European Commission

SUSTAINABLE & SMART
MOBILITY STRATEGY

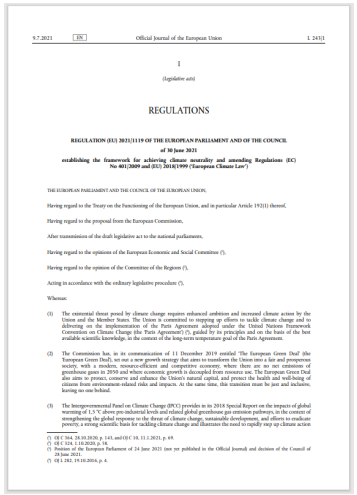
Maritime aspects in ‘Fit for 55’ package

15 September 2021
DG MOVE D.1

Mobility and Transport

Context: Delivering the European Green Deal

A socially fair transition
A competitive transition
A green transition



9.7.2021 EN Official Journal of the European Union L 243/1

I

(*legislative acts*)

REGULATIONS

REGULATION (EU) 2021/1119 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 30 June 2021
establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law')

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinions of the European Economic and Social Committee (1),

Having regard to the opinion of the Committee of the Regions (2),

Acting in accordance with the ordinary legislative procedure (3),

Whereas:

(1) The existential threat posed by climate change requires enhanced ambition and increased climate action by the Union and the Member States. The Union is committed to stepping up efforts to tackle climate change and to delivering on the implementation of the Paris Agreement adopted under the United Nations Framework Convention on Climate Change (the 'Paris Agreement') (4), guided by its principles and on the basis of the best available scientific knowledge, in the context of the long-term temperature goal of the Paris Agreement.

(2) The Commission has, in its communication of 11 December 2019 entitled 'The European Green Deal' (the 'European Green Deal'), set out a new growth strategy that aims to transform the Union into a fair and prosperous society, with a modern, resource-efficient and competitive economy, where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use. The European Green Deal also aims to protect, conserve and enhance the Union's natural capital, and protect the health and well-being of citizens from environment-related risks and impacts. At the same time, this transition must be just and inclusive, leaving no one behind.

(3) The Intergovernmental Panel on Climate Change (IPCC) provides in its 2018 Special Report on the impacts of global warming of 1,5 °C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty, a strong scientific basis for tackling climate change and illustrates the need to rapidly step up climate action

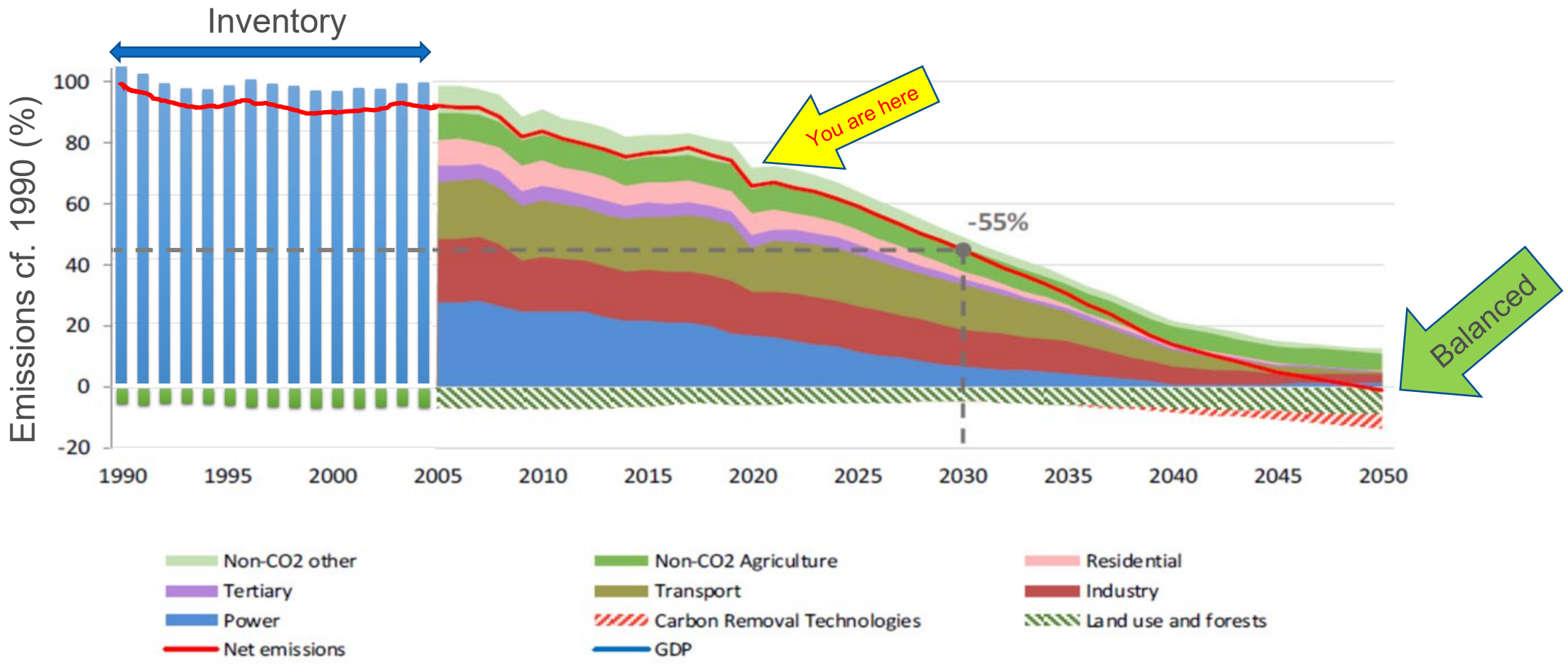
(1) OJ C 364, 28.10.2020, p. 145, and OJ C 10, 11.1.2021, p. 69.
(2) OJ C 324, 1.10.2020, p. 18.
(3) Position of the European Parliament of 24 June 2021 (not yet published in the Official Journal) and decision of the Council of 28 June 2021.
(4) OJ L 282, 19.10.2016, p. 4.

