SaveBlue

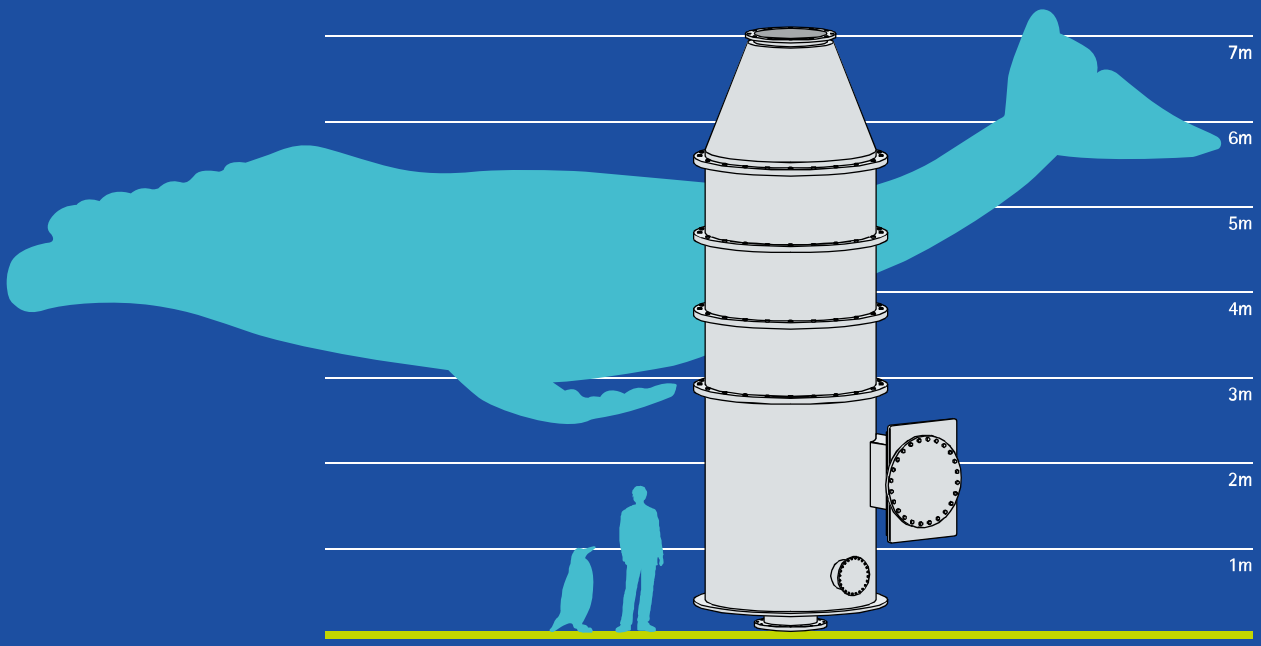
**Save the blue sky, save the blue ocean,
save the blue Earth**

Innovative marine exhaust and electric solutions from **Fuji Electric**

Fuji Electric

Innovating Energy Technology

The world's smallest wet scrubber is here



Creative use of space and resources are timeless hallmarks of ship design, as well as the guiding philosophy behind the new SaveBlue wet scrubber and laser gas analyzer, just two of the many environmentally minded products on offer from Fuji Electric.

As the 2020 IMO regulations draw near, the shipping industry must look into all feasible methods of compliance. As regards LNG, a number of studies point to the fact that the availability of this fuel, due to a lack of distribution infrastructure, is uncertain, not to mention the prohibitive cost of retrofitting existing vessels.

One thing is sure – major changes are needed, and Fuji Electric's solution is both the least expensive and the easiest to install, whether retrofitting or building new.

As well as being the world's smallest, our wet scrubber will pay for itself in three years, and it allows continued use of common heavy fuel oil (HFO). It makes sense to invest in a safe, sustainable solution that saves both money and the environment. The choice is clear: SaveBlue.

Searching for the best solution

To meet the coming IMO emissions regulations, there are several possible courses of action: installation of a wet scrubber, a switch to LNG fuel, or other options including the use of costly marine gas oil (MGO), which is less readily available.

