



THE FACTS

SUSTAINABILITY & SUPERYACHTS





TO SAY THAT THE SUPERYACHT INDUSTRY IS **COMMITTED TO BECOMING MORE SUSTAINABLE** IS AN UNDERSTATEMENT

In recent years, a substantial wave of individual and collective action has taken place across the industry, helping to reduce its environmental footprint and shape a more sustainable future.

And for good reason. The oceans are the lifeblood of our planet and the driving force behind yacht ownership. The superyacht industry is intrinsically connected to the oceans and its future relies on their health.

Thanks to the industry's many skilled designers, engineers and builders, as well as the extraordinary resources of owners, the superyacht industry is moving towards adopting a pilot role within the maritime community, pioneering new technology solutions to reduce the sector's environmental impact.



WHO ARE WE?

The Superyacht Life Foundation champions the positive people, places and projects surrounding the superyachting good life. We educate and inform, opening up the world of superyachts to new audiences.

Read our stories: thesuperyachtlife.com

IN A NUTSHELL

PROPULSION

- Diesel engines use state-of-the-art exhaust after-treatment systems to significantly reduce the amount of NOx and black carbon emissions.
- Diesel-electric hybrid technologies have been installed in superyachts for many years and are increasing in popularity.
- Hydrogen represents an exciting new frontier for propulsion that is being proactively investigated by the industry with several hydrogen-powered superyachts already in build thanks to the pioneering clients pushing innovation in this important field.

DESIGNING AND BUILDING

- Sustainable luxury is the new philosophy with designers swapping rare materials for sustainable interiors.
- Many superyacht builders have installed solar panels and other innovative technologies at their shipyards.
- Water Revolution Foundation, a non-profit that accelerates sustainability, has developed an assessment tool that measures and compares the environmental impact of design and build choices allowing for more sustainable choices to be made. Their database of sustainable solutions and yacht rating system will further improve sustainability across the industry.

OCEAN HEALTH

- Along with reducing the impact of yachts, the industry is working to restore and protect the oceans. Many companies provide financial support to ocean conservation programmes.
- Superyacht owners are doing their bit by assisting with research initiatives, including lending their yachts to scientists, and funding conservation programmes.



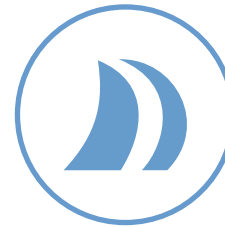
PHOTO: CBN



YACHTS ARE BECOMING MORE SUSTAINABLE

PROPULSION 101

The extraordinary resources and influence of owners, combined with the collection of skilled designers, engineers, architects and builders working in the industry, has enabled our industry to pioneer sustainable solutions to help superyachts reduce their environmental footprint. While this has been done for many years, the past few years have seen a marked increase in the adoption of innovative new propulsion systems with the aim of reducing emissions.



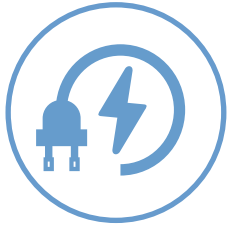
WIND

Good old-fashioned sails. Except that old-fashioned it's not. Innovations in sail technology have resulted in more efficiency and speed. Some sailing yachts even regenerate energy while sailing through hydro generation, reducing or eliminating their need for fossil fuel.



DIESEL

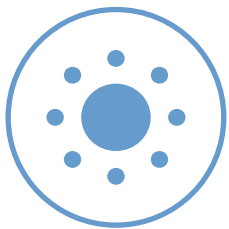
While many yachts still use traditional diesel engines, their impact has been mitigated thanks to new technologies. State-of-the-art exhaust after-treatment systems and filters significantly reduce the amount of NOx and black carbon emissions released into the air. It's also worth noting that, unlike shipping vessels, superyachts do not use HFO (heavy fuel oil), instead using the less-harmful, low-sulfur marine diesel EN590 which is among the most efficient fuels for combustion engines. Through additives, its impact can be reduced further.



