INTERNATIONAL MARITIME ORGANIZATION

IMO’s ruleset and policies relevant for the use of biofuels

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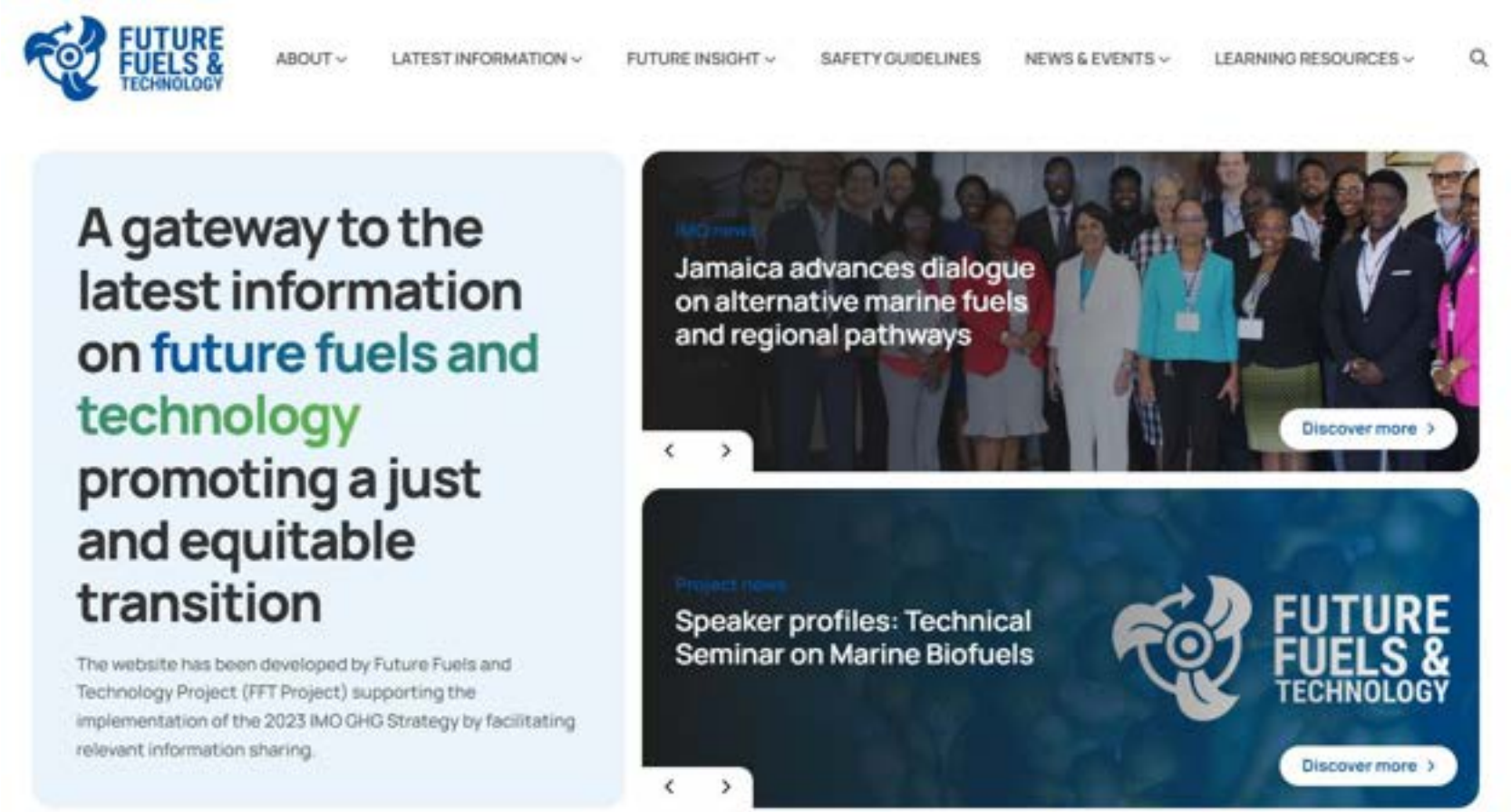


