

Green Shipping

Highlighting
the Issues



Dolores Mirmi
Project Adviser
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Why is Green Shipping such a relevant issue now? Why has Green Shipping moved up onto everyone's agenda?

Introduction Atlantic will demystify “Green Shipping” by publishing a series of insightful papers on the subject in the coming weeks. This first paper is just an introduction to the topic. In the following papers, we will analyze each aspect of this topic in more depth.

Increasingly, all stakeholders in the shipping industry are realizing the necessity to become more sustainable. There are several reasons for that: political and financial reasons, new environmental legislation, an unquestionable necessity to reduce the emission of greenhouse gases (GHG) in order to combat climate change and preserve the environment, and so on. However, what does this imply for Owners, Charterers, Traders and even Insurers? Will there be a shift in trading patterns and new statutory requirements regarding pollution? And equally importantly, can all stakeholders in the marine industry afford to support sustainability goals? Finally, is it possible to achieve complete green shipping by 2050? We will discuss a number of angles as the shipping sector embraces decarbonization (i.e., using alternative fuels to reduce emissions from ships).



1 Greenhouse Gas Pollution and Political Context

In recent times, the global temperature has been increasing in an alarming way and the earth's climate has changed dramatically. We can see all this by many examples, such as, extreme weather events, warming oceans, global temperature rise, glacial retreat, sea level rise, etc. In order to tackle the climate crisis, many countries have committed to the reduction of their GHG emissions in the Paris Agreement. It is important to remark that Biden Administration have returned the US to the Paris Agreement and have also set new "green" goals for the United States of America.

In line with the Paris Agreement, many countries have agreed that the shipping industry needs to contribute in the combat for climate change and reduce gradually the emission of greenhouse gases. Especially, the EU has established very ambitious goals to regulate European shipping in order to ensure the sector contributes to the EU's climate goals, but how to cut GHG emissions? Improved efficiency, reductions in carbon intensity, but also, and more importantly alternative fuels.

2 Alternative Fuels

Shipping needs to deploy green alternative fuels in order to fully decarbonize. What are the options?

- Ammonia
- Hydrogen
- LNG
- Batteries

Each alternative fuel has different characteristics, advantages and disadvantages that vary by ship type, size and route. It is important to point out that a lot of research is still needed around these fuels. There should also be consideration of the port infrastructure and supply chain that would support their deployment.



3 Technical Issues

Not only green alternative fuels have to be used to tackle climate change, but also technical measures and operational options have to be adopted to improve energy efficiencies.

Shipping could also cut up its emissions by improving its technical and operational energy efficiency. This can be achieved by installing energy saving devices such as wind-assist, but also through operational changes including optimizing/reducing operational speed. Other examples some suggest are: new vessel designs with main engine and auxiliary engine improvements, propeller optimization, hull shape optimization, voyage optimization, slow steaming - speed limit, zero-emission/berth (plug-in at Port), and so on.

4 IMO (International Maritime Organisation) – Legal Aspects

Recently, the Marine Environment Protection Committee (MEPC) at the IMO held a meeting (10-17 June 2021, MEPC 76) to discuss the measures to substantially reduce emissions. Some measures relate to the carbon intensity and operations of the ships themselves and others aim to impose taxes on heavy fuels that release high emissions to make alternative green fuels more attractive. However, this second approach was dismissed for now at the above-mentioned meeting and will only be discussed in November 2021, although delegates adopted some measures around carbon intensity and efficiency of ships, which has justified criticism in general, as it is not a very efficient measure to solve this problem.



5 Shipping Finance – Poseidon Principles

The so called “Poseidon Principles” set a framework for assessing and disclosing the climate alignment of ship finance portfolios. As such, the Poseidon Principles imply the following: an assessment of climate alignment, accountability, enforcement, and transparency. Many leading banks, jointly representing approximately USD 100 billion in loans, have set the Poseidon Principles. These Principles will enable financial institutions to align their ship finance portfolios with responsible environmental behavior and incentivize the decarbonization of international shipping.

6 Conclusion

To make an important contribution to battle global warming, the shipping industry must take immediate action to reduce greenhouse gas emissions. This is easier said than done and the main burden will naturally fall on shipowners. However, other stakeholders in the shipping industry will also need to make their contributions. As mentioned, the challenges to adopt alternative green fuels, whether of financial, technical, or of operational nature are enormous but fortunately a number of different energy innovations have emerged and do pose viable options and solutions if the industry as a whole pulls together. Upfront investment will be sizeable but this Herculean Task cannot be looked at in the context of a business plan but is essential for a great good of mankind. Besides, our oceans are the habitat of global shipping and to preserve them is in shipping’s best interest, too.

Contact



RICHARD ADLER
Key Client Broker CCO
adler@atlanticbrokers.com
+44 7393 600 724



DOLORES MIRMI
Project Adviser
dmirmi@atlanticbrokers.com
+34 91 563 86 32