



# SUSTAINABLE & SMART **MOBILITY STRATEGY**

Latest transport and mobility  
initiatives – Fit for 55 package



# Context: a vision for decarbonised transport

- **European Green Deal:** Europe to become carbon neutral by 2050
- **Climate Target Plan:** 55% emission reductions by 2030
- **Transport emissions must decrease by 90% by 2050** to meet these objectives



# EU Sustainable & Smart Mobility Strategy

- Published December 2020
- **Objectives:** making the European transport system more **sustainable**, **smart** and **resilient**, achieving a 90% emission reduction by 2050.
- **10 flagship areas** with key milestones.
- Action plan with a list of **82 concrete policy actions**.





# SSMS – Milestones

By 2030

- **Min. 30 million zero-emission cars** and **80.000 zero-emission lorries** in operation
- **Min. 100 climate neutral cities**
- **Scheduled collective travel under 500 km is carbon-neutral**
- **Doubled high-speed rail** traffic, rail freight traffic increases by 50%
- Transport by **inland waterways & short sea shipping** increases by 25%
- **Rail & waterborne-based intermodal compete** on equal footing with road-only transport
- **Paperless freight** transport
- **Automated mobility** deployed at a large scale
- Integrated electronic **ticketing**
- Operational **multimodal TEN-T Core Network** with high speed connectivity
- Zero-emission **ocean-going vessels ready for market**

By 2035

- **Large zero-emission aircraft** ready for market

By 2050

- **Nearly all cars, vans, buses & new heavy-duty vehicles** will be **zero-emission**
- **Doubled rail freight** traffic, **tripled high-speed rail** traffic
- Transport by **inland waterways & short sea shipping** increases by **50%**
- **External costs** of transport within the EU will be **covered by the transport users**
- Operational **multimodal TEN-T Comprehensive Network** with high speed connectivity
- **Death toll** for all modes of transport in the EU close to **zero**

# SSMS: examples of policy actions



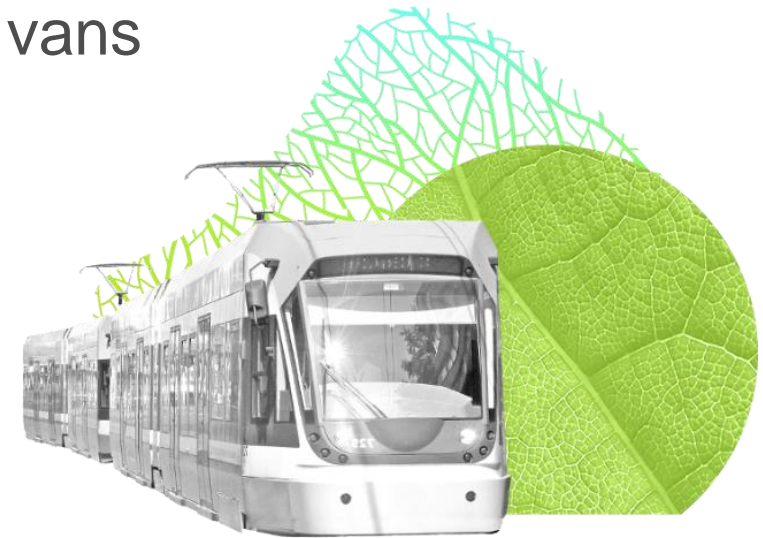
- Review of **CO2 emission performance standards for cars & vans** ([Published in Fit for 55](#))
- Review of **Alternative Fuels Infrastructure Directive** ([Published in Fit for 55](#))
- Strategic **Rollout Action Plan for alternative fuels infrastructure** ([Published in Fit for 55](#))
- **RefuelEU aviation** and **FuelEU maritime** initiatives ([Published in Fit for 55](#))
- Review of **Regulation on TEN-T guidelines** ([Q3 2021](#))
- **Low Carbon and Renewable Fuels Alliance**, complementing Hydrogen and Battery Alliances ([Q3 2021-Q1 2022](#))
- Review of **CO2 emission performance standards for HDVs** ([2022](#))

# The "Fit for 55" Package



# FF55 – Transport policy measures

- Stronger CO2 emissions standards for cars and vans
- Alternative Fuels Infrastructure Regulation
- ReFuelEU Aviation Initiative
- FuelEU Maritime Initiative
- ETS: Aviation and Maritime, Road transport



# Alternative Fuels Infrastructure Regulation (AFIR)





# AFIR: context and objectives

- Rapid growth of zero-emission vehicles expected – required to meet our decarbonisation targets
- Need to ensure adequate infrastructure to meet this demand
- Objectives:
  - Sufficient deployment of publicly accessible recharging & refuelling infrastructure across the EU
  - Full interoperability (physical interfaces and communication) between vehicles and infrastructure
  - Ensuring that infrastructure is easy to use (user information, price transparency and common payment methods)



