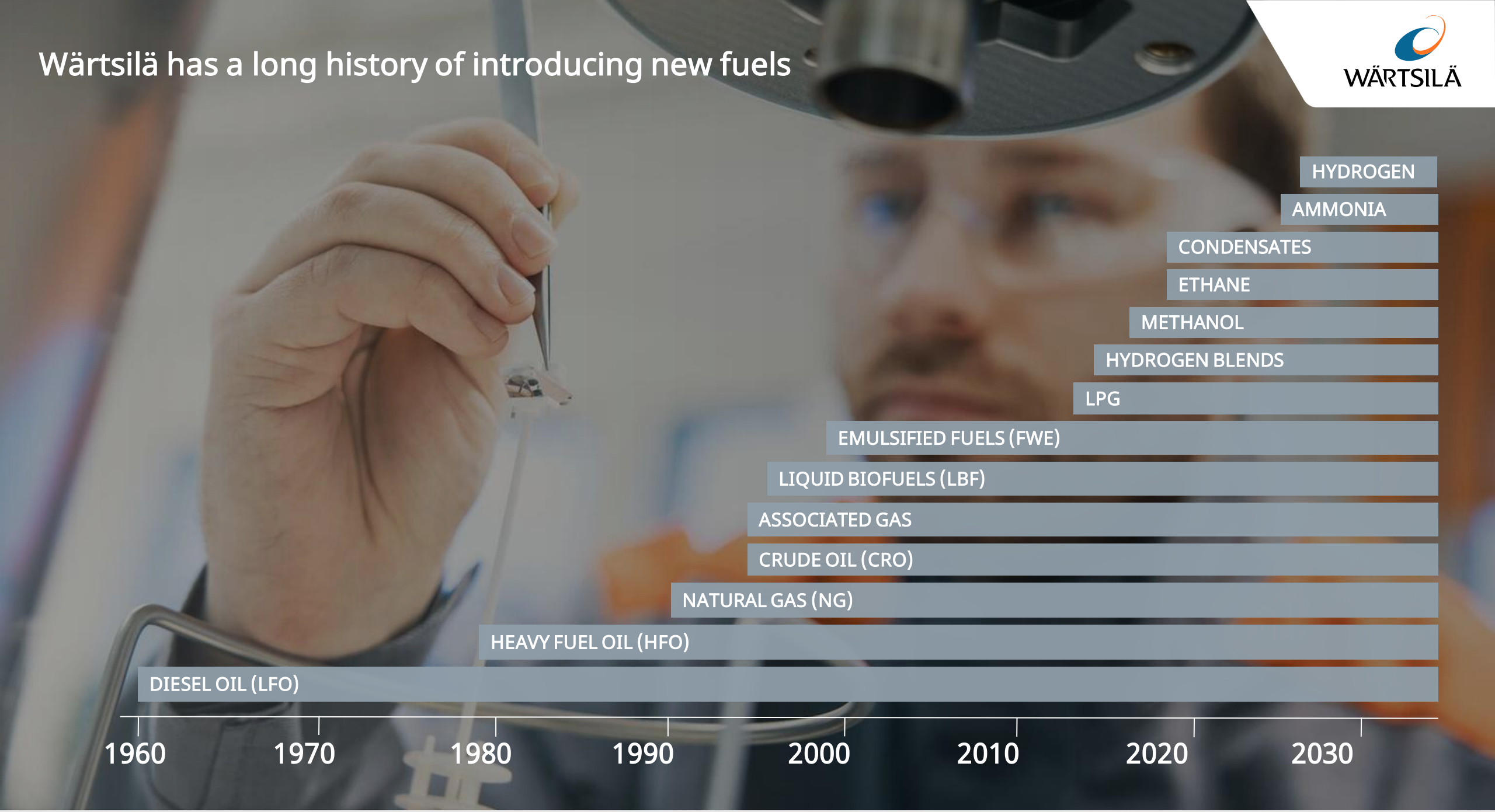
Bio- or Synthetic methane

Contains about 99% methane and can readily be used in liquid form with equipment made for LNG.



