Shaping the future of fuels and transport

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European Commission







- All transport modes are made more sustainable
- Sustainable Alternatives are available
- Right incentives are in place
- 90% reduction in transport emissions

Transport modes and decarbonisation options



Road transport

- ✓ Progressive shift from internal combustion to zero-emission vehicles:
  - ✓ Battery electric (cars, vans, buses, coaches, trucks)
  - ✓ Hydrogen especially for long-haul HDVs
- ✓ Use of renewable fuels under Renewable Energy Directive (biofuels, e-fuels) in the existing fleet



Rail

- ✓ Rail is already electrified to a large extent. Focus on renewable electricity
- ✓ Hybrid systems (battery or hydrogen fuel cell) can replace diesel operations when electrification is not possible
- ✓ Rail could aim at climate neutrality in 10-15 years



Waterborne transport

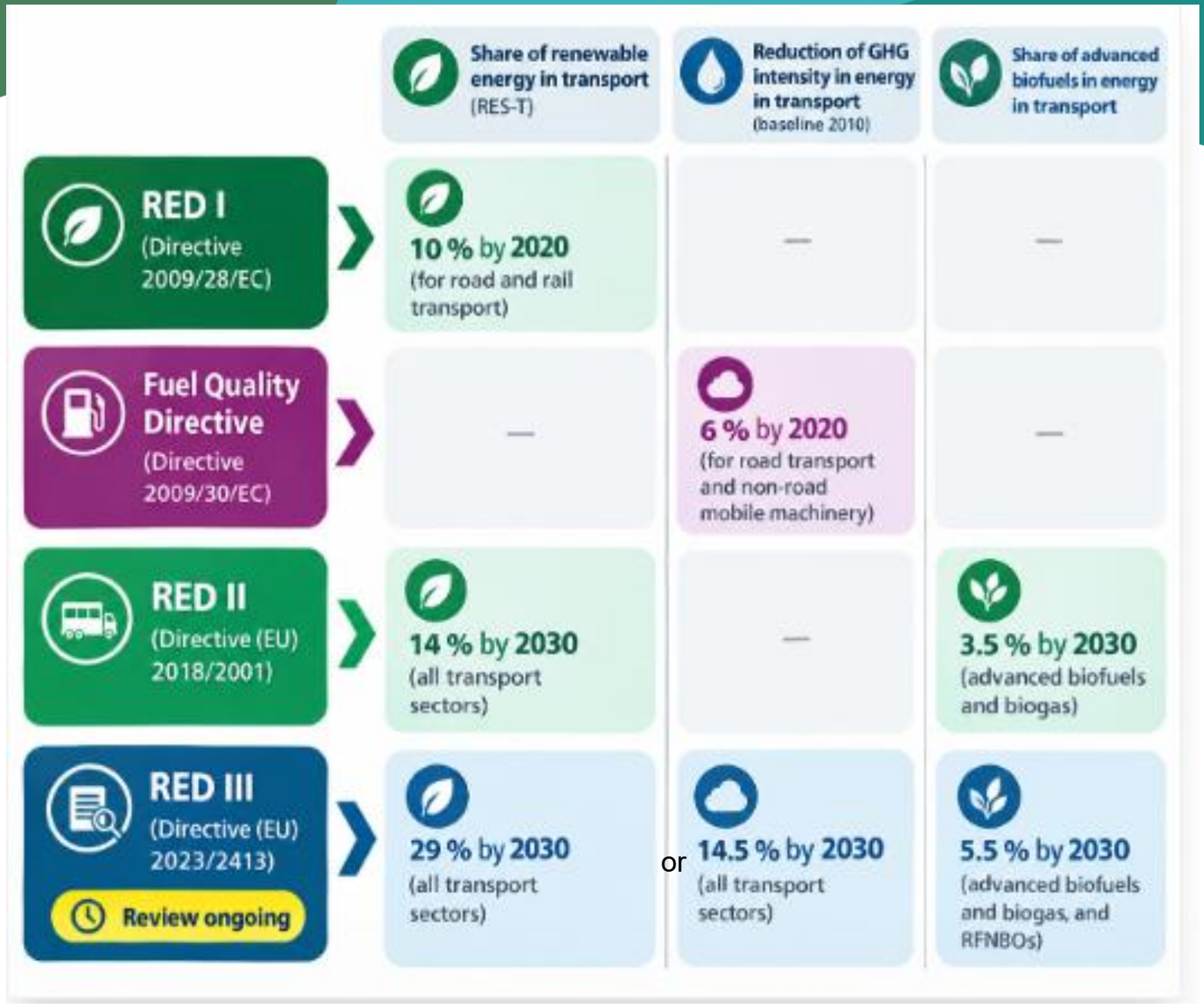
- ✓ Basket of fuel measures needed
- ✓ Push for on-shore power supply in ports
- ✓ LNG remains relevant for deep-sea shipping with clear pathway for blending with biogas/ methane while developing alternatives



