

Position Paper

SUSTAINABLE TRANSPORT INVESTMENT PLAN

Contribution to the call for evidence

The Shipyards & Maritime Equipment Association of Europe (SEA Europe) represents the European maritime manufacturing industry in 17 countries, encompassing the production, maintenance, repair, retrofit and conversion of all types of ships and floating structures – commercial as well as military – including the full supply chain with the various producers of maritime systems, equipment material, and services.

This document represents SEA Europe's response to the Call for Evidence for the Sustainable Transport Investment Plan. This contribution is based on the announcement made by the European Commission in the Clean Industrial Deal:

'A Sustainable Transport Investment Plan will outline short- and medium-term measures to prioritise support to specific renewable and low-carbon fuels for aviation and waterborne transport, on which many energy-intensive industrial sectors rely. It will also accelerate the rollout of recharging infrastructure.'

This contribution also aligns with SEA Europe's broader [recommendations](#) for the upcoming **Industrial Maritime Strategy**, which seeks to enhance the competitiveness, sustainability, and resilience of Europe's maritime manufacturing sector.

1. Background on the uptake and challenges of alternative fuels[1]

In January 2025, Clarksons Research's Green Technology Tracker outlined 'record investments in alternative fuel,' 'with overall newbuilding volumes reaching their highest level since 2007.'. According to public information from Clarksons Research[2], 'alternative fuel has continued to play a prominent role representing 50% of all tonnage ordered in 2024.'

The 2024 OECD Report on The role of Shipbuilding in Maritime Decarbonisation: Impacts of Technology Developments and Policy Measures highlights the following trends[3]:

- **'While the construction of alternative fuel capable ships is increasing, fleet uptake remains low.** The maritime sector is shifting toward low/zero-emission solutions, with ships capable of using alternative fuels making up over 52% gross tonnage in the global orderbook. Yet only around 7% of the global fleet can currently operate with these technologies, and maritime GHG emissions continue to rise.'

[1] Source: SEA Europe, Market Intelligence Report, June 2025 (see [here](#)).

[2] See [here](#).

[3] OECD (2025), The role of Shipbuilding in Maritime Decarbonisation: Impacts of Technology Developments and Policy Measures, OECD Publishing, Paris. See [here](#).

- **'Fuel optionality in ships is preferred to one specific fuel choice.** Fuel options in the orderbook point to increased diversification, with around 37% of vessels (by gross tonnage) being LNG capable, 9.7% methanol capable and 0.55% ammonia capable. Emerging technologies to reduce alternative fuel demand, such as battery, hybrid or nuclear propulsion, are also gaining traction for certain ship types but their uptake in the fleet remains relatively low (<1%).'
- **'Design and construction capabilities are regionally concentrated.** Chinese yards make up 47% of the orderbook in alternative fuel capable vessels in CGT, followed by Korea (42%). The building of methanol and ammonia capable ships is mainly concentrated in Korea, China and Japan, while ships capable of running on biofuels show a more diverse set of producer countries and manufacturers. European engine designers supply over 65% of the alternative fuel capable fleet and orderbook.'
CGT refers to Compensated Gross Tonnage, a measurement of the construction effort of ships.
- **'Retrofits in selected energy saving technologies and fuel conversions more than doubled since 2020** but account for less than 1% of retrofits and repairs. European and Chinese yards are leading alternative fuel conversions. Chinese yards also primarily carry out propeller and hull EST (energy-saving technologies) retrofits. Alternative fuel conversions focus on passenger vessels, EST retrofits on bulk carriers and containerships. Fuel conversions take significantly longer to complete than other retrofits (+45 days), hinting at potential capacity bottlenecks as demand grows.'
- **'In 2024, 82 builders constructed alternative fuel capable vessels.** The past ten years have seen growing capacity among shipyards to construct vessels capable of using alternative fuels, with their share of total active yards increasing to between 7 and 36% for different ship types in 2023. This trend is uneven across ship types and fuel options: bulk carriers and tankers lag in adoption, while a significant portion of yards build alternative fuel capable containerships and cruise ships. LNG currently leads in construction, with methanol also seeing increased growth.'