The European Climate Law of 30 June 2021

- Union-wide climate-neutrality objective 2050
- New 2030 target of at least 55% net greenhouse gas emissions reduction
- Recognition of the need to enhance the EU's carbon sink

European Commission | Mobility and Transport

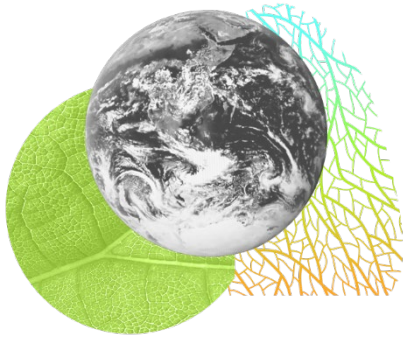
Context: Pathway to climate neutrality



European Commission | Mobility and Transport

Delivering on the 2030 commitment

CLIMATE



TRANSPORT

ENERGY

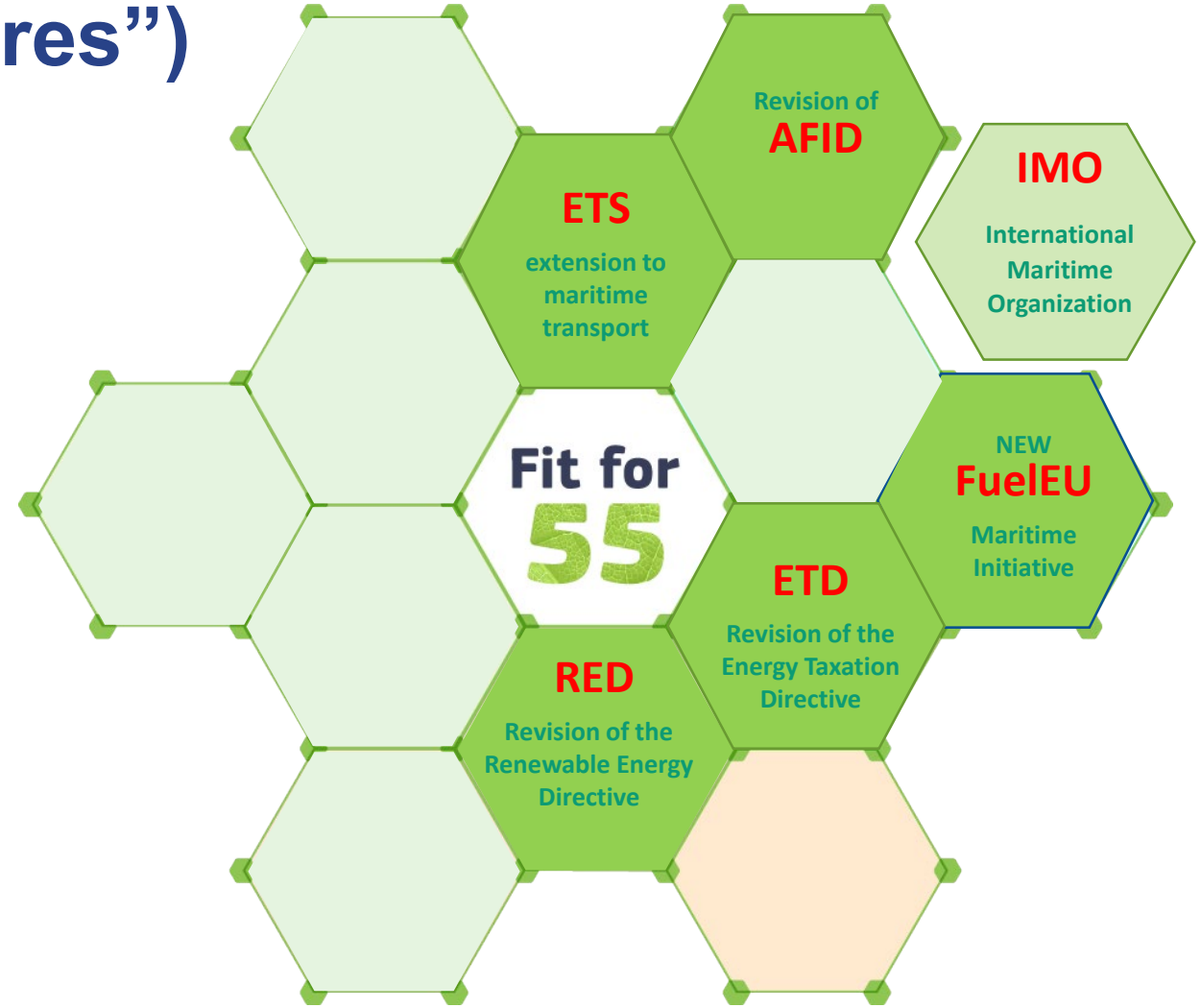
TAXATION AND TRADE

Fit for 55

- Revision of the EU Emissions Trading System (EU ETS)
- Revision of the EU ETS in alignment with the CORSIA system for reducing international aviation emissions
- Revision of the Alternative Fuels Infrastructure Directive
- Revision of the Effort Sharing Regulation
- NEW ReFuelEU Aviation Initiative
- Revision of the Regulation on Land use, Land use change and Forestry (LULUCF)
- NEW FuelEU Maritime Initiative
- Revision of CO2 emissions standards for cars and vans
- Revision of the Energy Taxation Directive
- Revision of the Renewable Energy Directive
- Revision of the Energy Efficiency Directive
- NEW Carbon Border Adjustment Mechanism

European Commission | Mobility and Transport

Initiatives that concern waterborne transport ("basket of measures")



MARITIME

European Commission | Mobility and Transport

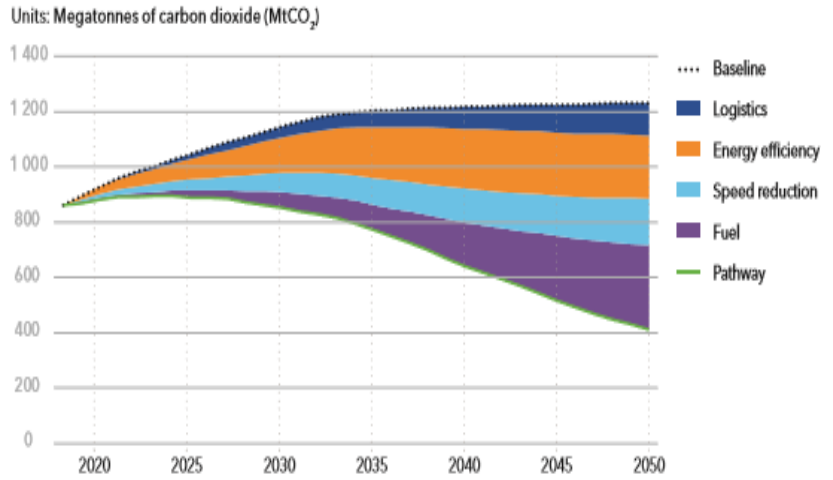
Key objectives