Aviation

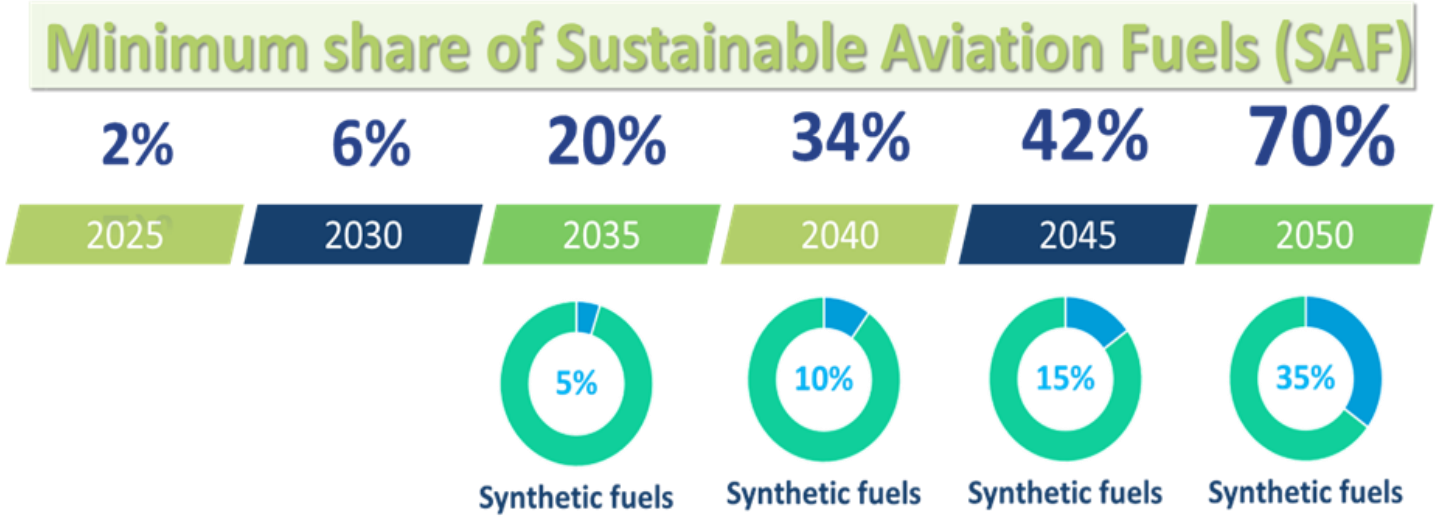
- ✓ Advanced biofuels and e-fuels are the realistic options for decarbonisation in the short term
- ✓ Aviation should not suffer shortages in supply because of demands from sectors that have other alternatives at hand