Wärtsilä W31 Hydrogen

Wärtsilä has a long history of introducing new fuels



DEMONSTRATORS

Mitigate the political risk

Create concrete evidence for stakeholders and authorities of the capability of your plant to operate on sustainable fuels

HYDROGEN | AMMONIA | METHANOL | ETHANOL

Demonstrators are not ready solutions and instead short-term tests of various concepts, and the feasibility must be evaluated case-by-case

A giant leap towards decarbonisation

Together with WEC Energy Group we have successfully completed **hydrogen blend tests on an unmodified Wärtsilä engine.** The results were outstanding: engine efficiency improved when running on the 25 vol% hydrogen blend, while also reducing greenhouse gas emissions. This was a world's first, testifying that **Wärtsilä's technology can support the decarbonisation of the energy industry.**

25 vol%

H2 hydrogen blend with 95% engine load

9.1%

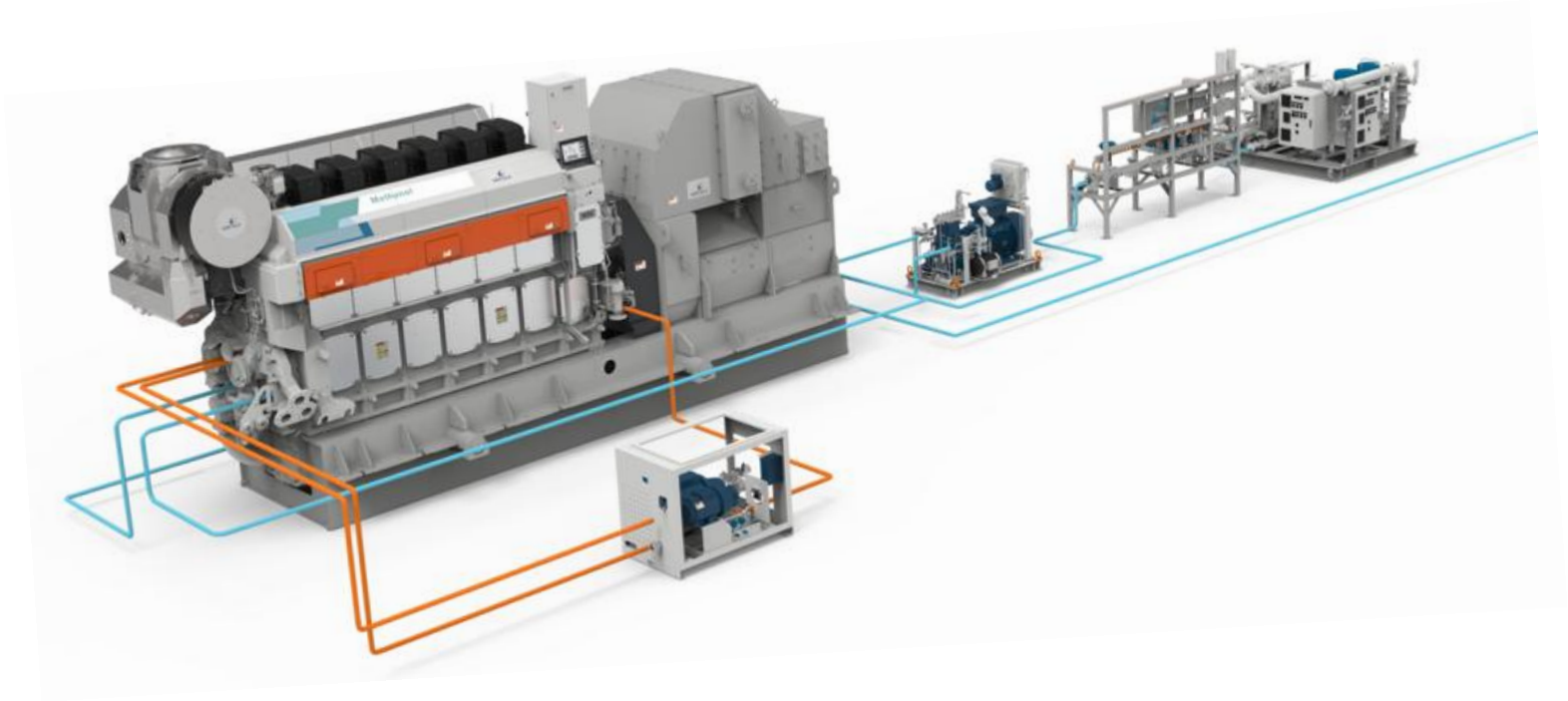
CO_2 CO_2 reductions at 95% load

WÄRTSILÄ

W9L32 Ethanol Demonstator

Free engine bed accommodating the new W9L32M engine

The W32 ethanol setup



Engine arriving at Suape port
Sep ’25

Start of installation and conversion
Dec ’25

Commercial Operation Date
Apr ’26

Concept validation

Engine-generator set and methanol container in place

Installation of the methanol container

Conversion from a diesel engine to ethanol engine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