- Ensure that maritime transport **contributes** to the increased EU climate effort and to the **Paris Agreement commitments**

- Put in place **the right incentives** to drive the decarbonisation of the sector, which requires:
  - Improving energy efficiency ➔ **using less fuel**
  - Greater use of renewable and low carbon fuels ➔ **using cleaner fuels**

- **Address various barriers** through a basket of measures (market and economic barriers, technological barriers, lack of a strong enabling regulatory framework)

- **Coordination** at global level & ensuring **fair competition** and the proper functioning of the EU maritime transport market



DNV-GL (2019) | Maritime Forecast to 2050

European Commission | Mobility and Transport

ETS – the basics

‘Cap-and-trade’ system:

- Puts a **quantity limit** (**cap**) on emissions for installations under the ETS
- The cap is **reduced** each year
- a fixed number of ETS **allowances** is issued (through auctioning or free allocations to address risk of ‘carbon leakage’)
- and ETS participants have to monitor their emissions and surrender enough allowances to cover all their annual emissions

Key benefits:

Capping and reducing GHG emissions

Price signal

Flexibility and **cost-effectiveness**

Generate revenues to tackle climate change

Proposed approach (I)

- **Same key principle as the other ETS sectors** - shipping companies will have to monitor their emissions and purchase and surrender ETS emission allowances for each tonne of reported CO_2 emissions.