LNG: A risky bet

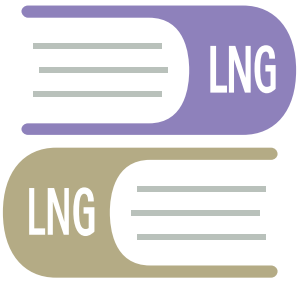
There has been much discussion about LNG as a potential marine fuel, and no comparative study of wet scrubbers and LNG can avoid a few key facts:

CAPEX

- The costs in money and time needed to retrofit a ship with a dedicated LNG driveline are undeniably high.
- By comparison, wet scrubbers require a smaller initial investment, and take less time to install.

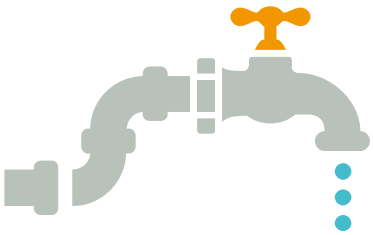
COMPLEXITY

- Once installed, an LNG-burning system is complex, requiring extra training for crew to ensure safe maintenance.
- Wet scrubbers, on the other hand, are "hands free," needing relatively little attention and maintenance.



AVAILABILITY

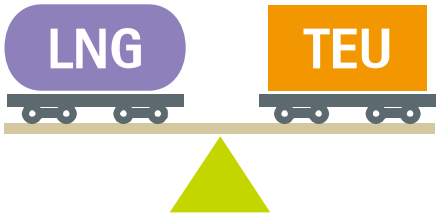
- The clear lack of adequate distribution infrastructure in Europe for LNG begs questions about its availability in the future.
- By contrast, wet scrubbers allow the ongoing use of abundant and inexpensive HFO while meeting the 2020 IMO regulations.



CARGO CAPACITY

- LNG loses the vital race for space. Fuel storage can eat as much as 3%* of a ship's TEU slots, which directly impacts profitability.
- Wet scrubbers are by far the most compact solution. They take up at most 0.3%* of available TEU slots, meaning savings on every voyage.

* From a study conducted by Germanischer Lloyd



SaveBlue

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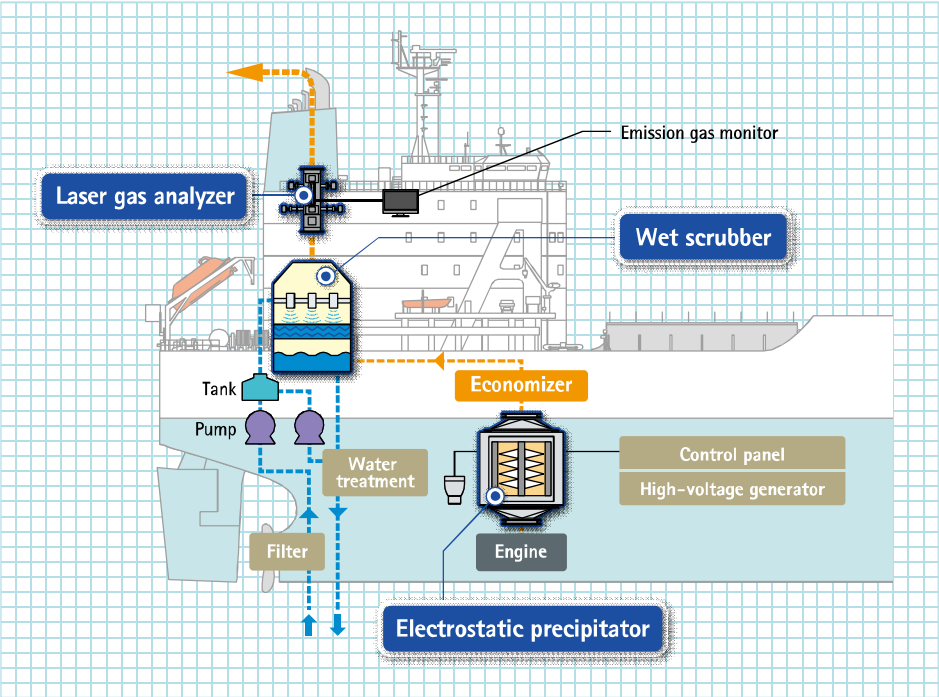
SaveBlue: The world's smallest wet scrubber and smartest gas analyzer

Aboard ships, use of space is linked directly to profitability. Thanks to Fuji Electric's innovative cyclone technology, a SaveBlue wet scrubber for a ship with a 10 MW engine is just seven meters tall and two meters in diameter, occupying less than half the volume of competitors' scrubbers.

