



# SUSTAINABLE & SMART MOBILITY STRATEGY

## FuelEU Maritime



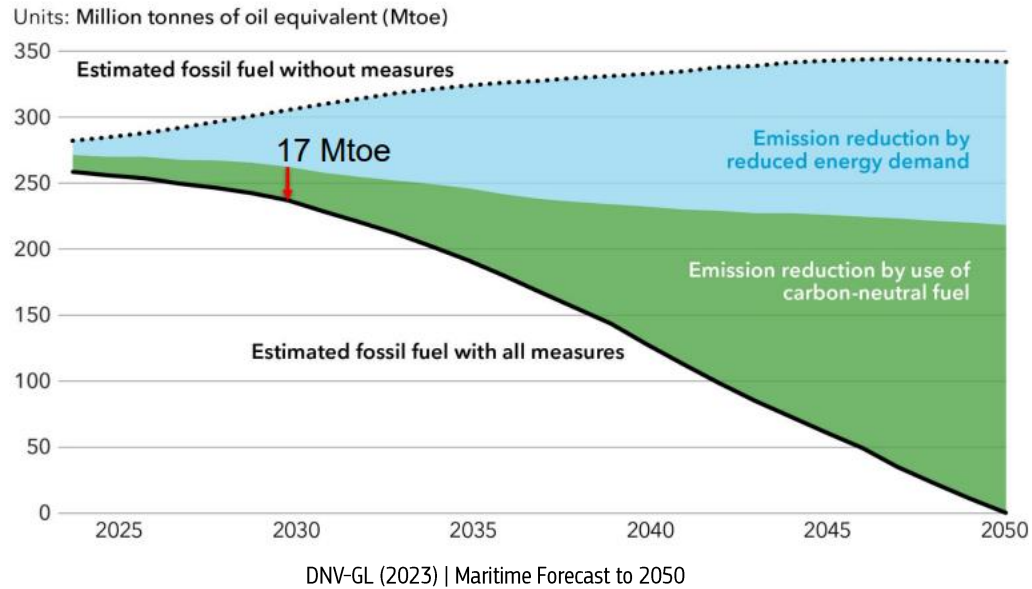
FuelEU Maritime Regulation  
European Commission  
*Directorate-General for Mobility and Transport*  
*Unit D.1 – Maritime Transport and Logistics*



Fitfor5 maritime instrument	In short/ Objective
<b>ETS</b> – Extension of the Emission Trading Scheme to maritime transport	<ul style="list-style-type: none"> <li>• Carbon tax/ Trading scheme</li> <li>• Promote Energy Efficiency and Energy Transition</li> </ul>
<b>AFIR</b> – Alternative Fuels Infrastructure Regulation	<ul style="list-style-type: none"> <li>• Require EU ports to develop shore-power</li> <li>• Bunkering infrastructure for alternative fuels.</li> </ul>
<b>FuelEU Maritime Regulation</b>	<ul style="list-style-type: none"> <li>• Promote the use of renewable and low-carbon fuels in maritime transport.</li> </ul>
<b>Renewable Energy Directive (REDIII)</b>	<ul style="list-style-type: none"> <li>• Renewable Energy targets for transport sector</li> <li>• Sustainability criteria and Certification framework for renewable fuels.</li> </ul>

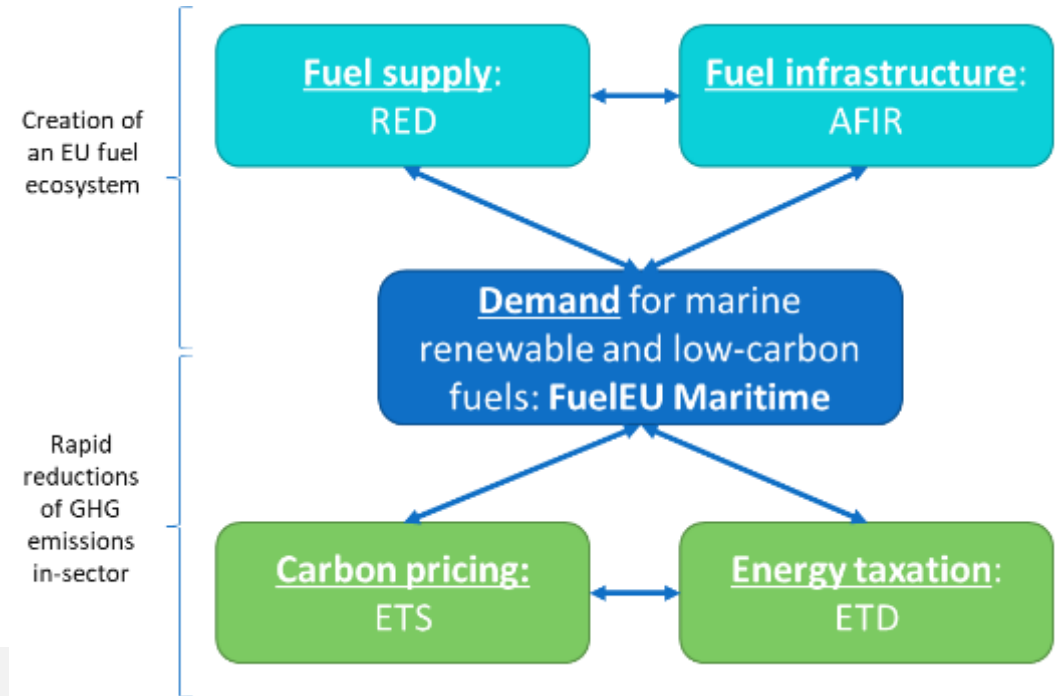


## MARITIME



## Abating maritime emissions requires:

- Improving energy efficiency → **using less fuel**
- Using renewable and low carbon fuels → **using cleaner fuels**



## Complementary FuelEU – ETS – AFIR - ETD

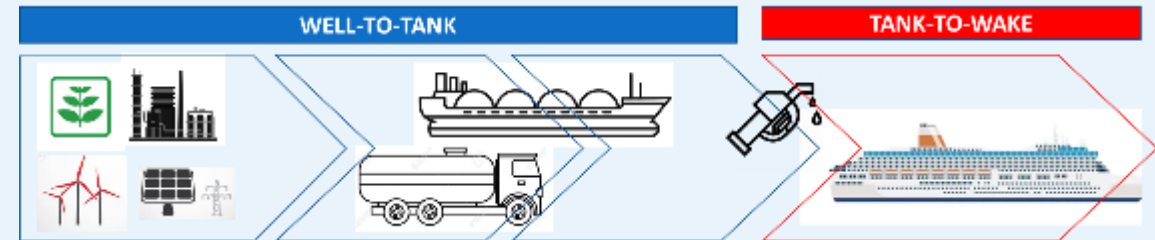
- ETS promotes energy savings while FuelEU addresses **fuel technology**.
- FuelEU addresses fuel demand, RED fuel supply and AFIR fuel distribution
- Taxation levels for renewable and low-carbon fuels and for electricity at berth are consistent with FuelEU goals.

- 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** target reduction % for the yearly average GHG intensity of the energy used on-board (**gCO<sub>2</sub>eq/MJ**)

2025	2030	2035	2040	2045	2050
-2%	-6%	-14,5%	-31%	-62%	-80%

- **Exemptions:** Small islands < 200,000 residents; PSO connections between island MS and another MS and between an island and the mainland of the same MS; outermost regions; transshipment ports; ice class ships and ships navigating in ice.
- **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 CO<sub>2</sub>, methane and nitrous oxide on a full Well-to-Wake calculation: allows fair comparison of fuels

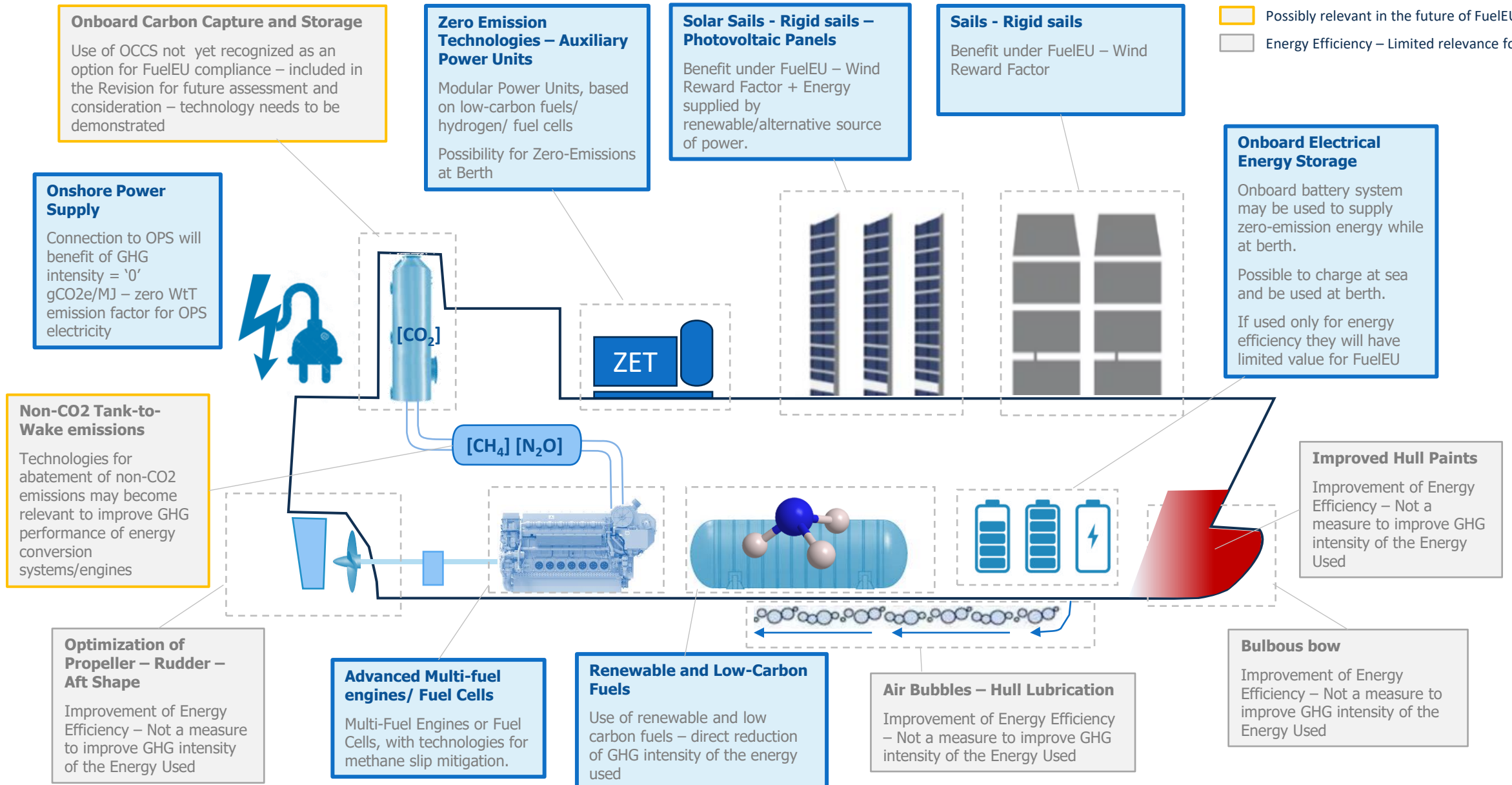


$$GHGe [gCO_{2eq}] = (WtT (fuel, electricity) + TtW (combustion, slip))$$

- **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)

## Technologies for compliance with FuelEU Maritime

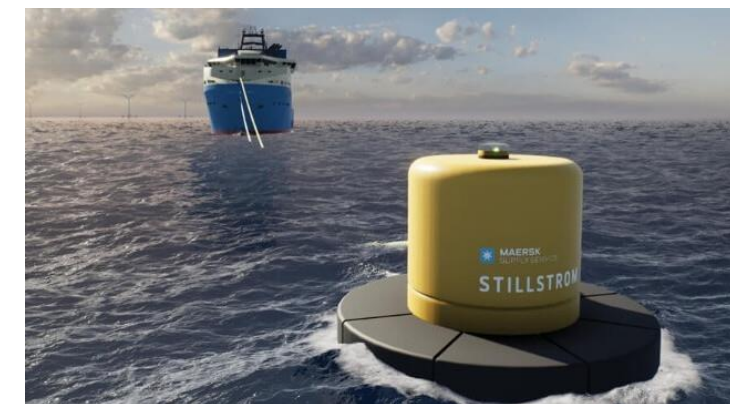
- Relevant for FuelEU GHG intensity calculation
- Possibly relevant in the future of FuelEU
- Energy Efficiency – Limited relevance for FuelEU



## Additional Zero Emissions at Berth



- Containerships and passenger ships (>5,000GT) required to connect to onshore power supply, securely moored at berth, **in all AFIR ports, as from 1 January 2030.**
- Also, **in all non-AFIR ports, as from 1 January 2035, for all ports that develop OPS capacity.**
- In all **non-AFIR ports** from 1 January 2030, if decided by Member States.
- Ships at anchorage not covered, but voluntary opt-in provision for MS.



## Eligibility of Renewable and Low-Carbon Fuels



### (Biofuels):

- **Sustainability** and GHG saving criteria - **RED Article 29**
- No “**food-and-feed**” crop Biofuels



### (RFNBOs and Recycled Carbon Fuels):

- GHG saving threshold - **RED Article 27(2)**



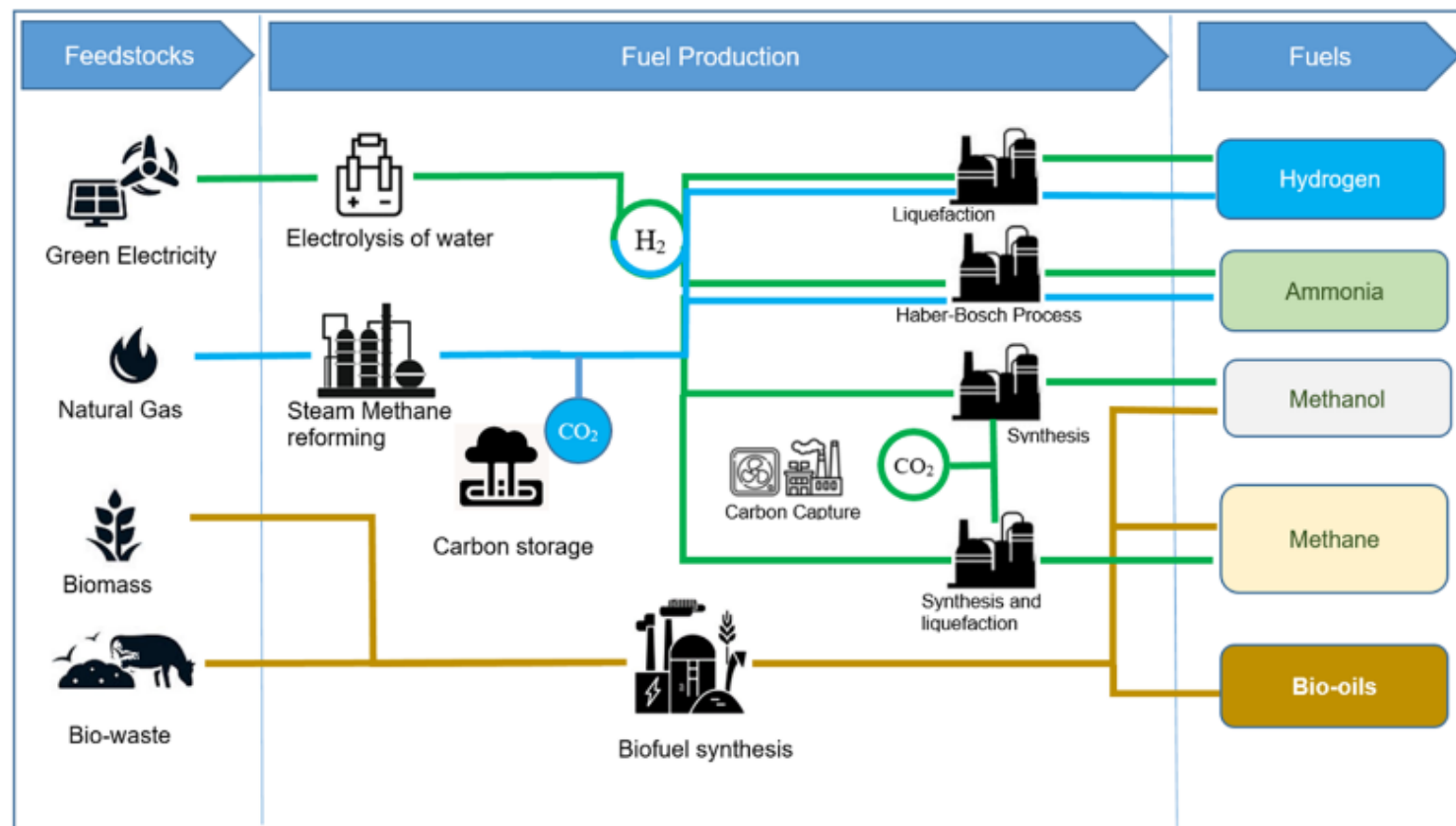
### (Low-Carbon Synthetic Fuels):

Revised (recast) **Gas Directive**

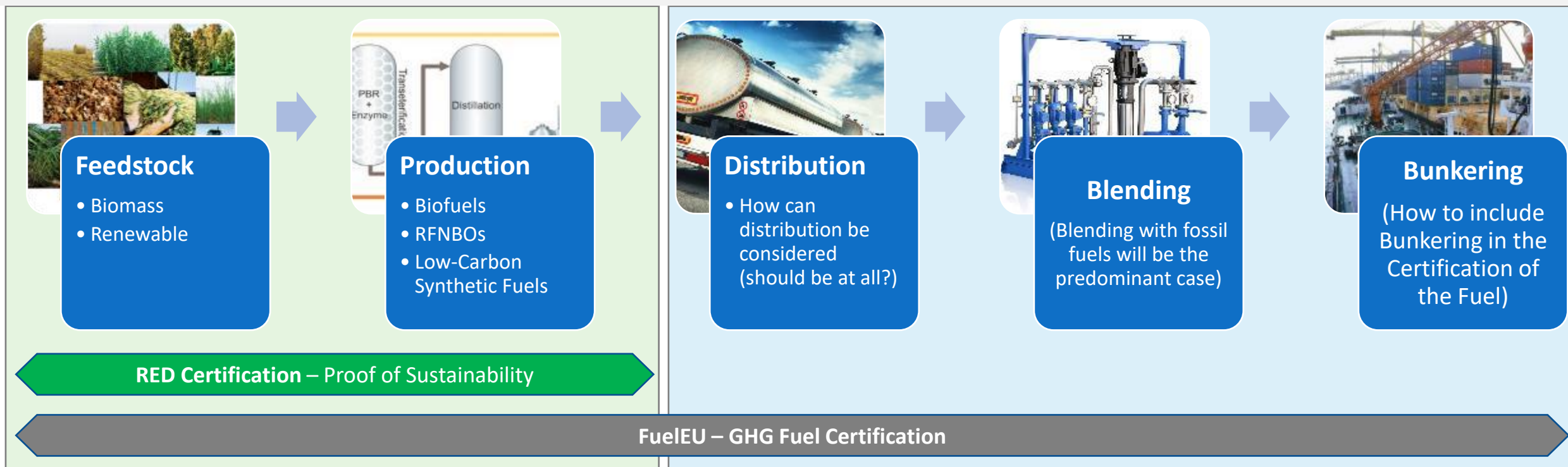


Fuels not meeting criteria treated as fossil fuels

### Several Pathways possible:



## GHG Fuel Certification



- **GHG Fuel Certification** – Essential for level playingfield
- Fuel Certificate – to be **submitted together with BDN**
- Need to include **GHG savings for each fuel product** supply
- Blends need to provide relevant information to **ALL parts blended**
- Fuel Certification for Bunkering **outside EU – OK!** – Fuel Certification Companies





## Compliance

### Governance:

- Monitoring and reporting is based on MRV approach – MRV data input.
- FuelEU-specific additional data (e.g. calculation of compliance balance, recording of penalties, exchange and notifications between user groups)
- Monitoring Template → FuelEU Report → Verification Report



### FuelEU Penalties:

- Deterrent financial penalty in case of non-compliance with GHG intensity target.
- Compliance Balance (Function of **deficit/surplus x energy used**)
- **Separate penalty** in case of non-compliance with requirements for additional Zero-Emissions at berth.
- Allocation of revenues from penalties to MS budgets.



### FuelEU Database:

- Central IT system to support compliance and functioning of the Regulation.
- Associated to THETIS-MRV – “FuelEU Module”
- Developed, hosted and managed by EMSA



### Report and review:

- Extensive report and review clause with the first reporting deadline on 31 December 2027 and every five years thereafter.
- Commitment to look in the future at:
  - Onboard Carbon Capture and Storage
  - Black Carbon
  - Geographic Scope and Ship Size
  - Alignment with IMO.



## Secondary Legislation

- **14 Implementing and Delegated Acts**
- Important building blocks for implementation of FuelEU
- Covering OPS, updates to Annex-II, RFNBOs, Zero Emission Technologies, Governance, FuelEU database, amongst others.

## FAQ/ HelpDesk/ Communication

- **FAQ** under development addressing most pressing questions in support of implementations
- **HelpDesk:** [Fitfor55@emsa.europa.eu](mailto:Fitfor55@emsa.europa.eu)
- Several **Events** under planning to reach out to stakeholders (webinars, etc)

## RLCF Alliance

Renewable and Low-Carbon Fuels Alliance

- Focus on uptake of **availability and scalability of renewable and low carbon fuels**.
- 200+ members, including operators, fuel suppliers, member states, etc.
- **Maritime Roundtable** focused on forecasting low-GHG marine fuel demand, in accordance with the FuelEU GHG intensity reduction curve.

## Other Fitfor55

- **Implementation of other Fitfor55 waterborne instruments** will be decisive for successful FuelEU implementation
- **Interdependency mainly on AFIR** (for shore-power availability) and in **RED** (for fuel certification)
- ETS implementation will also present important interdependencies, notably regarding the mitigation of risk of re-routing.

## FuelEU Maritime Dimensions of FuelEU Implementation

## EMSA

- EMSA supporting with **Governance** aspects of the FuelEU
- **FuelEU Data Base** currently under development – will be the “heart” of the Implementation

## ESSF

European Sustainable Shipping Forum

- Sub-group on Sustainable Alternative Power for Shipping working on FuelEU implementation
- Workstreams on Zero Emission Technologies, GHG Fuel Certification, Certification of Engines for lower methane emissions

Questions to:

**[Fitfor55@emsa.europa.eu](mailto:Fitfor55@emsa.europa.eu)**