Context

- March 2020, first **EU Climate law**. Aimed to write into law the goals set out in the European Green Deal.

- **2030 Climate Target Plan**, the Commission proposed to cut EU GHG emissions by at least 55% in 2030 and to become climate neutral in 2050.

- The targets were endorsed by the European Council in December 2020.

- Parliament and Council provisionally agreed on these targets in April 2021.

- On **14 July**, the Commission proposed the **Fit 55 package** implement the targets.
Emission Trading System – gradual extension to maritime from 2023 with 3-year phase-in period, same CO₂ price across sectors, yearly ‘cap’ on the total emissions covered by the system and gradual reduction of cap over time, attribution of shipping companies to national administering authority to ensure compliance.

Energy Taxation Directive zero minimum rates for sustainable fuels (biofuels and biogas, low-carbon-fuels, renewable fuels of non-biological origin, advanced sustainable biofuels and biogas, and electricity) for 10-year transitional period.

Effort Sharing Regulation – national targets continue to include domestic maritime.

Renewable Energy Directive – counts energy used in international shipping towards the target, multiplier for renewable fuels of non-biological origin and advanced biofuels and biogas supplied to maritime.

Initiatives that concern waterborne transport ("basket of measures")
Ways to reduce maritime emissions

Meeting the climate targets would require significant progress on two aspects:

- Improvement of energy efficiency (covering logistics, design, technical improvements and operations) – i.e. using less fuel
- Greater use of renewable and low carbon fuels – i.e. using cleaner fuels
Proposal for a Regulation
Challenges

• To reach the climate targets in 2050, maritime sector should use close to 90% of renewable and low-carbon fuels. **Today: fossil fuels over 99% of the fuel mix**

• Not a single technological option for the large variety of ship types and trades. Operators are trapped in a “wait-and-see attitude”

• **Coordination failure between supply, distribution and demand.** Need to address all relevant aspects – fuel production (Renewable Energy Directive); fuel distribution (Alternative Fuel Infrastructure Regulation) and **fuel demand** – to break the chicken-and-egg issue

• **Obligations must be imposed on demand** not only to promote investments in supply and distribution, but also to avoid carbon leakage

• **Long lead times** for fuel supply chains and fleet renewal: need for immediate, yet gradual action
Goals

• **Complement ETS** by specifically addressing the technology issue related to fuels, which may not be sufficiently incentivized by the ETS price signals in the short-medium term.

• Provide **regulatory predictability**

• EU supports **global measures** at IMO, where discussions are ongoing. The [EU submission to IMO on a low GHG fuel standard](https://ec.europa.eu/en/law-and-policy/environment/climate-action/energy-and-climate-change/energy-mobility/energy-efficiency-and-fuels) reflects the proposal. Proposal on guidelines on well-to-wake GHG emission is also coherent with the **FuelEU Maritime** approach.
FuelEU Maritime as part of Fit for 55

- **Complementary with ETS**: ETS promotes energy savings while FuelEU addresses fuel technology.

- **Complementary with RED and AFIR**: FuelEU addresses fuel demand, RED fuel supply and AFIR fuel distribution.

- **Complementarity with ETD**: taxation levels for renewable and low-carbon fuels and for electricity at berth are consistent with FuelEU goals.
FuelEU Maritime – Proposed Approach

- Focus on **fuel** and on **demand – promotion of uptake of renewable and low-carbon fuels** for maritime transport – complement to Energy Efficiency

- **Technology-neutral approach**: maritime operators will need to use an increasing proportion of zero and low carbon sustainable fuels, without obligation to use a specific technology

- **Establishes** limits on the yearly average GHG intensity of the energy used on-board (CO2eq/MJ)

<table>
<thead>
<tr>
<th>Year</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
<th>2045</th>
<th>2050</th>
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<tbody>
<tr>
<td>GHGe</td>
<td>-2%</td>
<td>-6%</td>
<td>-13%</td>
<td>-26%</td>
<td>-59%</td>
<td>-75%</td>
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- **Scope**: ships above 5000 GT, intra-EU traffic + 50% international, EU ports (same as for ETS)

- **Additional requirement for Zero-Emission at berth** (OPS and alternative zero-emission technologies) - compulsory as of 2030 for container and passenger vessels (some exemptions up to 2035)

- **Inclusion of CO₂, methane and nitrous oxide** on a full Well-to-Wake calculation: allows fair comparison of fuels

\[ GHGe [\text{CO}_2\text{eq}] = W_{\text{TT}} (\text{fuel, electricity}) + T_{\text{TW}} (\text{combustion, slip}) \]

- **Flexibility mechanism** via banking and borrowing: surpluses and (small) deficits can be carried over to the next year

- Voluntary and open **pooling mechanism** to reward/incentivise overachievers and encourage the rapid deployment of the most advanced options

- **Non-compliance** – deterrent financial penalty

- Monitoring and Reporting is based on **MRV approach**, with some additional data (e.g. calculation of Compliance Balance)
Why is it so important to be “Technology Neutral” and compare energy options on a Well-to-Wake basis – challenge for fuel certification.
How would FuelEU work?

OBLIGATIONS:

- Maximum limits on the GHG intensity of the energy used on board (yearly average) – Article 4
- For containers, ro-pax and passenger ships obligation to connect to OPS in ports or be zero-emissions at berth – Article 5

In case of compliance, companies are issued a valid certificate of compliance – Article 19

To provide flexibility and address issues of fuel availability the same ship can bank/borrow compliance surplus – Article 17

To reward early adopters and zero-emission ships, pooling of over-compliance is allowed among ships (private law agreements); no transfer of borrowed surplus – Article 18

Enforcement is done by checking for the certificate of compliance (Articles 22, 23); for non-compliance the company is subject to dissuasive proportionate penalties (Articles 20, 21)

In case of disagreement with the work of the verifiers, the companies may request a review (Articles 24, 25).

Companies monitor during the year the amount and type of energy in regulated journeys / port calls (using bunker delivery notes and OPS bills) – Articles 6, 7, 8

Data is scrutinised by verifiers (Articles 10, 11, 12, 13) and reported to COM through IT tool (Articles 14, 15, 16)

Lower GHG intensity using liquid biofuels, e-liquids, decarbonised gas (including biogas and e-gas), decarbonised hydrogen and decarbonised hydrogen-derived fuels (including methanol, and ammonia), electricity and wind. Certification relying as much as possible on existing schemes, like REDII – Article 9 + Annexes
Ongoing

• Discussion/ Negotiation of the FuelEU Proposal undergoing in Council.

• Link to proposal and accompanying documents: