

The introduction of alternative fuels to power the world maritime fleet is vitally important to assist with limiting the impact of global warming. These are some of the practical factors which may be taken into account when considering which alternative fuels may be most appropriate or likely to be taken up within the maritime community.

Operational Safety and the Environment



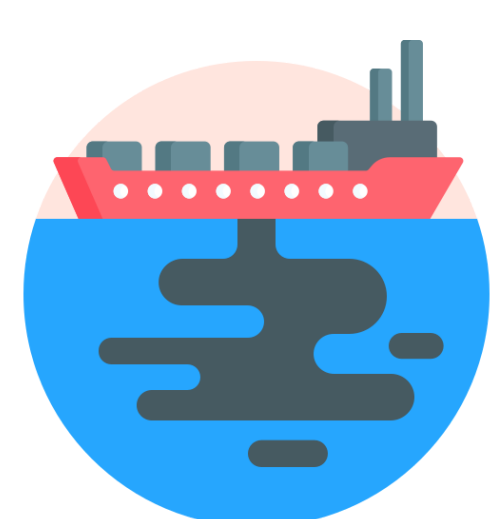
Personnel

To ensure safety of crew, fuel hazard characteristics relating to people must be considered and control measures introduced.



Vessel

Hazards posed by alternative fuels in relation to safety of the vessel and its systems must be adequately understood.



Environment

The potential for inadvertent discharge of alternative fuels into the environment may still exist, so consider necessary safety measures.



Regulations

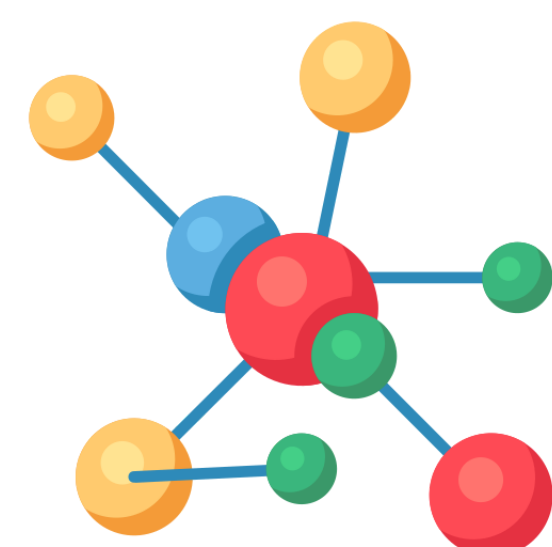
Regulatory regimes under maritime authorities for the use of alternative fuels on board are fundamental to operational safety.



Training

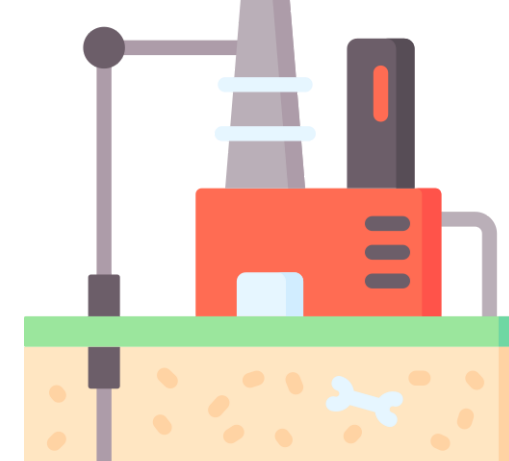
Further training for crew will be necessary to improve knowledge of specific characteristics of the alternative fuels and their hazards.

Characteristics of Operational Utilisation



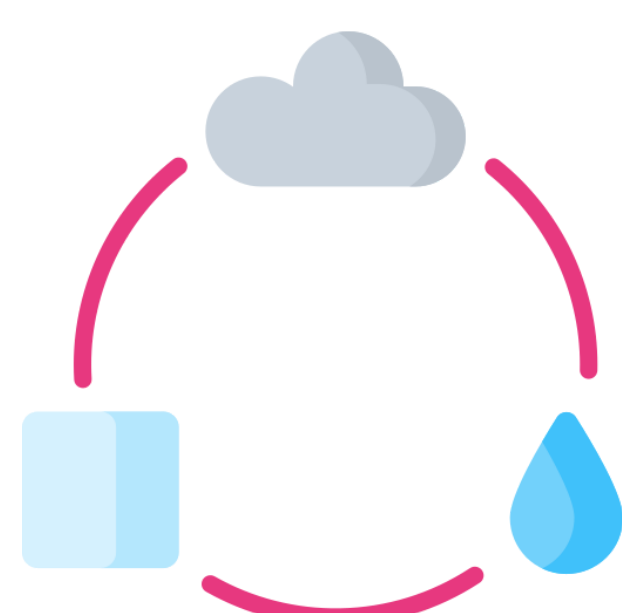
Fuel Characteristics

Differences in the physical and chemical characteristics influences their handling and storage, and the resultant emissions.



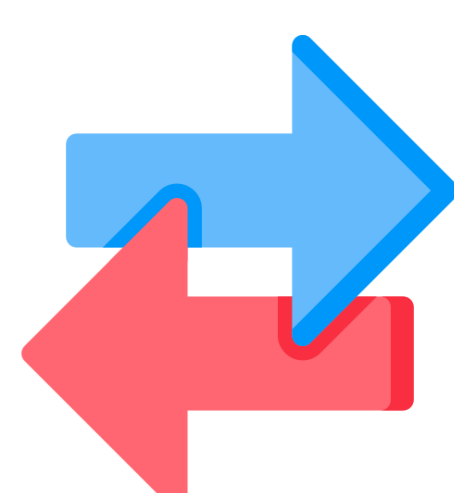
Production Methods

Alternative fuels can be produced using different methods and various source materials, such as fossil based through to biomass and renewable energy.



Carriage States

Traditional handling and storage practices may not be possible, requiring the use of machinery and systems that are only used in specialist applications at present.



Possible Interchangeability

Where some alternative fuels have relative similarity in physical characteristics it may be possible for fuel substitution if machinery systems are compatible.

We welcome all feedback on this or any other Loss Prevention guidance, so please feel free to contact the [Loss Prevention team](#) should you have any comments.

Characteristics of Fuel Production



Sustainability Issues

The sustainability of alternative fuels is associated with their source materials and with the impact of them being used to replace traditional fuels.



Fuel Availability

Fuel product availability is dependent upon their terrestrial accessibility, global distribution and the specific quantities known to be in reserves.



Adoption Trends

The number of vessels at present that have, or can be modified to have, the systems needed to safely carry and use specific alternative fuels.

What is the goal?

A reduction in GHG emissions striving for 30% by 2030, then 80% by 2040 compared to 2008 levels, with an aim to reach net-zero emissions as close to 2050 as possible.

Where can I find more information?

You can read more about the considerations of alternative fuels for the maritime industry [here](#).