The EU's support for sustainable alternative fuels in transport



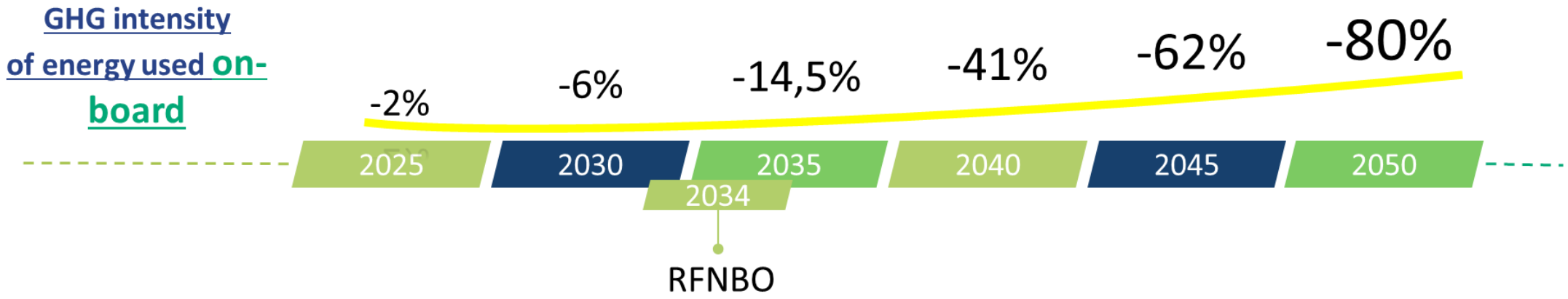
ReFuelEU – Aviation Regulation

- Promotes the increased use of SAF as the single most powerful tool to decrease aviation CO2 emissions. The measure is part of the Fit for 55 package to meet the emissions reduction target of 55% by 2030
- Obligation on fuel suppliers to distribute SAF in increasing amounts over time
- Obligation on airlines to uplift (SAF-blended) aviation fuel at EU airports (anti-tankering measure)
- Eligibility of SAF:
  - Biofuels produced from Part A (advanced biofuels) and Part B of RED Annex IX
  - Synthetic aviation fuels (drop-in RFNBOs).
  - Feedstock competing with food & feed sectors are excluded, COM delegated directive March 2024 inclusion of cover crops



FuelEU – Maritime Regulation

- Industry responsible for nearly 3% of global emissions
- Limits on the annual average GHG intensity of the energy used on-board (CO2eq/MJ).
- « Well-to-Wake » approach. Reference value: 91.16 g CO2eq/MJ



RFNBOs:

- Multiplier of 2 from 2025-2033
- Options include biofuels, LNG, methanol, ammonia, hydrogen, and emerging energy sources
- Scope: Ships above 5000 GT

- The regulation will apply to all vessels calling at EU ports, regardless of flag or nationality, covering both voyage emissions and berthing operations



RLCF Alliance



Objective

Rapidly boost production, storage and distribution capacity of renewable & low-carbon fuels for maritime and aviation sectors

- Support the ecosystem for the production of sustainable aviation and maritime fuels
- Create awareness and knowledge among the relevant stakeholders, with a specific focus on project promoters, financiers, off-takers and public authorities
- Support projects on their path to Final Investment Decision (FID)

GENERAL ASSEMBLY

All RLCF Alliance members

- Brings together a diverse range of stakeholders from the transport fuels and related value chains

Aviation | Maritime | Fuels production | Finance

STEERING GROUP (ex. P&MG) 1-Year term, renewable

Chair EC

20 Alliance members of which:

4 Vice-chairs elected - 1 per sector

- Proposes and supports the priorities of the Alliance and its activities
- Prepares the RLCF Alliance Work Programme
- It proposes initiatives to develop a project pipeline

TASKFORCES

4 Taskforces on:

- Deliver clear, actionable results on specific topics

Labelling | Financing | Mapping | Infrastructure

RLCF Labelling scheme

RLCF Alliance

Easier comparison



A common framework makes it easier to compare projects on a like-for-like basis.

