Low-emission transport fuels
Technology and policy pathways to decarbonise shipping and aviation

Session 3 Creating a market for low-emission fuels

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Delivering the European Green Deal

The European Climate Law

- Union-wide **climate-neutrality objective 2050**
- New **2030** target of at least **55% net** greenhouse gas emissions reduction

A socially fair transition
A competitive transition
A green transition
Urgency to act

Projected GHG emissions make it likely that warming will exceed 1.5°C and also make it harder to limit warming below 2°C after 2030

Source: Climate Change 2022: Mitigation of Climate Change. Contribution of WG III to the 6th Assessment Report of the IPCC
European Green Deal, a pathway to climate neutrality

Inventory

Emissions cf. 1990 (%)

-55%

We are here

Balanced

European Commission
Delivering on the 2030 commitment

CLIMATE
- Revision of the EU Emissions Trading System (EU ETS)
- Revision of the Effort Sharing Regulation
- Revision of CO2 emissions standards for cars and vans
- Revision of the Energy Efficiency Directive
- Revision of the Regulation on Land use, Land use change and Forestry (LULUCF)

ENERGY
- Revision of the Energy Taxation Directive
- Revision of the Renewable Energy Directive
- Revision of the Alternative Fuels Infrastructure Directive

TRANSPORT
- Revision of the EU ETS in alignment with the CORSIA system for reducing international aviation emissions
- NEW ReFuelEU Aviation Initiative
- NEW FuelEU Maritime Initiative

TAXATION AND TRADE
- NEW Carbon Border Adjustment Mechanism
**Overview: Fit for 55 Package**

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| • Stronger ETS including in aviation  
• Extending the ETS to maritime, road transport, and buildings  
• Updated Energy Taxation Directive  
• Carbon Border Adjustment Mechanism | • Updated Effort Sharing Regulation  
• Updated LULUCF Regulation  
• Updated Renewable Energy Directive  
• Updated Energy Efficiency Directive | • Stricter CO₂ performance for cars & vans  
• New infrastructure for alternative fuels  
• ReFuelEU: More sustainable aviation fuels  
• FuelEU: Cleaner maritime fuels |

**Support measures**

Using revenues and regulations to promote innovation, build solidarity and mitigate impacts for the vulnerable, notably through the new Social Climate Fund and enhanced Modernisation and Innovation Funds.
FuelEU Maritime and ReFuel Aviation as part of Fit for 55

- **Complementary with ETS**: ETS promotes energy savings while Fuel Initiatives address fuel technology.
- **Complementary with RED and AFIR**: Fuel Initiatives address 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.
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Backups
• Increased target for **renewables in transport** from 14% to 29% in energy terms **and** a parallel compliance target with a reduction in the carbon intensity of 14.5% of transport fuels.

• The level of the target doubles the level of ambition.

• RED also expands its scope since it no longer refers to only the road and rail sector, but encompasses **‘all fuels and electricity supplied to the transport sector’**, including aviation and shipping.

• The LCA approach remains unchanged compared to RED II (currently in force).
Revision of the EU Emissions Trading System (EU ETS) Directive

Updates to Existing EU ETS

**Increase in overall ambition of emissions reductions**
by 2030 to -62% compared to 2005 levels

**Phase-out of ETS free allowances** between 2026-2034 in line with phase-in of the Carbon Border Adjustment Mechanism (CBAM)

**Market Stability Reserve (MSR)** strengthened

**Innovation Fund increased** from 450 to 575 million allowances &
**Modernisation Fund increased** with 3 new MS eligible: EL, PT, SI

**Inclusion of maritime sector** with gradual surrendering till 2026

**Update of ETS-Aviation** with ‘clean-cut’ approach & extension of ‘stop-the-clock’ until 2027 (Commission to assess strengthening of CORSIA by mid-2026), & gradual phase-out of free allocation
FuelEU Maritime

- **GHG intensity of the energy used on-board** to be gradually reduced

*Annual average carbon intensity reduction compared to the average in 2020*

-2%  -6%  -14.5%  -31%  -62%  -80%

Use of **onshore power supply for most polluting ships** required at berth
ReFuelEU Aviation

The ReFuelEU aviation regulation will oblige:

- aircraft fuel suppliers at EU airports to gradually increase the share of sustainable fuels (notably synthetic fuels) that they distribute

Minimum share of supply of sustainable aviation fuels (in %)

- 2% in 2025
- 6% in 2030
- 20% in 2035
- 34% in 2040
- 42% in 2045
- 70% in 2050