# AFIR proposal: mandatory targets – road



- Electricity Recharging LDV (Art 3)
  - Fleet-based target, expressed in power installed (kW) per registered EV
  - Distance-based target along TEN-T core and comprehensive network (maximum distance, power installed)
- Electricity Recharging HDV (Art 4)
  - Distance-based target along TEN-T core and comprehensive network (maximum distance, power installed)
  - Safe and Secure parking areas (overnight recharging)
  - Urban nodes (in particular for urban delivery)
- Hydrogen Refuelling, HDV / LDV (Art 6)
  - Distance-based target along TEN-T core and comprehensive network (maximum distance, capacity)
  - Urban nodes (in particular for urban delivery)
- LNG, limited until 2025 (Art 8)
- *NB: all targets are set for publicly accessible infrastructure*



# Electric Recharging for HDVs in AFIR

- Distance based target
  - TEN-T core, every 60 km in each direction:
    - 1400 kW power output (at least one 350 kW recharging station) by 2025
    - 3500 kW power output (at least two 350 kW recharging stations) by 2030
  - TEN-T comprehensive, every 100 km in each direction:
    - 1400 kW power output (at least one 350 kW recharging station) by 2030
    - 3500 kW power output (at least two 350 kW recharging stations) by 2035
- Location based target
  - At least one 100 kW recharging station at every safe and secure parking by 2030
  - Recharging stations at urban nodes:
    - 600 kW of min. 150 kW recharging stations by 2025
    - 1200 kW of min 150 kW recharging stations by 2030

# Gaseous fuels refuelling (LDV & HDV)



## Hydrogen

- Distance based target
  - TEN-T core and comprehensive network:
    - Every 150 km serving both directions by 2030 - 2 t capacity, 700 bar
    - Every 450 km also liquid hydrogen
- Location based target
  - 1 refuelling station in every urban node by 2030 - 2 t capacity, 700 bar

## LNG

- Until 2025, appropriate number of LNG refuelling points along the TEN-T core network
- To allow LNG HDVs to circulate throughout the Union, where there is demand
- Unless costs are disproportionate to the benefits, including environmental benefits.

# Overview & perspectives – zero-emission trucks

## Vehicle market – supply side:

- ACEA pledge: all new commercial vehicles to be fossil free by 2040
- ACEA estimates: 40.000 electric trucks on the roads by 2025; 270.000 by 2030. 60.000 H2 trucks by 2030
- Individual OEM strategies & announcements: electric trucks expected to represent 35% to 60% of new sales by 2030 (Scania, MAN, Volvo Trucks, Renault Trucks, Daimler Trucks & Buses, etc.)