Technical support



Access to the advisory hub of the European Investment Bank (EIB).

A trusted reference



A credible signal for investors, public authorities and offtakers.

Greater Visibility

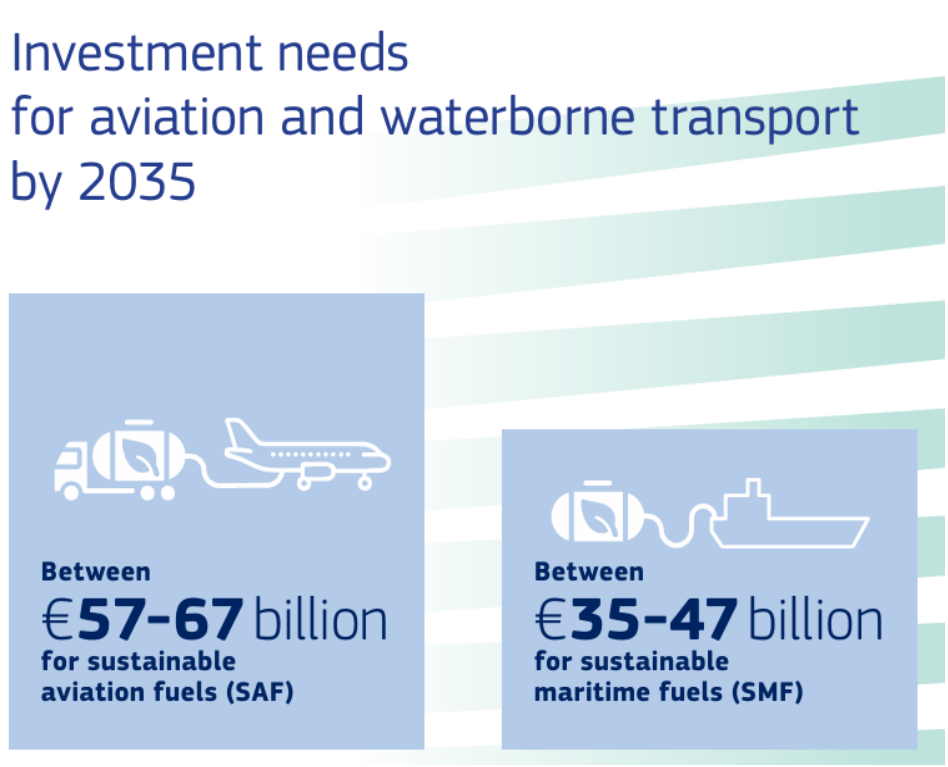


Dissemination and communication of the labelled projects to showcase their potential.