- **Cap** – derived from 2018-2019 data and adjusted every year with a linear reduction factor of 4,2%.

- Rather than free allocation, a **phase-in period** of allowance surrendering to ensure a smooth transition

    - 20 % of verified emissions reported for 2023
    - 45 % of verified emissions reported for 2024
    - 70 % of verified emissions reported for 2025
    - 100 % of verified emissions reported for 2026 and after

Proposed approach (II)

- **Monitoring, Reporting and Verification rules**: built on the EU maritime transport MRV system but with a **new role given to administering authorities** (monitoring plans, aggregated emissions at company level)

- **Emissions coverage:** around 2/3 of emissions related to EU maritime transport
  - all emissions from voyages within the EU (intra-EU)
  - 50% of the emissions from voyages starting or ending outside of the EU (extra-EU)
  - all emissions when ships are at berth in EU ports

- A scope consistent with **Common But Differentiated Responsibilities** (recital 17)

- **Greenhouse gases covered by Regulation (EU) 2015/757**

Proposed approach (III)

- **Responsible entities**: same companies as the ones implementing the EU MRV maritime transport regulation (around 1600 entities)
- **Covered ships**: only covering large ships (above 5000 gross tonnage) regardless of the flag they fly
- **Enforcement**: EU ETS rules on penalties & ships can be denied entry to EU ports where the responsible shipping company has failed to surrender the necessary allowances for two or more consecutive years
- **Review clause**:
  - Monitor the implementation of the rules applicable to the maritime sector
  - Take account of relevant developments at the level of the International Maritime Organization (IMO)

Proposed approach (IV)

- **More funds for innovation** and a **commitment for Member States to use the entirety of their revenues on climate and energy (including social) purposes**.

- ETS-funded Innovation Fund **already active for ships and ports** (€122 million announcement, July)

E-PROOF: Electric Propulsion for Ferry

First Bio-LNG to marine shipping

Production of green hydrogen

- **Supporting contracts for difference under the Innovation Fund**

Energy Taxation Directive

European Commission | Mobility and Transport

Objectives of the revision

1. **Contributing to the EU 2030 targets and climate neutrality by 2050 in the context of the European Green Deal**
   - by aligning taxation of energy products and electricity to EU energy and climate policies and contributing to the EU efforts to reduce emissions while ensuring coherence with the ETS
   - and by aligning taxation to other initiatives of the package such as the revision of the Renewable Energy Directive and Energy Efficiency Directive

2. **Preserving and improving the functioning of the EU internal market**
   - by updating the scope and the structure of rates
   - and by rationalising the use of tax exemptions and reductions applied by Member States

3. **Ensuring the ability to preserve revenues generation**

The revision is based on two pillars

1 Rationalizing the definition of minimum rates

- by introducing a new structure of rates according to **the environmental performance** of the energy products and electricity
- where all rates are based on **energy content** and are **periodically updated** according to the inflation rate

2 Adapting the definition of the taxable basis: Eliminating fossil fuel incentives

- by broadening the scope of the Directive in terms of products and uses of energy products and electricity
- by removing some tax reliefs and exemptions

… With transitional periods for some products and uses to allow for a smooth adjustment …

Taxation of shipping and fishing sectors (I)

The current exemptions will be lifted and the following rules will apply:

- Fuel used for intra-EU waterborne regular service navigation, fishing and freight transport will be subject to the same EU minimum rates as defined in Article 8(2) for purposes such as agriculture
- These minimum rates are substantially lower than those applicable to the general use of motor fuels – this is due to the risk of bunkering outside the EU
- The minimum rates are defined as a "single use", therefore actual national rates can be different from other uses covered under Article 8(2)
- The minimum rate will be €0.9/GJ for gas oil and heavy fuel oil (corresponding to € 32.7 EUR/1000 litres for gas oil and € 36.4 EUR/1000 kg for heavy fuel)

Taxation of shipping and fishing sectors (II)

The current exemptions will be lifted and the following rules will apply:

- Over a transitional period of 10 years a minimum rate of zero will apply to sustainable biofuels and biogas, low carbon fuels, renewable fuels of non-biological origin, advanced sustainable biofuels and biogas and electricity. Reduced minimum rates will apply to these products after the transition.

