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🚢 💡 New Global Paradigm in Marine Fuels – What It Really Means

Green fuels are no longer theory — they are now policy.

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Insight Analysis Covers

- IMO Approves Global Carbon Fee creating a Marine Green Fuels Market
- Methanol & ammonia as future marine green fuels
- The hidden costs of artificial markets
- Who benefits, who pays, and how green is green?
- Unlocking renewable energy integration

IMO Approves Global Carbon Fee

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- The International Maritime Organization (IMO) has approved a global carbon fee — a historic first for any UN body.

- ➡️ Core Changes:
  - Ships pay $380/ton CO2 above allowed limits
  - Clean ships benefit with a $100/ton CO2 fee
  - Top performers receive carbon credits
  - Small ships are exempt from the regulation
  - Biofuels are now officially considered green fuel

IMO Emission Reduction Targets

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- The IMO's new regulations aim for ambitious decarbonization in maritime shipping:

- ➡️ Emission Reduction Goals:
  - 20-30% reduction by 2030
  - 70-80% reduction by 2040
  - Net-zero target around 2050

- These targets support the acceleration of green fuel adoption and innovation in shipping technologies.

Technical Perspective: Methanol as Marine Fuel

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- Lower toxicity and easier handling than ammonia.
- Dual-fuel engines already in use (e.g., Maersk).
- Compatible with existing fuel infrastructure.
- Short- to medium-term viable option for decarbonization.

Technical Perspective: Ammonia as Marine Fuel

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- High energy density and carbon-free fuel.
- Major challenges:
  - Toxic and corrosive, posing safety risks.
  - Technology still in pilot stage.
  - Requires new bunkering infrastructure.
- Promising for long-term decarbonization but not yet mature.

Economic Implications of Artificial Market Creation

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- Initial support from regulation helps market uptake.
- Risks:
  - Distorted pricing.
  - Overcapacity or underutilization.
- Long-term sustainability depends on market efficiency and global coordination.

Impact on Shipping and Trade

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- Transition to green fuels may increase operational costs.
- New infrastructure and retrofits required.
- Potential pass-through to global supply chain prices.
- Incentivizes innovation in fuel efficiency and cleaner logistics.

Ensuring Fuels Are Truly Green

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- Need for robust certification systems.
- Traceability of production origin is key.
- Lifecycle emissions analysis must be standardized.
- Examples: Lhyfe and Atmen working on hydrogen traceability.

Link with Renewable Energy Absorption

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- Green fuels can absorb surplus renewable energy.
- Facilitates energy storage and seasonal balancing.
- Supports decarbonization of primary fuel consumption.
- Complements grid stability and climate targets.

Conclusion

- New IMO regulations support the acceleration of green fuel adoption and innovation in shipping technologies
- Methanol: ready and practical for now
- Ammonia: promising but needs safety and tech maturity
- Artificial markets can kickstart adoption
- Marine Green Fuels will increase Renewables penetration
- Certification, infrastructure, and policy alignment are critical

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