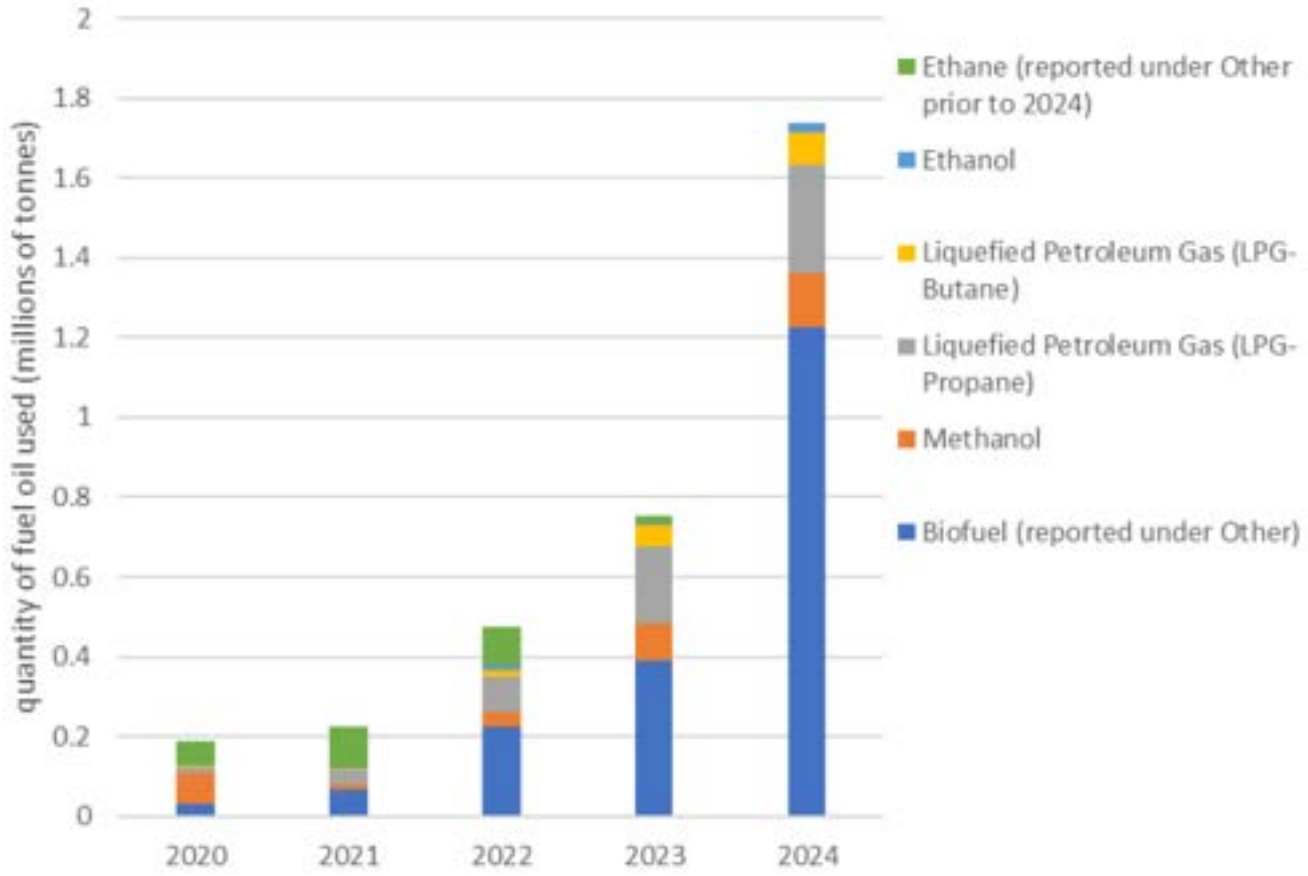
https://futurefuels.imo.org/

Contact us:
futurefuels@imo.org

IMO Ship Fuel Oil Consumption reporting

Document MEPC 84/6/1:
latest IMO DCS report (2024 data)

- The volume of **biofuel** used by ships >5,000 GT is rapidly increasing
- 1,225,531 tonnes used in 2024 (390,846 tonnes in 2023)



MARPOL Annex VI regulations on air pollution

- For "**drop-in**" biofuels: relevant MARPOL Annex VI requirements apply: fuel quality, Bunker Delivery Note, sulphur content, etc.