- Fuel used for the remaining intra-EU waterborne navigation (including among others navigation of private pleasure crafts) will be subject to the levels of taxation applicable to motor fuels

- Member States may exempt or apply the same levels of taxation applied for intra-EU waterborne navigation to extra-EU waterborne navigation according to the type of activity

- Member States may apply total or partial exemptions to electricity supplied to vessels berthed in ports (no need to apply for national derogations)

FuelEU Maritime Regulation

European Commission | Mobility and Transport

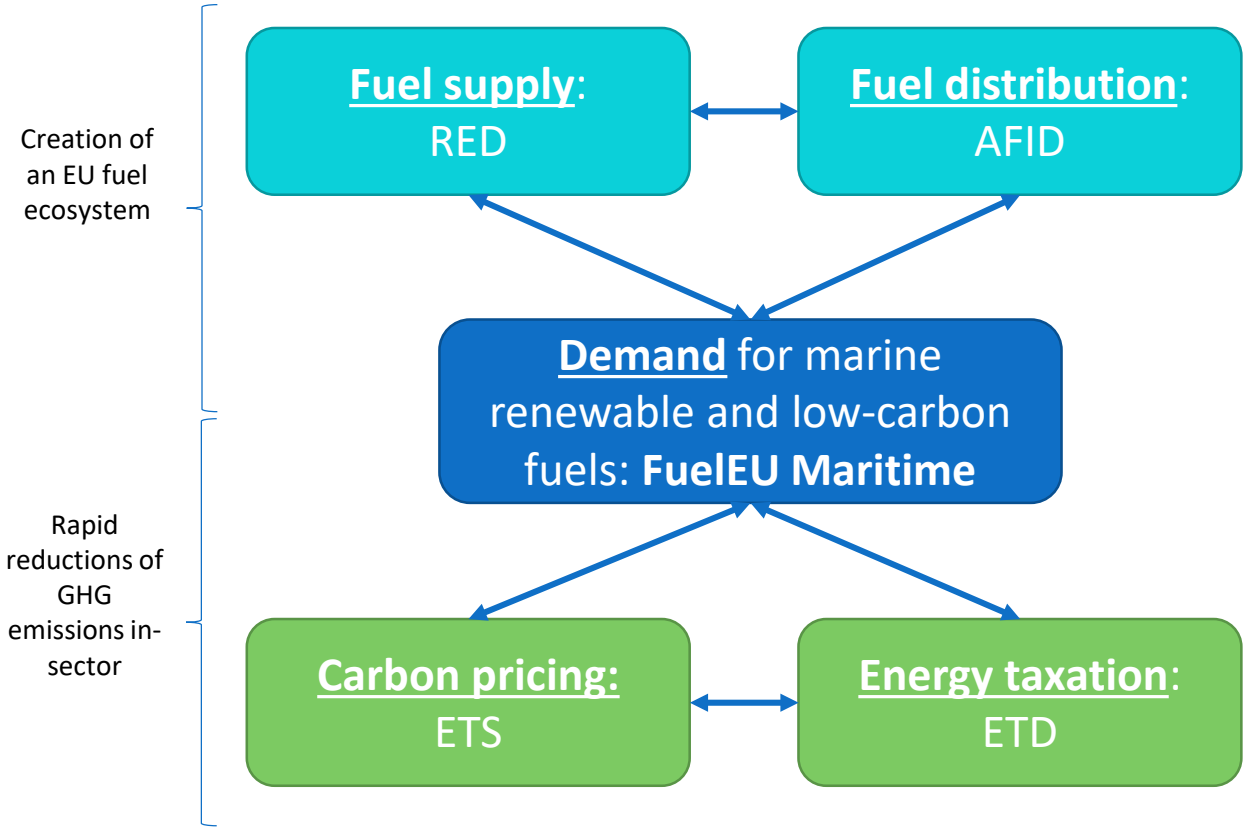
Goals

- 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**
- Need to **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
- Harmonised rules to ensure smooth operations and **avoid distortions in the internal market**
- EU supports **global measures** at IMO, where discussions are beginning. The EU submission to IMO on a low GHG fuel standard reflects the proposal. Proposal on guidelines on well-to-wake GHG emission is also coherent with the FuelEU Maritime approach

Challenges

- **Long lead times** for fuel supply chains and fleet renewal: need for immediate, yet gradual action. **Regulatory predictability is key**
- **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 complement Renewable Energy Directive (supply) and Alternative Fuel Infrastructure Regulation (distribution) 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

