

Boosting Renewable Energy for Transport: State of Play on EU plans

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REDII update

EU Climate Agenda (Fit for 55)

Crucial legislation on transport

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Wrap-up & Questions

Summary: RED II in force

RED II (Directive 2018/2001)	
Energy from Renewable Sources	At least 32 % (at EU level)
Renewables in the Transport Sector	At least 14% obligation for fuel suppliers until 2030
Blending Obligation for Low-Emission and Renewable Fuel	To translate the 14%, obligation can be in energy, volume or by GHG reduction
Cap on Food/ Feed Crop Based Biofuels	<ul style="list-style-type: none"> 2020 consumption level for each MS within a 7% limit, with 1% flexibility MS may reduce the 7% to zero
Target for Annex IX Part A (advanced)	<ul style="list-style-type: none"> 0.2 % (2022), 1 % (2025), 3.5 % (2030) may be counted twice to achieve this target
Limit for Annex IX Part B (UCO, animal fat)	<ul style="list-style-type: none"> Limit of 1.7%, which can be modified by MS if approved by Commission may be counted twice to achieve the 14%
GHG emission saving thresholds	<ul style="list-style-type: none"> 50% for old installations 60% for new installations after 5 October 2015 65% for installations starting operation after 1 January 2021 70% for renewable fuels from non-biolog. origin after 1 January 2021
Fossil fuel comparator	94 gCO _{2eq} /MJ instead of 83.8 gCO _{2eq} /MJ

Transposition of REDII



All 27 Member States should have had in place by 30 June 2021 national law transposing the REDII. No Member State met that deadline.

Austria, Belgium, Bulgaria, Greece, Luxembourg, Poland, Portugal, and Romania have still no legislation in place.

RED II Implementation rules

ALSO THE COMMISSION IS BEHIND SCHEDULE

implementation rules are crucial for making the law work. Most work far behind schedule

Adopted:

- Delegated Act on high ILUC risk biofuels.
- Implementation rules on Voluntary Schemes

In consultation:

- DA on GHG methodology on RFNBOs and RCF
- DA on co-processing (in refineries) with biofuels

Still to be proposed:

- Research on low ILUC risk biofuels - **still ongoing**
- EU database on transparency and traceability of renewable fuels – **still not ready.**
- Review on feedstock list of Annex IX - research ongoing almost concluded. **Draft report has leaked.** Unclear if Commission will propose changes to the Annex.

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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 transport (-90% GHG emission reduction)

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

Intermediate target agreed by Member States:

- **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
Coherence is
questioned even by
Member States

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Revision of RED II (aka REDIII)

		Commission	European Parliament	Council
Overall RED target		40%	45%	40%
RES-T	Target and reporting	25%e and at least 13% GHG saving	16% GHG emission reduction by 2030; MS can pick: v/v, e/e or GHG	29% in e OR at least 13% GHG saving; MS can pick: v/v, e/e or GHG
	Crop-based	7% max; MS may distinguish between crop biofuels based on ILUC	7% max; high ILUC biofuels phased out unless low ILUC-risk certified	No change to crop-based cap
	Annex IX-A	0.5% (2025), 2.2% (2030)	0.5% (2025), at least 2.2% in 2030	1% (2025), 4.4% (2030) (with multiplier)
	Annex IX-B	cap 1.7%	cap 1.7%	No cap if COM agrees
	RFNBOs	At least 2.6% in 2030 co-processing for fossil fuel only may be counted	2.6% in 2028, at least 5.7% in 2030. From 2030 1.2% RFNBOs target in maritime	5.2% in 2030 (after double counting) co-processing for fossil and biofuel can be counted towards 5.2% target
	Multipliers	1.2x for maritime and aviation only if Annex IX-A biofuel or RFNBO	Same as Commission	Keep as in REDII
	Sustainability criteria	No dramatic changes	Waste hierarchy and cascading principle to be taken into account	Keep as in REDII

Sustainable Aviation Fuel – ReFuel EU (Regulation)



	Commission	European Parliament	Council
Scope	Applies to aircraft operators, Union airports, and to aviation fuel suppliers.	No change to COM proposal	No change to COM proposal
Definition /feedstock	<ul style="list-style-type: none"> Drop-in fuels that are either synthetic fuel or Annex IX biofuel Synthetic Fuel: RFNBO Excluded: Crop-based biofuels 	<ul style="list-style-type: none"> SAF: Drop-in either: a) Annex IX, (b) synthetic fuels or (c) recycled carbon fuel but only produced from waste processing gas Until 31/12/2034 also allowed (certain) biofuels complying with sustainability criteria. Not specified. Excluded: food and feed crops, intermediate crops, palm fatty acid distillate and all palm and soy-derived materials, and soap stock and its derivatives. 	<ul style="list-style-type: none"> Drop-in either: a) Annex IX, (b) synthetic fuels or (c) recycled carbon fuel Syn fuels: includes low carbon H2 and need to save at least 70% GHG saving biofuels other than Annex IX shall account for a maximum of 3% (animal fat) Excluded: crop-based
Mandates (minimum targets)	2025: 2% (SAF), no RFNBO 2030: 5% (S), 0.7% (R) 2035: 20% (S), 5% (R) 2040: 32% (S), 8% (R) 2045: 38% (S), 11% (R) 2050: 63% (S), 28% (R)	2025: 2% (SAF), 0,04% RFNBO 2030: 6% (S), 2% (R) 2035: 20% (S), 5% (R) 2040: 37% (S), 13% (R) 2045: 54% (S), 27% (R) 2050: 85% (S), 50% (R)	No change to COM proposal
Compliance		Introduces SAF flexibility mechanism: for a period of 10 year Book & Claim; Delegated Act required for the knowing the details	