HYBRID

Just like cars, hybrid technologies use a combination of electricity and fuel. Hybrid technologies have been installed in superyachts for many years and are increasing in popularity. Notable examples include:

- *Ethereal*, a 58m Royal Huisman launched in 2009, is considered the first hybrid superyacht.
- *Savannah*, an 84m Feadship launched in 2015, is billed as one of the first hybrid motor yachts with three generators and a combined total of approximately one megawatt-worth of batteries.
- *Black Pearl*, a 107m sailing yacht by Oceanco launched in 2016, uses special shaft generators which create free electricity by allowing the propellers to turn when the yacht is under sail.



SOLAR

While not yet a practical solution for larger yachts, solar has been used in innovative ways on a number of vessels.

- Both Sunreef Yachts and Silent Yachts have launched solar-powered catamarans up to 30m long.
- The sails on *Black Pearl* are intended to be replaced with a new 'solar cloth' that incorporates solar cells into the very fabric of the sail.
- *Artefact*, a 80m hybrid motor yacht by Nobiskrug uses solar panels to minimise its emissions.



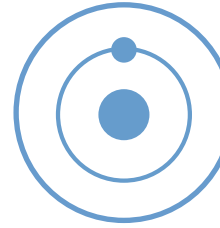
PHOTO: BEVERLEY WILKINSON



PHOTO: FEADSHIP



PHOTO: OCEANCO



HYDROGEN

Hydrogen represents an exciting new frontier for propulsion that is being proactively investigated by the industry.

- With zero emissions, it's no surprise that many superyacht builders are funding research into hydrogen fuel cells, looking into the viability of the technology and accelerating its path to adoption.
- In April 2021, German shipyard Lürssen announced that they were building a superyacht that will make use of this new technology. This is expected to be launched in 2025 and will run on methanol-hydrogen fuel cell power.
- In Norway, Green Yacht AS is currently refitting an existing yacht with hydrogen technology. Using the hull of a 28m Sunseeker, Hydrogen Viking will be upgraded to run on a combination hydrogen-battery propulsion system.

WHAT IS HYDROGEN FUEL CELL TECHNOLOGY?

Its premise is simple enough: Energy is generated by a fuel cell, powered by hydrogen and stored either in tanks or green methanol. The result? Noiseless, emission-free superyachts. It works by generating electricity when hydrogen is mixed with oxygen. Hydrogen fuel cell technology is extremely low in pollutants and, when combined with regeneratively-produced methanol, carbon-neutral as well. Once perfected, this technology is expected to radically change sustainability in the maritime sector.

IT'S NOT ONLY PROPULSION

For many years, luxury and sustainability didn't always go hand in hand. But that's all changing.

- Designers are swapping rare materials for sustainable interiors. Winch Design recently announced two interior concepts using only sustainable materials including a leather alternative made from pineapple leaves.
- Water Revolution Foundation developed a superyacht assessment tool that measures the environmental impact of design and build choices, including carcinogens, exotoxins and water use, allowing for more sustainable choices.

SHIPYARDS ARE REDUCING THEIR IMPACT TOO

Many shipyards are going the extra mile to ensure their own facilities are as sustainable as their yachts.

- Feadship's yard in Amsterdam uses 'district heating', a combination of renewable and surplus heat. In addition, the roof of the main building is covered in 2,262 solar panels generating an estimated 550,000 kWh of energy annually.
- Oceanco has also installed solar panels on the rooftop of their outfitting facilities in Alblasterdam which will cover up to 10% of the yearly energy consumption for the building.
- Ferretti Group also generates electricity through solar power and has converted all of its lighting to energy-saving LED lamps. In addition, its new 'trigeneration plant' which combines cooling, heating and power is expected to reduce the yard's electricity consumption by 79%.
- Sanlorenzo's Ameglia facilities are located inside the Montemarcello-Magra nature park. 8,000sqm of solar panels been installed and the site is designed to become self-reliant in terms of its energy use.