The transition to alternative fuels and energy carriers in the maritime industry presents several challenges that hinder widespread adoption. These challenges can be categorized into technical, economic, infrastructural, and regulatory barriers:

- Many alternative fuels and energy carriers, such as liquefied natural gas (LNG), hydrogen, ammonia, and methanol, require new or modified engine designs. Existing ships are often incompatible with these fuels, necessitating costly retrofits or entirely new vessels. The same is true for battery electric propulsion. Alternative propulsion requires significant changes to the overall ship design making retrofit extremely hard and also new builds require entirely new designs.
- Safety concerns arise with certain alternatives. For example, ammonia is toxic, hydrogen is highly flammable, and LNG requires special handling to prevent leaks and explosions and batteries have their very specific safety requirements as well.

- Fuel efficiency and energy density vary significantly. Many alternative fuels have lower energy content compared to traditional marine fuels, which affects ship range and operational efficiency.
- The initial investment for ships with alternative propulsion is high, making it financially unfeasible for many shipping companies.
- Alternative fuels also often have higher production and supply chain costs compared to conventional marine fuels, making them less attractive in the short term. Market demand and economies of scale are still developing, meaning alternative fuels are not yet as commercially competitive as traditional fuels.
- The global supply network for alternative fuels is underdeveloped. Bunkering facilities, storage, distribution networks, and electrical charging infrastructure are not widely available at major ports. Ensuring a reliable and consistent supply of alternative energy sources is a major hurdle, as many of these fuels are not yet produced at scale. Investment in port infrastructure and refuelling stations is needed, requiring significant collaboration between governments, fuel producers, and maritime companies.
- The regulatory framework for incentivising the use of alternative fuels is still evolving, leading to uncertainty for shipowners and operators. Different countries and regions have varying standards and incentives, which can complicate the global adoption of alternative fuels. Compliance with emissions targets set by the IMO and other regulatory bodies requires clear guidelines and incentives to encourage industry-wide transition.

The shipbuilder's point of view:

There is no one-size fits all solution for the various ship types in terms of green propulsion. The use of alternative propulsion requires the development of a large number of prototypes depending on the ship type or the shipowner's preference. Alternatively, the shipbuilder needs to make sure that the ship design is ready to accommodate one or more alternative fuels in the future.

It will require coordinated efforts between industry stakeholders, policymakers, and technology providers to address these challenges. While progress is being made, it is crucial to overcome these barriers to achieve a sustainable and low-emission future for the maritime sector.

2. SEA Europe's recommendations

Ensuring the large-scale availability of clean propulsion and reducing its price gap with fossil fuels is crucial to strengthening the business case for the entire maritime sector. This includes not only shipowners, but also shipyards and maritime equipment manufacturers, who all play a key role in the transition to a greener shipping sector. Making clean propulsion more accessible and affordable will **drive demand for new vessels and the most energy-efficient technologies and support investment in innovation.**

More generally, SEA Europe believes that the Sustainable Transport Investment Plan is an opportunity to **promote waterborne transport as a more efficient and sustainable alternative to road transport**, including through initiatives like **Green Corridors** for key shortsea routes.

To this end, SEA Europe outlines the areas of action hereunder.