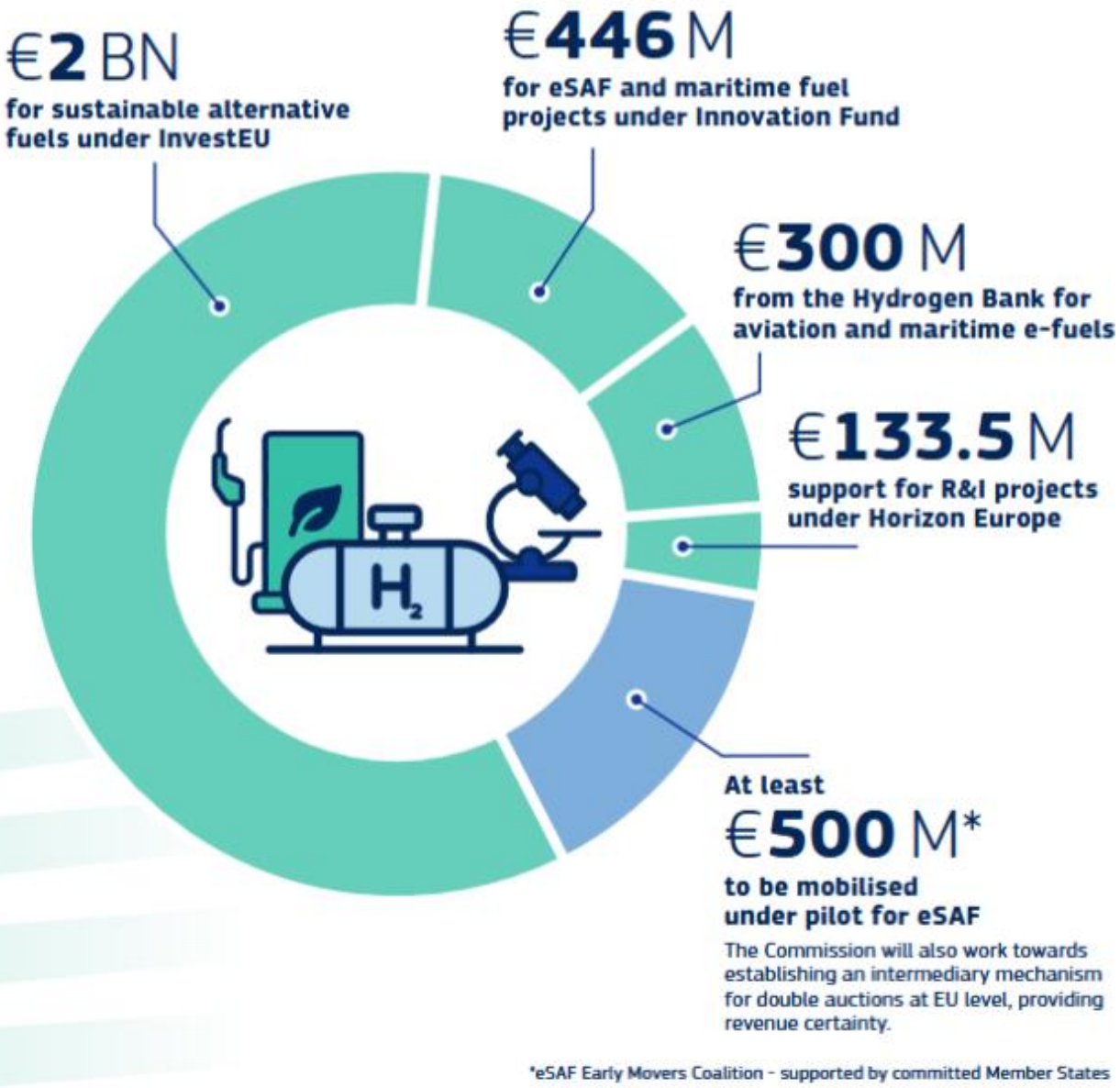
Sustainable Transport Investment Plan

- EU **legal framework ensures that the demand is there**, particularly in aviation/maritime:
- EU renewable & low-carbon fuels availability & production capacity are limited; **significant scale-up needed**
- **Challenges:**
  - Need large projects to deliver at speed and scale
  - Planning, permitting and financing as well as overall energy cost
  - Complex value chain, often with global links
  - Uncertainties around feedstock potentials and use
  - “First mover” risk





Immediate short-term measures: **Mobilising at least € 2.9 bn from the EU**



EU-wide double auctions:
Commission's study looking at possible legal instrument, governance and financing sources (ETS, CF etc.) to be used in the next MFF

Task force to support the "Early movers Alliance" & launch the First pilot double auction with MS aiming at EUR 500million in 2026.
+ Support from the Competitiveness Coordination Tool.