- MEPC.1/Circ.795/Rev.9: unified interpretation to regulation 18.3 of MARPOL Annex VI
  - Allows liquid biofuels (up to B30) to be used in engines certified under Annex VI without extra NO_x testing, provided they do not cause exceedances of emission limits
  - For blends >30% biofuel with changes to the NO_x critical components or settings, assessment of NO_x impacts is required

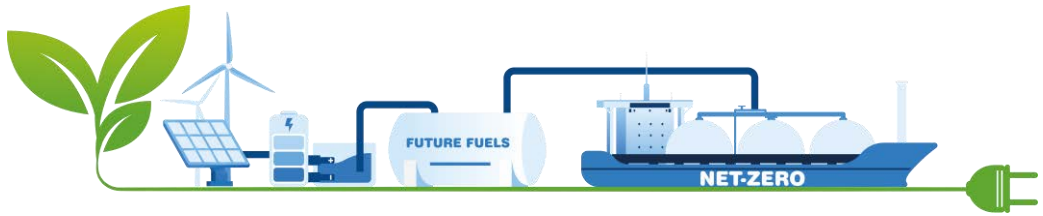
Use of biofuels under CII regulations

- MEPC.1/Circ.905: *Interim guidance on the use of biofuels under regulations 26, 27 and 28 of MARPOL Annex VI (DCS and CII)* approved by MEPC 80 (July 2023)
  - Allowing the use of sustainable biofuels for CII compliance
  - WtW value certified by an international certification scheme (ref: ICAO)
  - Proof of Sustainability to be provided for verification
  - Interim solution, until LCA framework is fully operational

Biofuels GHG emissions assessment

- **LCA Guidelines -** provide a general methodology for the assessment of GHG emissions of all marine fuels, including biofuels, on a well-to-wake basis
- Review of proposed default WtT and TtW emission factors by **GESAMP-LCA WG**
- Review of LCA methodology, including sustainability aspects such as **ILUC**
- Draft Guidelines on **marine fuel certification**
- Draft Guidelines on the **fuel lifecycle label (FLL)**
- Draft Guidelines for Test-Bed and Onboard **Measurements of Methane (CH_4) and/or Nitrous Oxide (N_2O)** Emissions from Marine Diesel Engines

Sustainability themes/aspects in the IMO LCA Guidelines
1. GHGs
2. Carbon source
3. Source of electricity/energy
4. Carbon stock – DLUC
5. Carbon stock – ILUC
6. Water
7. Air
8. Soil
.9 Waste and chemicals
.10 Conservation



Biofuels carriage requirements

- MSC-MEPC.2/Circ.17: *2019 Guidelines for the Carriage of Blends of Biofuels and MARPOL Annex I Cargoes*
  - Biofuel blends containing <75% of a MARPOL Annex I cargo are subject to MARPOL Annex II (IBC Code carriage requirements)
- MEPC.1/Circ.879: Guidelines for the carriage of energy-rich fuels and their blends
  - energy rich fuels which are not petroleum-based should be covered by MARPOL Annex I, i.e., not necessary to require biofuels to be carried only on chemical carriers
- MEPC.1/Circ.917: *Interim guidance on the carriage of blends of biofuels and MARPOL Annex I cargoes by conventional bunker ships* adopted by MEPC 83 (April 2025)
  - allowing up to 30% biofuel blend in conventional bunker ships

IMO safety requirements for biofuels

- On the use of **liquid biofuels** (e.g. FAME, HVO), there is already a wide set of safety rules applying today, including for blends
- **IGF Code** applies to all low-flashpoint fuels, including LNG and bio-methane
- MSC.1/Circ.1621: *Interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel* approved by MSC 102 (November 2020)
  - Based on the principles of the IGF Code
- **CCC** Sub-Committee is revising guidelines for methyl/ethyl alcohol as fuel (ethanol/methanol) to ensure consistency in the approach regarding requirements on toxicity:
  - Correspondence Group established by CCC 11 (September 2025)
  - ISWG + CCC 12 in 2026
  - Approval expected in 2027
- MSC 110 recommended to develop new guidance on the safe storage and handling of **FAME** as fuel (CCC)

Which of the following topics would you like the next Technical Seminar to focus on?

- Ammonia
- LNG (including bio- and e-LNG)
- Methanol
- Hydrogen
- Batteries
- Fuel Cell
- Nuclear Propulsion

Scan the below QR Code or enter the following code on the Slido website: 4624251

https://app.sli.do/event/ksCSwtoW9onCUae7JS6sCc

Thank you.

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