

Boosting Renewable Energy for Transport: State of Play on EU plans Fit for 55 and the Renewable Energy Directive III

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Agenda

EU Climate Agenda (Fit for 55)

Renewable energy for transport

Outlook

Wrap-up & Questions

The European Green Deal Fit for 55

Goal: EU to be climate neutral in 2050.

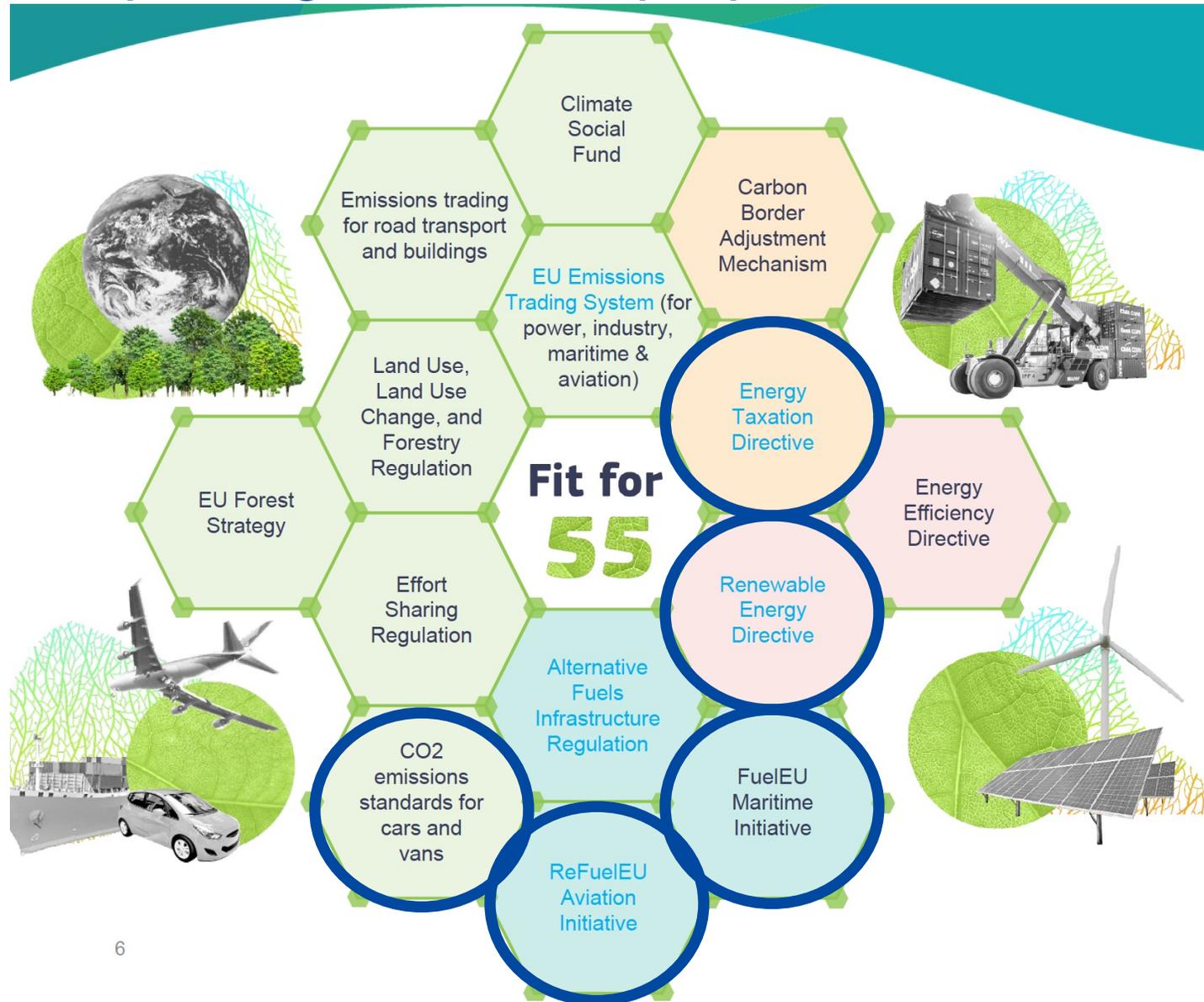
Reaching this target will require action by all sectors of the EU economy, including minus 90% GHG emission reduction for transport.