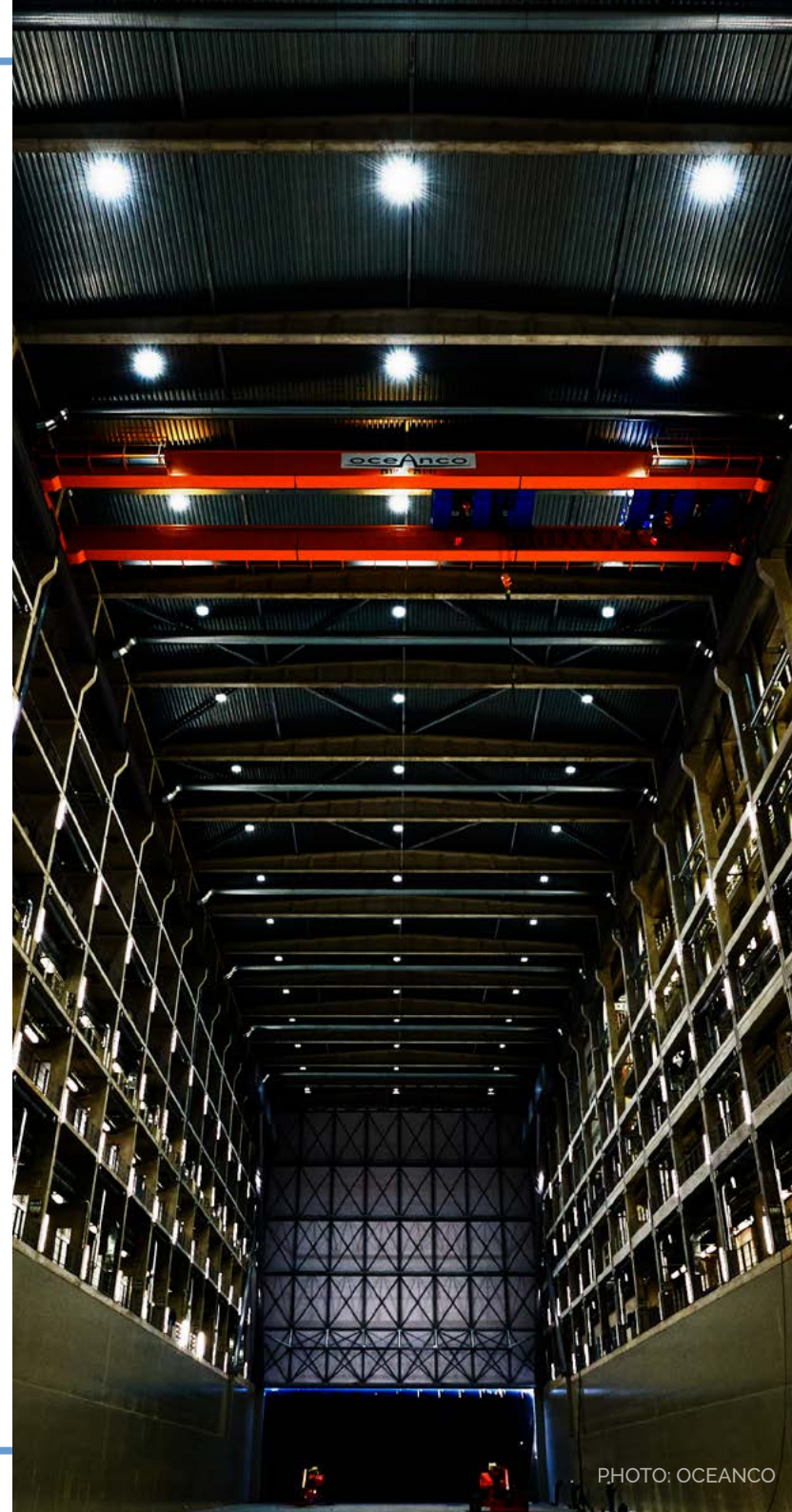


PHOTO: OCEANCO



COLLECTIVE ACTION IS BEING TAKEN

WATER REVOLUTION FOUNDATION

Leaders from the industry have banded together to establish Water Revolution Foundation, a non-profit that accelerates sustainability in the superyacht industry through collaboration and innovation.