FuelEU Maritime as part of Fit for 55



- **Complementary with ETS**: ETS ensures respect of the overall emission cap and promotes cost efficient abatement measures (energy savings), while FuelEU addresses specifically **fuel technology issues**
- **Complementary with RED and AFIR**: FuelEU addresses fuel demand, RED fuel supply and AFIR fuel distribution. Coordinated action to solve the **chicken-and-egg issue**
- **Complementarity with ETD**: taxation levels for renewable and low-carbon fuels and for electricity at berth help bridging the price gap with fossil fuels and are consistent with FuelEU goals

Proposed approach (I)

- Focus on **fuel** and on **demand** (but other aspects are covered elsewhere!)
- **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
- Inclusion of **CO_2, methane and nitrous oxide** on a full **well-to-wake** calculation: allows fair comparison of fuels and is in line with the approach promoted by EU in IMO
- Obligation on **yearly average** instead of single voyage: provides flexibility

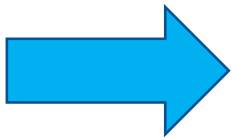
Article 4 sets limits on the
yearly average GHG intensity of the energy used on-board
(CO2eq/MJ)

Proposed approach (II)

- **Level of ambition** is in line with **the Climate Target Plan 2030** (consistency with other measures; constraints of fuel availability and production is respected; etc.)
- **Targets** are established in 5-year intervals **from 2025 until 2050:** regulatory predictability
- **Same scope as in ETS** (ships above 5000 GT, intra-EU traffic + 50% international, EU ports)
- 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, in particular zero emission technologies
- Ships not meeting GHG limits would pay **deterrent financial penalty**. Revenues used for development of RLF in the maritime sector
- **Low administrative burden:** monitoring is based on MRV and its electronic system (THETIS MRV) – 'report only once' approach
- **Responsible entity**: the same in charge of duties and responsibilities imposed by the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM code)

Proposed approach (III)

- Mature technology for **onshore power supply (OPS) in ports** is already available
- Effects on **air quality** much more relevant in port areas



Article 5 sets the additional requirement to use
onshore power supply (OPS) or zero-emission technology
in ports as of 2030

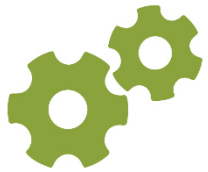
- OPS requirement applies to **container and passenger vessels** (taking into account high energy demand and technical feasibility)
- Ships not meeting OPS obligation would pay **deterrent financial penalty**. Revenues used for development of RLF in the maritime sector
- **Low administrative burden:** monitoring is based on MRV and its electronic system (THETIS MRV) – 'report only once' approach.

FuelEU Maritime

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**



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**

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

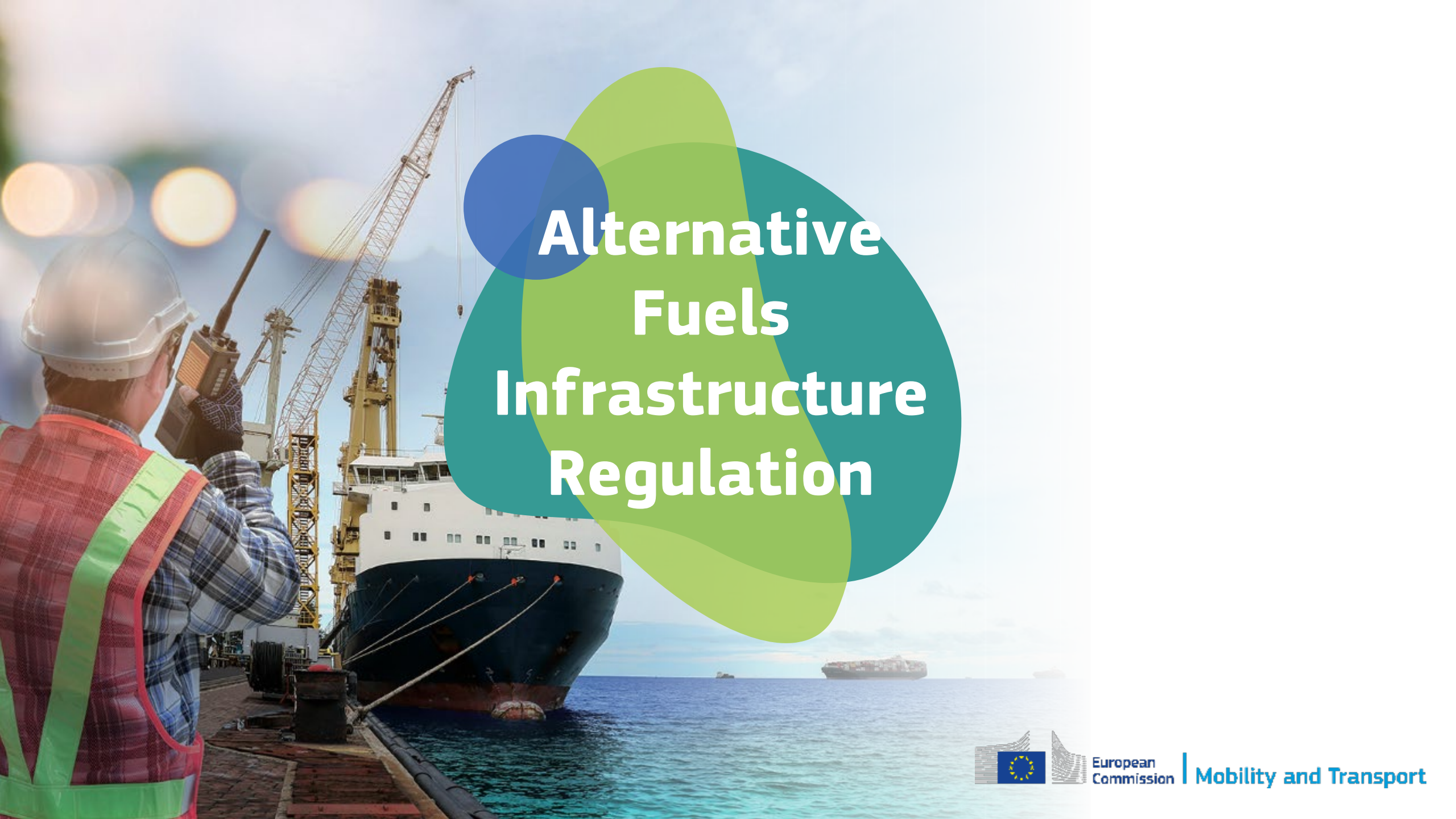
To provide flexibility and address issues of fuel availability the same ship can bank/borrow compliance surplus **– Article 17**