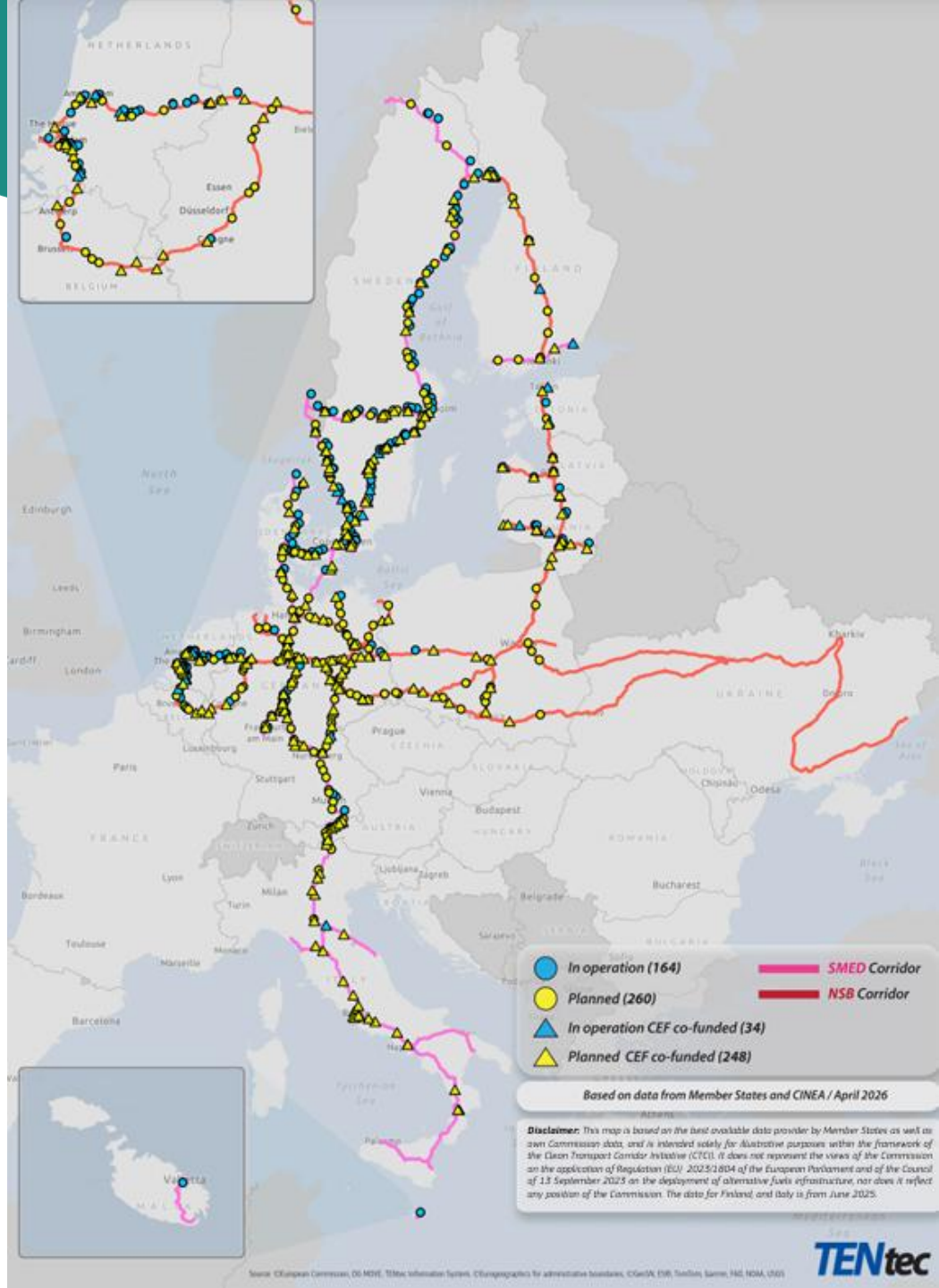
Clean Transport Corridor Initiative

Accelerate the deployment of truck recharging infrastructure

- Common challenges :
  - Grid connection: availability of power, permitting procedures, connection times, diversity of local rules
  - Limited availability and transparency of information
  - De-risking of the infrastructure use in the first years of operation