- Over 50 companies have signed Water Revolution's code of conduct, each pledging to uphold ten commitments including sustainable consumption of natural resources and actively proposing sustainable solutions to clients.
- The foundation's superyacht assessment tool measures the environmental impact of design and build choices, including carcinogens, exotoxins and water use, allowing for more sustainable choices to be made.
- Water Revolution Foundation's database of verified sustainable solutions will centralise and facilitate the adoption of new technologies and ideas.
- The foundation's Yacht Environmental Transparency Index (YETI) is a rating system allowing yachts to be compared and benchmarked on their environmental credentials.



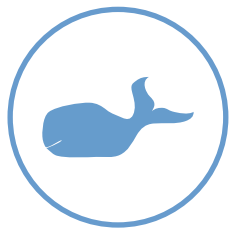
WATER REVOLUTION FOUNDATION

A non-profit on a mission to neutralise the footprint of the superyacht industry.

waterrevolutionfoundation.org

OCEAN CONSERVATION IS A PRIORITY

Along with reducing the impact of yachts, the industry understands the importance of restoring and protecting the oceans.



- Water Revolution Foundation recently endorsed IUCN's Important Marine Mammal Areas (IMMAs) programme as the first ocean conservation project for the yachting industry to collectively support as the stewards of the oceans that yachting directly relies on.
- Many superyacht companies, including Benetti, Imperial, Lürssen and Winch Design, provide financial support to Blue Marine Foundation, an NGO on a mission to put 30% of the world's oceans under protection by 2030.
- Superyacht crew have united under the Clear Ocean Pact, a commitment to reducing single-use plastics on board yachts.
- Brokerage firms are partnering with conservationists. Camper & Nicholsons support Mission Blue's efforts to protect the oceans. Meanwhile, Fraser partnered with the Plastic Oceans Foundation to help educate people about the dangers of plastic pollution.
- At marinas and yacht clubs, floating rubbish bins are being installed to help clear plastic debris.



SUPERYACHT OWNERS ARE DOING THEIR BIT TOO

Superyacht owners are increasingly concerned about the environmental health of the oceans.

- Many superyacht owners regularly collect data for environmental organisations. To help facilitate this, the International Seakeepers Society connects owners with scientists, allowing them to use yachts as platforms for marine research. Similar programmes include Yachts for Science and The Pelorus Foundation, both of which pair yachts with purposeful projects.
- Kjell Inge Røkke, Norwegian owner of *REV Ocean*, soon-to-be the largest yacht in the world, will use the vessel to carry out scientific research all over the world, uncovering new truths about our oceans and helping to preserve them in the process. *REV* will be able to carry 60 scientists and 30 crew members, allowing for ground-breaking research on climate change, overfishing and plastic pollution.
- Alongside ocean research, owners and their crew often participate in disaster relief, providing humanitarian aid to those in need. As incongruous as it might seem to see a yacht anchored up in such an environment, the size, capacity, speed and range of these vessels can make them ideal first responders. YachtAid Global is a non-profit that works with yachts to help deliver and coordinate disaster relief and development aid to coastal communities worldwide.
- The Bertarelli Foundation, meanwhile, provides significant funding for marine reserves. The foundation was set up by Ernesto and Kirsty Bertarelli, who own *Vava II*. The foundation has supported the creation of more than 2,000,000 km² of marine protected areas.



PHOTO: REV OCEAN

ABOUT THE SUPERYACHT LIFE FOUNDATION

There is much more to this industry than meets the eye.

The Superyacht Life Foundation works to correct misconceptions and share the positive aspects of the superyacht community to a wider audience, championing the positive people, places and projects surrounding the superyachting good life. As a non-profit foundation, we use our non-partisan status to educate and inform, opening up the world of superyachts to new audiences.

For more information or media inquiries, please contact:

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READ OUR STORIES
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