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**).

European Commission | Mobility and Transport



Alternative Fuels Infrastructure Regulation

European Commission | Mobility and Transport

AFIR: Art 9, Shore side electricity

- **Minimum shore-side electricity** supply to be provided in maritime ports if certain conditions are met:
  - **TEN-T core and comprehensive ports** (exemption for islands not connected to the grid)
  - **Types of ship** and **number of port calls** in last three years: 50 calls/year for container ships, 40 calls/year for ro-pax and high-speed passenger crafts, 25 calls/year for other passenger ships (cruise).
  - **Gross tonnage** of those calls (> 5000 GT)

If conditions are met, ports to install shore-side power output sufficient to satisfy at least 90% of demand (in terms of port calls)

AFIR: Art 11, LNG maritime

- Member States shall ensure that an appropriate number of refuelling points for LNG are put in place at TEN-T core maritime ports referred to in paragraph 2, to enable seagoing ships to circulate throughout the TEN-T core network by 1 January 2025. Member States shall cooperate with neighbouring Member States where necessary to ensure adequate coverage of the TEN-T core network.

- Member States shall designate in their national policy frameworks TEN-T core maritime ports that shall provide access to the refuelling points for LNG referred to in paragraph 1, also taking into consideration actual market needs and developments.

Renewable Energy Directive

European Commission | Mobility and Transport

Background: target architecture underpinning the EU-level target

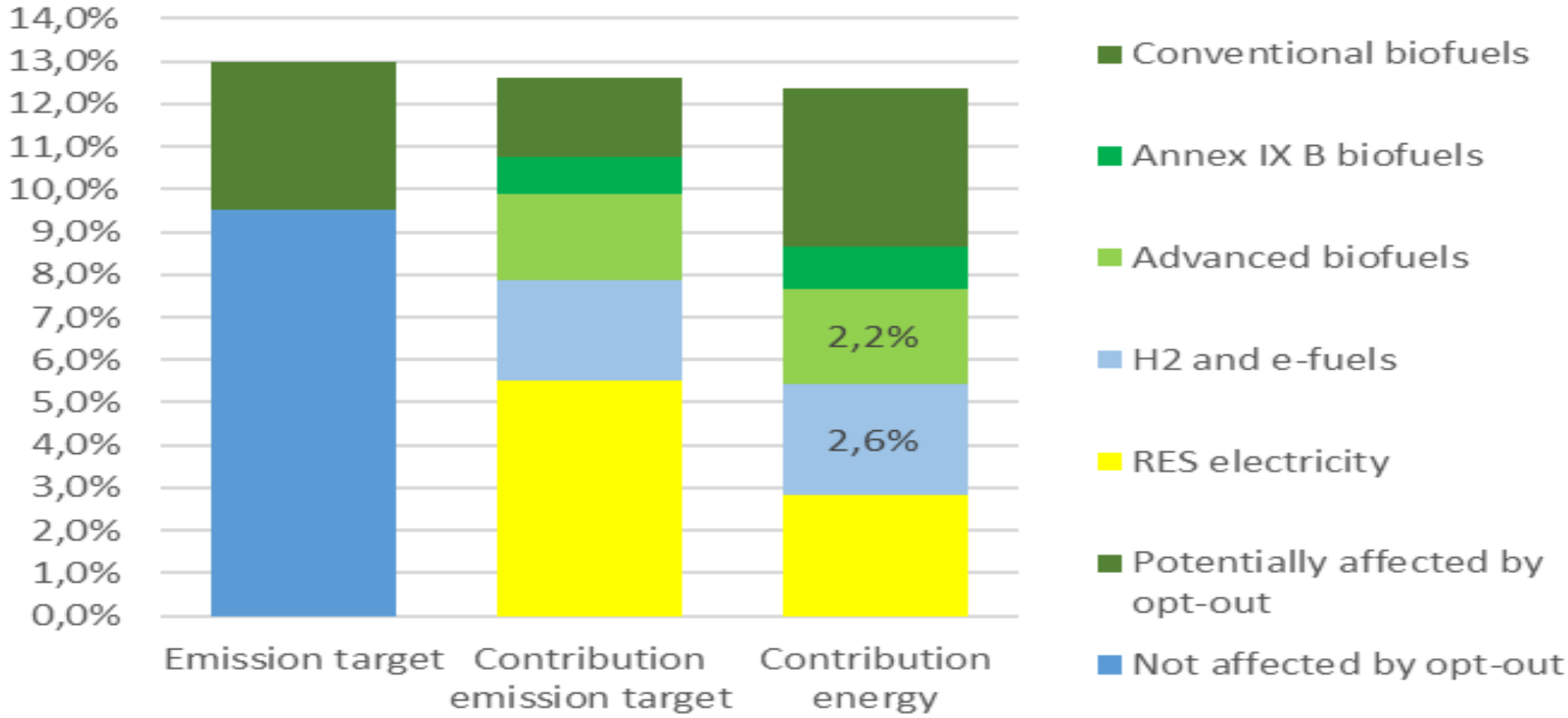
	REDII		REDII revision
	32%		**40%**
Transport	**14%** target for renewables in transport **3.5%** sub-target for advanced biofuels (double counting)	→	**-13 %** reduction of the GHG intensity of transport fuels (equiv. to 28 % energy based) **2.2%** sub-target for advanced biofuels **2.6%** sub-target for RFNBOs
Heating & Cooling	1.1 pp annual increase, **indicative** **1.0 pp** in district H&C, indicative	→	1.1 pp annual increase, **binding** Indicative top-ups for each MS **2.1 pp** in district heating, indicative