The SaveBlue laser gas analyzer, which is compact, durable, and provides real-time monitoring, is easily installed on any marine wet scrubber to ensure compliance with the 2009 EGCS Guidelines while keeping your operating costs low.



The SaveBlue advantage

The SaveBlue wet scrubber yields more space to work with when designing new ships – as well as less-expensive, smoother retrofits.

OPTIMAL ENGINE PERFORMANCE

Our wet scrubber is specially engineered for minimal pressure loss, keeping engine performance at a premium.

ENERGY EFFICIENT

The Fuji Electric system uses half as much water as existing competitors' scrubbers, which means half as much power used for pumping.

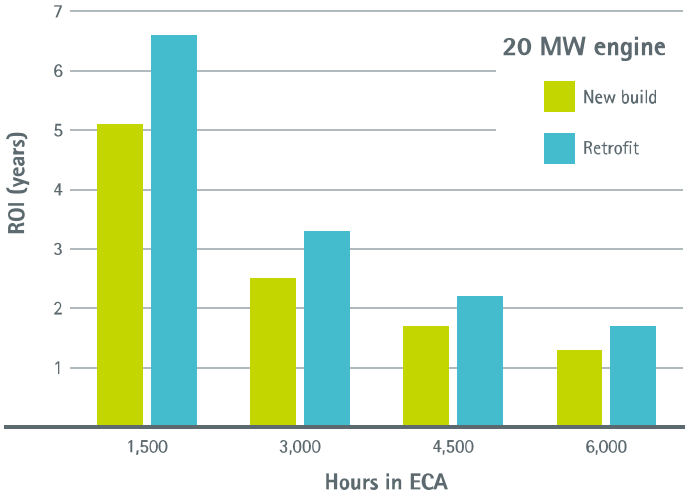
STRONG AFTERMARKET SUPPORT

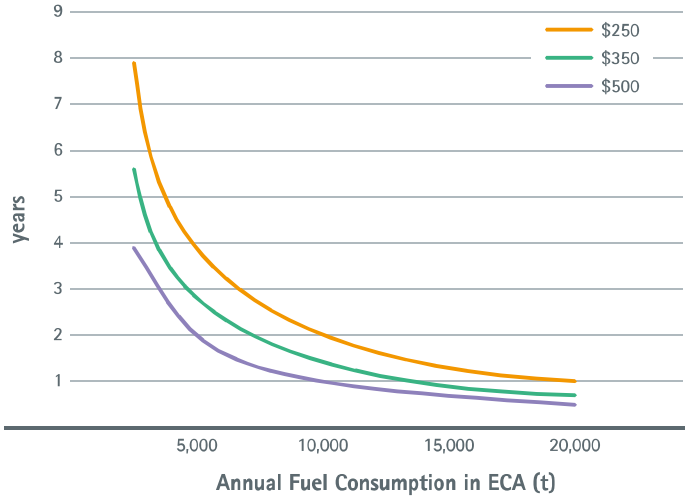
The SaveBlue solution comes with peace of mind, because we stand behind our products. From friendly remote support to fast solutions on the ground, our total aftermarket support will keep you running clean.

Return on Investment

The SaveBlue wet scrubber delivers where it counts most: the bottom line.
Return on Investment (ROI) calculations are complex and highly case specific, with variables including ship class, size and age, route, and time spent in Emission Control Areas.
With low installation and retrofitting costs, the Fuji Electric solution pays for itself in just three years.

Typical SaveBlue payback times





The Fuji Electric Solution

After decades of experience making tailored Environmental & Energy Management Systems (E&EMS) for multiple industries, Fuji Electric has decided to focus on the maritime industry. Our wet scrubber, laser gas analyzer, electrostatic precipitator, and inverters are just a few parts of the vessel-wide E&EMS we offer. These devices and others are designed to dovetail seamlessly, not only to reduce emissions in line with the 2020 IMO regulations, but to optimize power use in all onboard operations.