The legal framework for the 2050 goal is the EU Climate Law.

Intermediate target agreed by the EU:

- **Reduce emissions by at least 55% by 2030 compared to 1990 levels. The so-called 'Fit for 55' package should deliver the target.**

The FF55 package: relevant proposals for biofuels - all interrelated



- Vast package of legislation: over 3500 pages text
- Complex and detailed
- Consistent transposition into national law will be a challenge
- Additional legislation through several EU Implementation Acts

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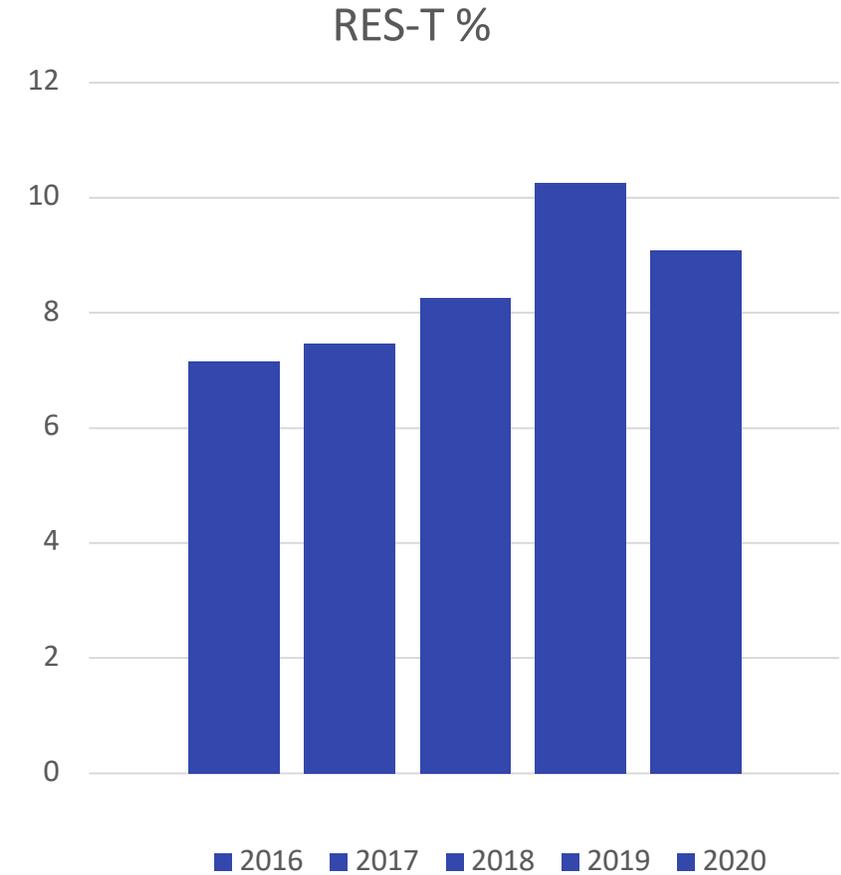
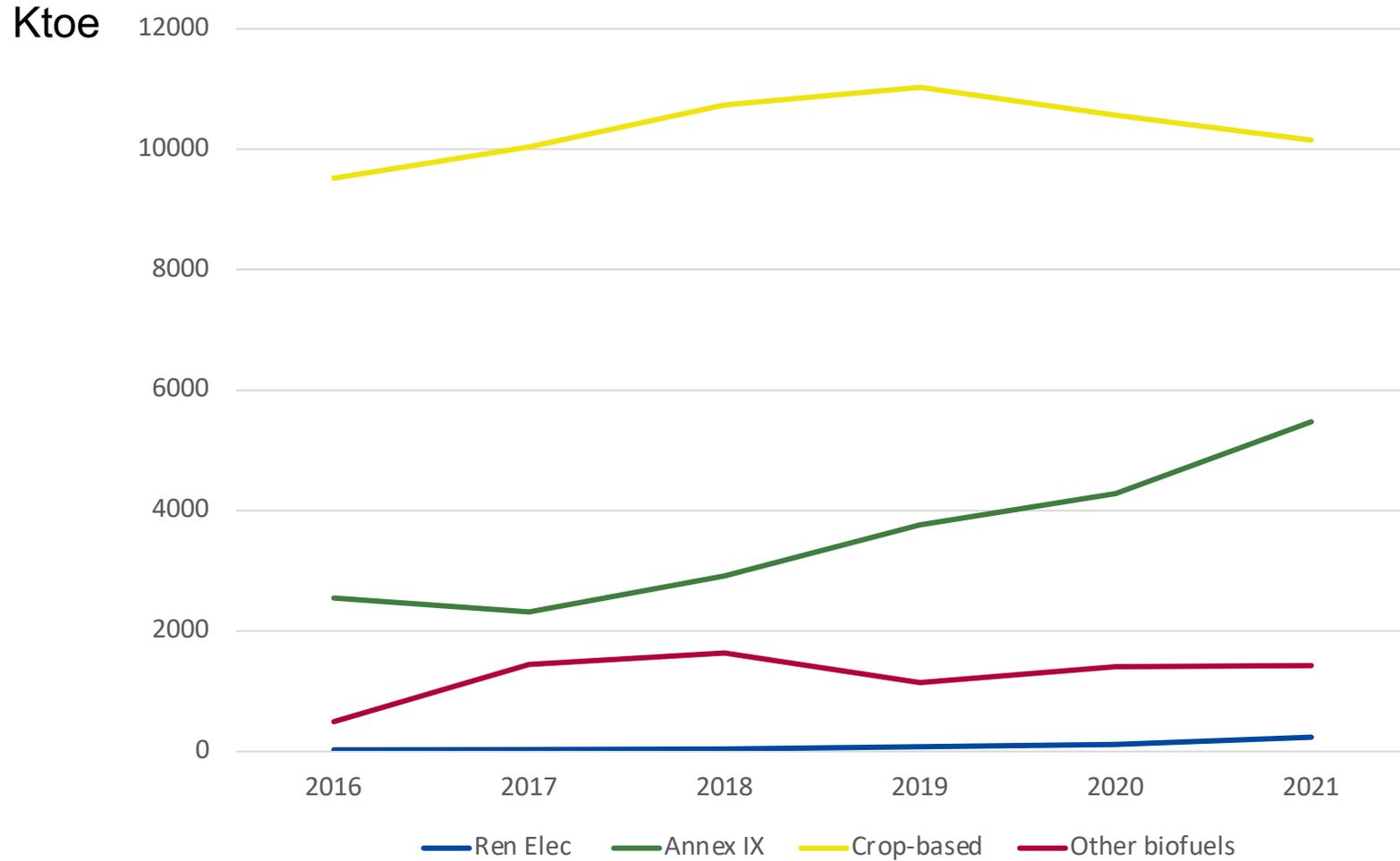
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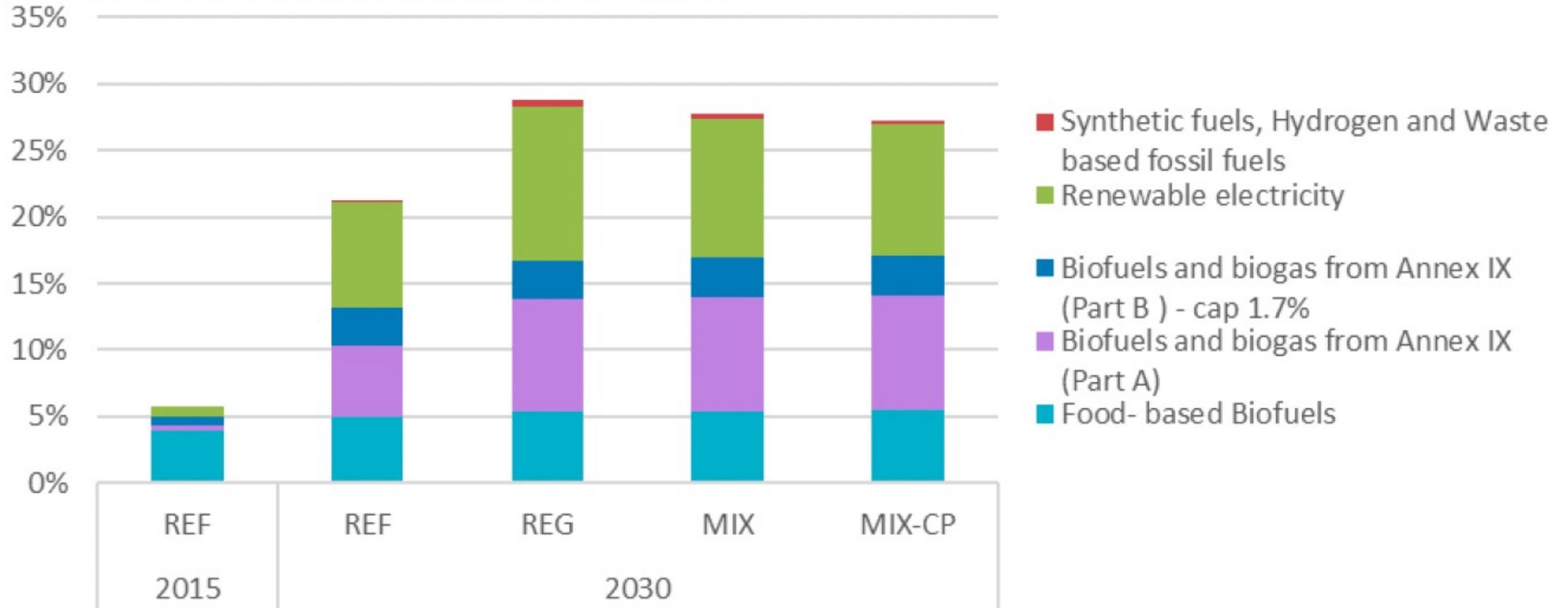
Renewable Energy in Transport (RES-T) 2016-2021