## Vehicle market – upcoming legal requirements:

- Revision of CO2 emission standards for trucks in 2022

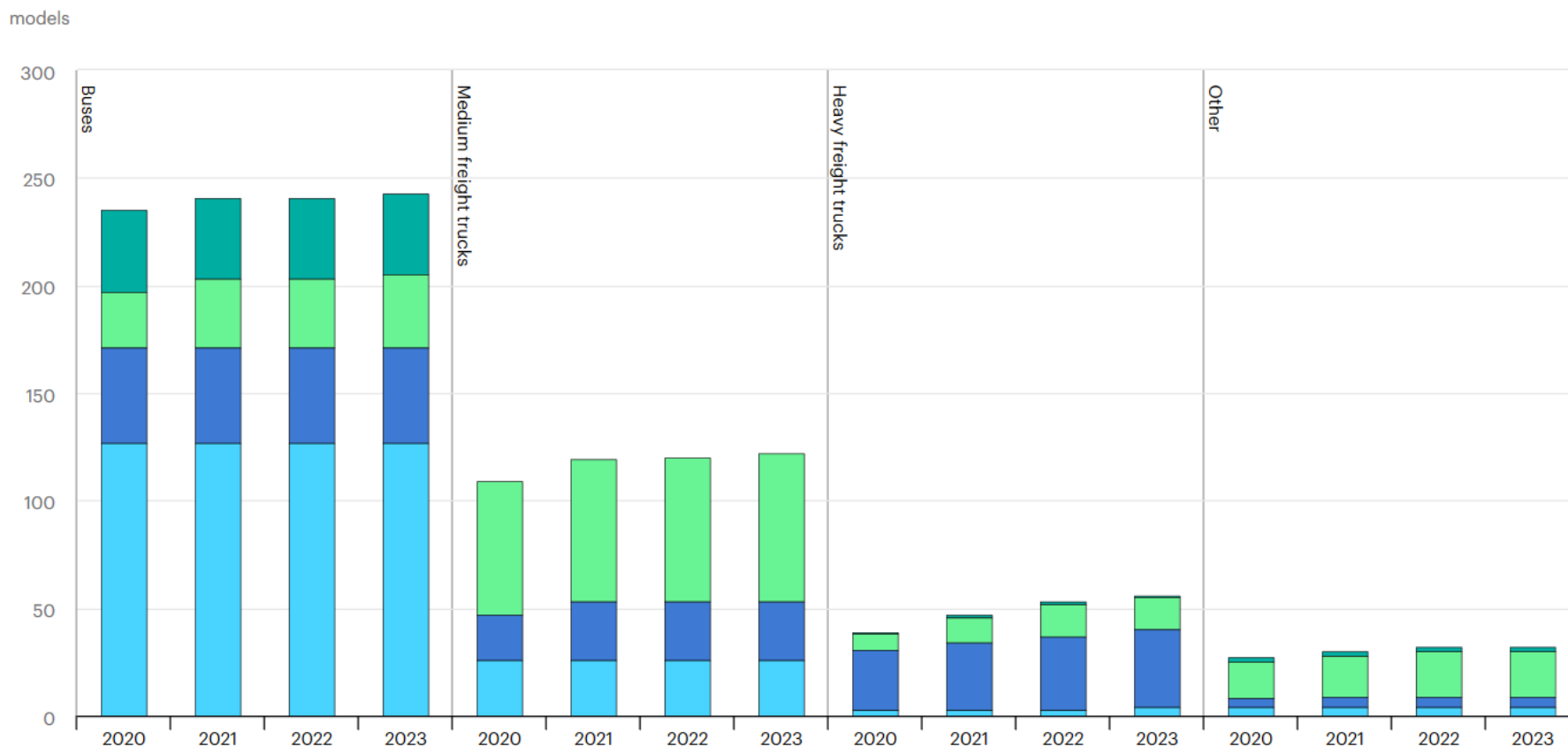
## Vehicle market – demand side:

- European Clean Trucking Alliance: demand for higher ambition on number of zero-emission trucks and corresponding infrastructure

## Recharging & refuelling Infrastructure:

- Mandatory targets in AFIR
- Financial support

# Number of zero-emission HDV models by year and region



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● China ● Europe ● United States ● Rest of the world

<https://www.iea.org/data-and-statistics/charts/number-of-electric-hdvs-models-available-by-segment-and-year-2020-2023>

# AFIR provisions for waterborne transport



## Shore-side electricity supply (OPS)

- TEN-T Maritime ports: sufficient power output to meet 90% of demand by 2030
  - Requirement applies to all TEN-T Core and Comprehensive network ports that had a minimum number of average annual port calls by different types of ship above 5000 gross tonnes in the last 3 years (>50 by seagoing container ships, >40 by seagoing ro-ro passenger ships and high-speed passenger crafts, or >25 by other passenger ships)
- Inland waterways ports: at least one installation providing shore-side electricity
  - In all TEN-T Core ports by 2025 and in all TEN-T Comprehensive ports by 2030

## LNG

- Appropriate number of LNG refuelling points to enable seagoing ships to circulate throughout the TEN-T core network by 1 January 2025
  - Member States to designate the TEN-T core maritime ports that shall provide access to LNG



# FuelEU Maritime



# FuelEU Maritime: challenges to be addressed

- **Fossil fuels represent >99% of the fuel mix in maritime.** By 2050, 90% renewable and low-carbon fuels needed to meet climate targets
- **No single solution** for all ship types and trades.
- **Regulatory predictability** (long lead times to establish fuel supply chain & fleet renewal).
- Need to complement:
  - Requirements on **fuel supply** (Renewable Energy Directive)
  - Requirements on **fuel distribution** (Alternative Fuel Infrastructure Directive)
  - **Price signals** from ETS
- Need to avoid **carbon leakage** and guarantee a **level-playing field**.

# FuelEU Maritime proposal



- **GHG Intensity limit** (CO<sub>2</sub>eq/MJ) of energy used on-board each ship:
  - 2% lower than 2020 fleet average from 2025,
  - 6% lower from 2030
  - 13% lower from 2035
  - 26% lower from 2040
  - 59% lower from 2045
  - 75% lower from 2050
- Obligation to use **onshore power supply (OPS)** for most polluting ships when in port.
- Deterrent financial penalties for ships not meeting limits / OPS obligation .
- Consistent with IMO process

# Thank you for your attention

*Dario Dubolino*

*Directorate General for Mobility and Transport  
Unit B.4 Sustainable and Intelligent Transport*



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