- In March 2025, SEA Europe and European Shipowners|ECSA issued a joint statement[4] recommending the European Commission to **introduce binding obligations for the production and manufacturing of clean fuels in Europe** in line with the Net Zero Industry Act objectives. This should aim to secure the production levels needed by the maritime sector.
- SEA Europe calls upon the European Commission to **accelerate the rollout of port electrification and the deployment of onshore power infrastructure in European ports**:
 1. Enable the development and operation of electric-powered ships, such as passenger vessels;
 2. Ensure ships can meet the FuelEU Maritime requirement to connect to onshore power while moored.
- SEA Europe supports the **principle of technology neutrality for clean propulsion**, allowing all types of low- and zero-emission technologies to compete fairly, without favouring one solution over another. This includes not only alternative fuels, but also technologies such as fuel cells, wind propulsion, and battery-electric (assisted) propulsion, among others. The technology neutrality approach fosters innovation by encouraging the development of diverse clean propulsion solutions and letting the best technologies succeed based on performance and suitability. SEA Europe believes this is essential because shipyards act as system integrators, assembling complex vessels using equipment and technologies from various maritime manufacturers. A technology-neutral policy is key to choose the most effective and sustainable solutions for each project.
- SEA Europe believes that decarbonising shipping requires not only a focus on clean propulsion but also **strong support for energy-saving and emission abatement technologies**. Solutions such as – but not limited to – wind-powered propulsion, hull coating, air lubrication, fuel cell and carbon capture systems can significantly reduce emissions and fuel consumption. These technologies are essential complements to renewable and low-carbon fuels and clean propulsion systems, and help accelerate the transition to greener shipping. Since shipyards integrate a wide range of systems from different maritime equipment manufacturers, supporting a broad range of energy efficiency measures gives them the flexibility to build vessels that are both innovative and environmentally efficient.

[4] See [here](#).

- SEA Europe calls upon the European Commission to **urgently assess and amend EU regulations that inadvertently hinder technology development and scale-up in Europe, including those under the FuelEU Maritime Regulation.** Regulatory obstacles or inconsistent technical requirements are hindering research and development, deterring investment in the technology, and jeopardizing the competitiveness of European manufacturers. Furthermore, it excludes technological solutions that offer similar or even superior overall performance in terms of greenhouse gas and pollutant emissions compared to other technological alternatives. Delays in scaling up innovation risk the loss of strategic markets and critical technologies to global competitors. A swift regulatory review and correction process is essential to ensure Europe remains a global leader in clean and advanced technologies, including near-zero and zero emission technologies. As a concrete example, the Fuel Cell technology using other fuels than e.g. Hydrogen or Ammonia, and more specifically the 'High-temperature' Fuel Cells, must be recognised as a valid technology under FuelEU Maritime. The broader emission reduction benefits of this technology offer significant local pollutant and global GHG emissions reduction benefits, beyond the zero-emission at berth requirement under FuelEU Maritime. In the same vein, the use of technologies such as hull coatings, solar power, waste-heat-to-power, and hull air lubrication systems must be further acknowledged in European legislations as energy efficient means to reduce ship's consumption.
- SEA Europe calls upon the European Commission to ensuring that **all clean maritime technologies are eligible for EU financial instruments and State aid schemes** without discrimination, in order to facilitate their scale-up.
- SEA Europe calls upon the European Commission to conduct a **targeted evaluation of the technical criteria of the EU Green Taxonomy for the maritime industry** to support the development of more pragmatic criteria that incentivise private investment in the maritime manufacturing industry. Since the EU Taxonomy defines a 'best in class' green standard, it overlooks the essential incremental investments needed to scale up clean technologies and transition to net-zero. If transitional investments are not considered eligible to the Taxonomy, they will fail to attract private financing – putting the European maritime sector at a competitive disadvantage against global competitors who are moving forward more pragmatically. In practice, **the EU Taxonomy has had a directly detrimental impact on innovation and investment, as it has been applied to determine eligibility for support from the European Investment Bank and the Innovation Fund.** This use has narrowed the scope of such support and overlooked the broader spectrum of essential transition investments. We consider this a **misuse of the EU Taxonomy**, which was originally intended to identify the most sustainable activities and guide private capital toward them. It was not designed to serve as the definitive benchmark for the entire green transition – a process that is, by nature, transitional.

Background Note:

SEA Europe represents close to 100% of the European shipbuilding industry in 17 nations, encompassing the production, maintenance, repair, and conversion of all types of ships and floating structures, commercial as well as naval, including the full supply chain with the various producers of maritime systems, equipment material, and services. As an NGO observer at the International Maritime Organisation (IMO), CESA represents the shipbuilding industry and its supply chain from EU Member States, Norway, and Turkey. For further information please visit www.seaeurope.eu or contact: press@seaeurope.eu