Maritime – FuelEU (Regulation)



	Commission	European Parliament	Council
Scope	<ul style="list-style-type: none">• Applies to all ships above gross tonnage of 5000 regardless of flag for all energy used• If next port is outside EU only 50% of energy used applies	No change to COM proposal	No change to COM proposal
Measure / fuels allowed	<ul style="list-style-type: none">• A limit on the greenhouse gas intensity of all energy used• No restriction on what fuel can be used	No change to COM proposal	No change to COM proposal
Mandates (minimum targets)	2025: - 2% 2030: - 6% 2035: - 13% 2040: - 26% 2045: - 59% 2050: - 75%	2025: - 2% 2030: - 6% 2035: - 20% 2040: - 38% 2045: - 64% 2050: - 80% From 1/1/2030 at least 2% should be RFNBOs; not for small companies; multiplier of 2 applies (from 2025 until 2034)	No change to COM proposal

CO₂-emission standards for cars and vans (Regulation)



First file of the FF55 package that resulted in an **agreement** between legislators

Most important elements of the agreement reached:

- Newly registered cars, compared to 2021, have to reduce emissions by 55% by 2030 and by 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, no further reduction of the use of crop-based (until at least 2030); a hard phase-out of high ILUC risk biofuels (palm for now), stronger role for novel fuels, uncertainty on multipliers, cascading principle (EP) could undermine bio-based fuels
- **SAF:** ambitious targets but e-fuels are not around yet and Annex IX-B fuels are scarce due to competition with road transport and maritime
- **Maritime:** A not so ambitious CI reduction target, a modest start to reduce the use of fossil fuels. RCF amendment EP if adopted would contradict use of RCF under RED. Exemption of small shipping companies means 60% of the vessels don't need to comply.
- **CO₂ standards:** 2035 will mean the end for the internal combustion engine for (most) cars and vans unless emission-free fuels can still be used.

Draft Legislation to be expected soon: sustainable carbon cycles

Carbon farming - examples



Afforestation and reforestation
according to ecological principles



Targeted conversion of **cropland to fallow**, or of set-aside areas to **permanent grassland**



Use of **conservation tillage, catch crops, cover crops** and increasing **landscape features**



Agroforestry
and other forms of mixed farming



Restoration, rewetting and conservation of **peatlands and wetlands**



Blue carbon: coastal wetlands, regenerative aquaculture, marine permaculture

Draft Legislation to be expected soon: sustainable carbon cycles

Carbon farming



A **green business model** rewarding land managers for improved land management practices, resulting in carbon sequestration in ecosystems and reducing the release of carbon to the atmosphere.

Benefits of carbon farming:



Increased carbon removals



Additional income for land managers



More biodiversity and nature



Increased climate resilience of farm and forest land

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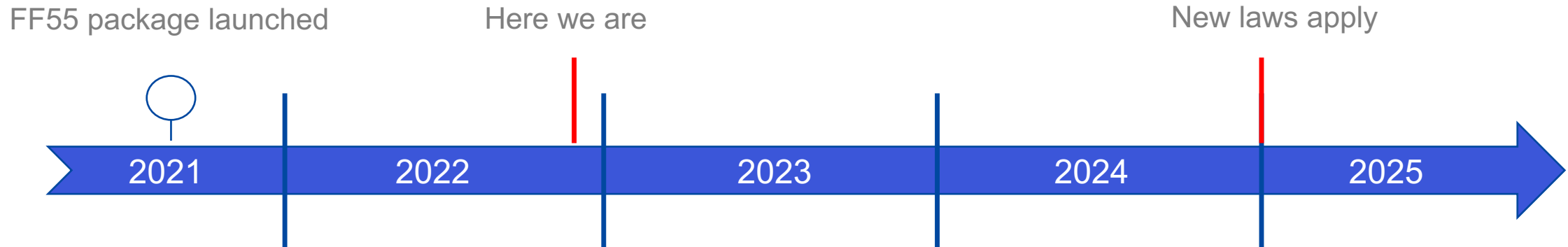
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SoP on decisionmaking and timeline



- Except for the proposal on Energy Taxation both institutions have adopted positions on all other files
- On CO₂ standards cars/vans common agreement reached (file closed)
- Highly unlikely that given the complexity and differentiating views of both legislators on outstanding files other agreements will be achieved still this year
- However, if this speed is maintained, we may expect new legislation adopted by mid 2023, possibly not that much deviating from the original Commission proposals
- New laws applicable from 2025 onwards (until at least 2030), provided MS have transposed Directives in time (which is unlikely); Regulations don't need transposition

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

- 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.
- Advanced biofuels (made from feedstock listed in Annex IX-A) will have, in theory, a growing market share.
- Electricity is strongly pushed and will gradually replace liquid and gaseous fuels for passenger transport, but less for HD vehicles, shipping and maritime.
- New substantial fuel markets arising for aviation and maritime.
- E-fuels, such as H_2 , are the new mantra but are expected, due to costs, to scale up closer to 2030 only.
- The war in Ukraine has shown that things can change rapidly and unexpectedly.

Wrapping up

- Member States were/are slow in transposing REDII into national law and so is the Commission in drafting implementation rules; it creates uncertainties for industry.
- The FF55 package is ambitious, legislation complex and not technology-neutral (electricity and green hydrogen are over promoted); CO₂ standard cars/vans means very likely phasing out ICE by 2035.
- REDII revision is modest in changes, also in ambition, but devil, as per usual in the detail.
- 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).
- 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)

Questions?