- Through voluntary instruments:
  - Roadmaps of measures – endorsed by Member States of the pilot corridors (June 2026)
  - Mapping of existing and planned recharging infrastructure that are EC- or MS-funded

- Expanding the CTCI to all TEN-T corridors and corresponding Member States (September 2026 onwards)



Alternative Fuels Infrastructure Regulation - AFIR

- **Electricity Recharging (road):**
  - LDVs: fleet-based target, expressed in power installed (kW) per registered electric vehicle; distance-based target on TEN-T (maximum distance and power)
  - HDVs: distance-based target on TEN-T (maximum distance and power); safe and secure parking areas (from 2027); urban nodes
- **Hydrogen Refuelling (road), HDV / LDV:**
  - Distance-based targets on TEN-T (distance / capacity)
  - Urban nodes (in particular for urban delivery)
- **LNG for road:** fill gaps, where necessary, until 2025 - Art 8
- **Ports**: appropriate LNG supply at designated TEN-T maritime ports; provision of on-shore power supply in TEN-T ports (inland and maritime) – Art 11
- **Airports**: provisioning of electricity supply to stationary aircraft

Six challenges to scale clean fuels in Europe



1. SCALE

Move from pilot projects to large-scale commercial production.



2. COST

Close the cost gap with fossil fuels through innovation, scale & financing.



3. RESOURCES

Secure sustainable feedstocks, renewable hydrogen & electricity.



4. INFRASTRUCTURE

Build the full ecosystem: storage, distribution, refuelling, charging, ports & airports.



5. INVESTMENT CERTAINTY

Provide stable, predictable regulation to support long-term investment.



6. GLOBAL COMPETITIVENESS

Ensure decarbonisation strengthens Europe's industrial base.



Scaling clean fuels requires more than production capacity — **it requires competitive costs, scarce resources, infrastructure, investment certainty and a strong European industrial base.**

EU SUSTAINABLE TRANSPORT POLICY TIMELINE

Key milestones towards a climate-neutral and resilient transport system

2019

EUROPEAN GREEN DEAL

Sets the EU roadmap towards climate neutrality by 2050.

Transport identified as a key sector for decarbonisation.

2021

SUSTAINABLE & SMART MOBILITY STRATEGY

82 initiatives for greener, smarter and more resilient transport.

Targets zero-emission mobility, modal shift and digitalisation.

2024

ALTERNATIVE FUELS INFRASTRUCTURE REGULATION (AFIR)

Binding targets for the deployment of alternative fuels infrastructure including:

- EV charging
- Hydrogen refuelling
- Shore-side electricity
- TEN-T network rollout

2025

REFUELEU AVIATION

Sustainable aviation fuel (SAF) blending obligations begin.

FUELEU MARITIME

GHG intensity limits for maritime fuels enter into force.

SUSTAINABLE TRANSPORT INVESTMENT PLAN

Investment framework supporting the deployment of clean transport technologies and infrastructure.

2026

REVIEW OF AFIR

Assessment of implementation and possible strengthening.

REVIEW OF RED III

Evaluation of renewable transport fuel targets and alignment.

REVIEW OF REFUELEU AVIATION

Early implementation assessment.

CORPORATE VEHICLES INITIATIVE

Potential regulation/ standards for corporate fleet electrification.

WEIGHTS & DIMENSIONS REGULATION

Revision to enable zero-emission vehicles, battery weight allowances and aerodynamic improvements.

STRATEGIC FRAMEWORKS — Setting the vision and direction

INFRASTRUCTURE REGULATION — Enabling the transition

SECTOR-SPECIFIC FUEL REGULATIONS — Decarbonising key modes

REVIEWS & IMPLEMENTATION — Ensuring effectiveness and progress

Thank you for your attention

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Unit B.4 Sustainable and Intelligent Transport



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