Source: Eurostat SHARES

The outlook for renewable energy in EU transport up to 2030

Figure 21 - RES-T share in core scenarios; Source PRIMES



Source: European Commission, COM(2021)557

Relevant legislation for (renewable) energy in transport (SoP)

Name	Legal instrument	Political agreement	Officially adopted	Published
Renewable Energy (RED III)	Directive	✓	✗	✗
ReFuel EU Aviation	Regulation	✓	✗	✗
FuelEU Maritime	Regulation	✓	✗	✗
Alternative Fuels Infrastructure	Regulation	✓	✓	✗
CO₂ standards for cars and vans	Regulation	✓	✓	✓
Energy Taxation	Directive	✗	✗	✗
Emission Trading System for road transport	Directive	✓	✓	✗

Revision of the Renewable Energy Directive II (aka REDIII: 2025-2030)

		REDII in force	Changes in RED III (entering into force 1-1-2025)
Overall RED target		32%	At least 42;5%; joint endeavour to reach 45%
RES-T	Target and reporting	14% e	At least 14.5 % GHG saving or 29% share of RE Scope: all modes of transport (including aviation and shipping)
	Crop-based	2020 consumption level for each MS within a 7% limit, with 1% flexibility MS may reduce the 7% to zero	No changes
	Annex IX-A (advanced biofuels)	0.2 % (2022), 1 % (2025), 3.5 % (2030)	At least 1% in 2025 and 5.5% in 2030 (This is a shared mandate with RFNBOs) If more feedstock available share can be increased
	Annex IX-B	Limit of 1.7%, which can be modified by MS if approved by Commission	No change
	RFNBOs (H ₂)		At least 1% in 2030 (so less for advanced biofuels) Use of hydrogen to produce petrol and diesel counts towards the target
	Multipliers	Annex IX-A and B: x2 Aviation and shipping: x1.2 Electricity: x4	Annex IX + RFNBOs: x2 Advanced biofuels in maritime and aviation: x1.2 (on top of the x2) RFNBOs in maritime and aviation: x1.5 (on top of the x2) Renewable electricity: x4 for road and x1.5 for rail
	Sustainability criteria		Cascading system to be respected as much as possible

Implementing Acts (mentioned in the RED)

Name	SoP /Adopted	Published
On verification of sustainability	✓	https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R0996&qid=1692183048159
Conditions and calculating rules on RFNBOs	✓	Not yet
Review of Annex IX	Proposal expected any time now	
Co-processing (use of biofuels in the refining industry)	Consultation ongoing	
High ILUC risk biofuels	SoP unclear	

CO₂-emission standards for cars and vans (Regulation)



First file of the FF55 package that resulted in an agreement between legislators and is published (*Regulation (EU) 2023/850*)

Most important elements of the agreement reached:

- Newly registered cars, compared to 2021, have to reduce emissions by 55% by 2030 and 100% by 2035 on a tank to wheel basis
- For new vans, the reduction targets are 50% and 100%, respectively
- The Commission needs to present a methodology to measure emissions on a well-to-wheel basis before 2025
- The Commission should present a proposal for registering after 2035 vehicles running exclusively on CO₂ neutral fuels
- First review of the legislation in 2026

Some observations

RED:

- Higher ambition to have renewable energy in transport
- More countries may go for a greenhouse emission saving target instead of a volumetric target
- No further reduction of the use of crop-based biofuels (until at least 2030)
- No increase of the cap on waste-based oils
- Stronger role for novel fuels (RFNBOs) but in competition with Advanced Biofuels
- Depending on the country the cascading principle could put a limit on the use bio-based fuels

CO₂ standards:

- 2035 will mean (in theory) the end for the internal combustion engine for new cars and vans unless emission-free fuels can still be used

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How might the market for renewable fuels develop up to 2030 ?

- Up to 2030 biofuels are needed to deliver on the targets.
- The use of food/feed crop-based biofuels may grow a bit but not much (now around 4.5%).
- Biofuels from waste oils (Annex IxB) is limited in growth potential (capped due to limited feedstock) but we may see strong growth in some Member States due to national targets and uptake in aviation and maritime.
- Advanced biofuels (made from feedstock listed in Annex IX-A) will have, in theory, a growing market share but are now in competition with RFNBOs. Good on for the short-term but less good beyond 2030.
- Electricity is strongly pushed and will gradually replace liquid and gaseous fuels for passenger transport, but less for trucks, shipping and maritime. RFNBOs (renewable H₂ is the expected solution for heavy duty transport).
- New renewable fuel markets arising for aviation and maritime, substantial in volume .
- E-fuels, such a H₂, are the new silver bullet but are expected, due to costs, to scale up after 2030 only.

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Wrapping up

- The FF55 package is ambitious, legislation complex and not technology-neutral (electricity and green hydrogen are overpromoted).
- REDIII is modest in changes but devil, as per usual, in the detail and in the way Member States implement the Directive.
- New markets for aviation and maritime creating opportunities for Annex IX biofuels;
- Food/feed biofuels will see limited market growth but opportunities for other crops (cover / intermediary / energy crops depending on review Annex IX).
- CO₂ standard for cars/vans could result in phasing out ICE by 2035
- The fuel of the future is called Renewable Fuel of Non-Biological Origin. It will mainly be H₂ but also other fuels that can be produced through the use of renewable electricity (e-fuels) and CO₂

Questions?