Buildings		NEW	**49%** RES share in buildings **indicative**
Industry		NEW	**1.1 pp** annual increase in industry RES share **indicative** **50 %** sub-target for RFNBOs

Main changes proposed

for the transport related Articles in the Renewable Energy Directive

- A shift to an target expressed in terms of a reduction of the GHG emission intensity of fuels. Most multipliers are abolished.
- An increase of the ambition level of the target. The emission intensity of fuels would need to be reduced by 13%, which corresponds to a share of 28% renewables as determined according to the current methodology set out in RED II.
- An introduction of energy-based sub target of 2.6% for renewable fuels of non biological origin. The target for advanced biofuels would be set at 2.2%.
- A credit mechanism is introduced allowing fuel suppliers to exchange credits that can be used for fulfil the supply obligation. Charging point operators would receive credits for supplying renewable electricity to EVs and could sell these credits to fuel suppliers.

Average contribution of energy carriers to the targets



Relevant changes for the maritime sector

Targets

- Aviation and maritime sectors are fully covered.
- The new RED would provides an incentive to supply renewable fuels in the maritime sector and helps achieving the target set out under Fuel EU maritime.
- Particular emphasis is placed on the support of advanced biofuels and synthetic fuels produced from renewable hydrogen (1.2 multiplier).

Certification

- The certification framework for renewable fuels and bioenergy is further strengthened.
- Sustainability certification can be conducted across the globe and the certificates can be used not only under the RED but also under the dedicated measures set out in Fuel EU maritime and Refuel EU aviation.
- The Commission is empowered to recognise voluntary certification scheme for the implementation of the system.

Thank you for your attention!

- Link to proposal and accompanying documents: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12312-CO2-emissions-from-shipping-encouraging-the-use-of-low-carbon-fuels_en

Here for more information

European Commission | Mobility and Transport