



# ABS: THE IMO AND EU REGULATORY FRAMEWORK FOR MARINE BIOFUELS

Regulations aimed at reducing air pollutants and emission of greenhouse gases (GHGs) from shipping have increased interest in the use of biofuels, writes Konstantinos Theocharis.



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**M**ARPOL Annex VI has dealt with the use of biofuels by fuel oil quality regulations under Regulation 18.3.2, while the ISO standard 8217 “Petroleum products – Fuels (class F) – Specifications of marine fuels” was modified in 2017 to widen tolerance for use of biofuels in existing and new fuel oil grades.

## SOLAS and ISM Code

Liquid biofuels, or biofuel blends, intended as ‘drop-in’ fuels to replace conventional residual or distillate fuel oils are to meet the SOLAS requirement for a flashpoint of not less than 60° C.

The IMO International Safety Management Code (ISM Code) provides an international standard for the safe management and operation of ships and the prevention of pollution. With respect to biofuels, the fuel supplier’s fuel specifications, Bunker Delivery Note (BDN), SDS sheets, equip-

ment manufacturer’s recommendations and industry stakeholder guidelines provide the basis for operators to undertake their ISM Code obligations.

## IMO DCS

MEPC 80 approved circular MEPC.1/ Circ.905 Interim guidance on Biofuel (with application as of 1 October 2023) which provides that properly certified biofuels with a well-to-wake (WtW) GHG emissions reduction of at least 65 percent compared to fossil MGO of 94 gCO<sub>2</sub>e/MJ (i.e., not exceeding 33 gCO<sub>2</sub>e/MJ) may be assigned a Conversion Factor (CF) equal to the value of the WtW GHG emissions of the fuel according to the certificate multiplied by its Lower Calorific Value (LCV).

This allows GHG intensity credit to be given to sustainable biofuels/biofuel blends for the purpose of DCS and CII, pending the development of the comprehensive method



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EU MRV Regulation, requiring the reporting of total aggregated emissions of GHGs covered by Directive 2003/87/EC with any applicable derogation such as the derogation from the general principle to use the default CO<sub>2</sub> emission factor (EFCO<sub>2</sub>) for the case of sustainable certified biofuels.

The Renewable Energy Directive, Directive (EU) 2018/2001 (RED II), Article 29 specifies the sustainability and GHG emissions saving criteria that a biofuel shall comply with to be considered sustainable. In that case, according to paragraph 1.2 Derogation from the general principle and use of emission factors pursuant to Article 14 of Directive 2003/87/EC, of Part C under Annex II, the EFCO<sub>2</sub> of the biomass fraction of the fuel shall be zero.

### Class Requirements

Biofuels or ‘biodiesels’ are still considered liquid fuels and therefore are not a ‘type defining parameter’ under ABS Marine Vessels Rules of an internal combustion engine. Furthermore, not all internal combustion engines are designed for the wide variety of residual and distillate marine fuels that are available for marine application.

The suitability of the engines to burn all marine fuels is also demonstrated through the engine designer’s internal testing, which forms part of the manufacturer’s MARPOL Annex VI Technical File Stage A type testing.

Engine type tests (and NO<sub>x</sub> certification testing) are typically undertaken on distillate grade marine fuels, and this is acceptable for all liquid fuels, under the type defining parameters, that an engine may operate on in service. The suitability of a particular engine design to burn biofuels should be confirmed by the engine designer, who will typically issue generic guidance or provide specific acceptance of a particular biofuel.

to account for WtW GHG emissions and removals based on the IMO Guidelines on Life Cycle GHG Intensity of Marine Fuels (LCA Guidelines). For fuel blends, the CF is to be calculated as a weighted average of the CF for each amount of fuel, biofuel and fossil fuel, by energy.

The CF value of a biofuel cannot be less than zero in any case. The verification of the reported biofuel consumption shall be backed up with Proof of Sustainability (PoS) or similar documentation from a UN recognized scheme along with the Bunker Delivery Note (BDN).

### EU MRV

Regulation (EU) 2023/957 introduced several amendments to Regulation (EU) 2015/757, EU MRV with the purpose of aligning the MRV system with the additional reporting requirements that arise from the inclusion of maritime industry in the EU ETS. To that aim, Delegated Regulation (EU) 2023/2776 introduced Part C in Annex II of the



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