

Nufarm Carinata

Icarus project:
Nufarm perspectives on the future role of SAF

25 September 2026

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1. About Nufarm

Agricultural innovation

Nufarm global footprint:

- Headquartered in Melbourne (NUF:ASX), with extensive Australian and global crop protection manufacture & distribution
- Manufacturing facilities in 14 countries with 100% owned subsidiaries in 25 countries
- ~\$3 billion sales in over 100 countries; 2,500 employees globally

Nufarm Seed & Bioenergy platform (previously under the brand Nuseed)

- Global R&D Innovation Centers (Horsham Vic, West Sacramento USA, Venado Tuerto ARG)
- Working on Omega-3 canola, carinata, sorghum, and energy cane to empower growers and end-use customers to scale today to meet current and emerging demand

1. About Nufarm

Our Bioenergy Platform



- Proprietary global position
- Non-food intermediate crop producing novel oil feedstock
- High protein, non-GMO meal co-product
- South American expansion
- EU & AUS development underway



- Top 3 position globally
- Strength in food, feed and fuel
- Recently introduced early sorghum category
- Human and animal nutrition traits
- Leading efforts to link agronomic performance, new cropping patterns and high yield potential
- Brazil, USA, Argentina are key geographies



- Proprietary global position
- Novel biomass feedstock for ethanol, electricity & biogas
- Verified greenhouse gas reduction & sustainability
- Highest agricultural efficiency of biomass production
- In Brazil and other tropical countries



- #1 canola seed position in Australia
- Top 4 position globally
- Range of novel oil positions
- Currently executing growth strategy into high value markets in Canada, Europe and Latin America
- Best in class canola traits capability, with leading market share within Australia

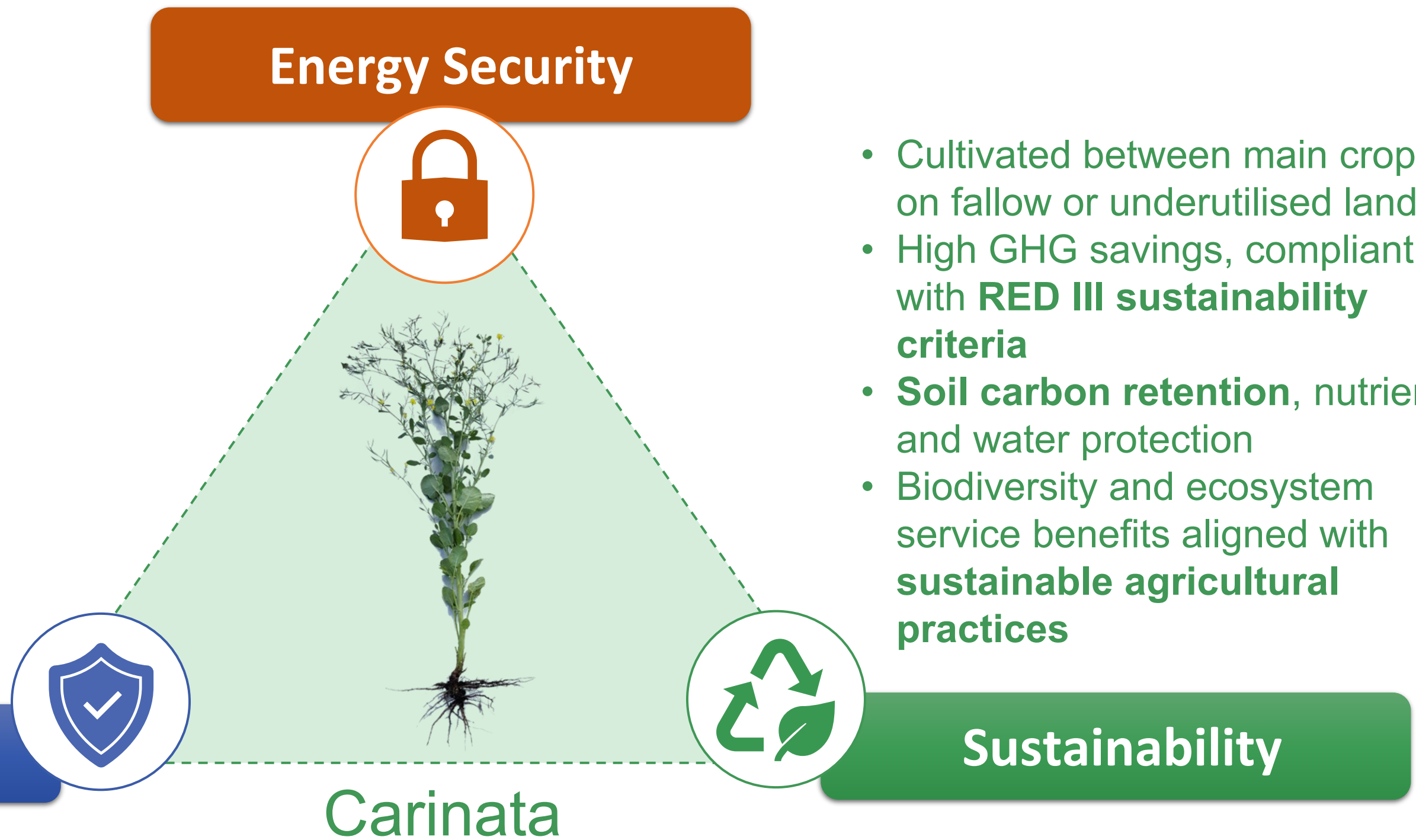
1. About Nufarm

Positioning Carinata in the nexus of the EU Energy Trilemma

- **Reduced dependence on imported fossil fuels**
- Domestic, low-carbon feedstock for advanced biofuels & biomaterials in the **Bioeconomy**
- **Resilient, reliable and flexible domestic biomass supply**
- Efficient use of existing farmland without negative land-use change

- Cost-effective **domestic** feedstock mobilisation for advanced fuels and SAF
- **Additional farm income** without displacement of food or feed production
- Stronger EU value chains, jobs and industrial competitiveness
- **Reduced exposure to global feedstock price volatility** and increase animal feed production

- Cultivated between main crops on fallow or underutilised land
- High GHG savings, compliant with **RED III sustainability criteria**
- **Soil carbon retention**, nutrient and water protection
- Biodiversity and ecosystem service benefits aligned with **sustainable agricultural practices**



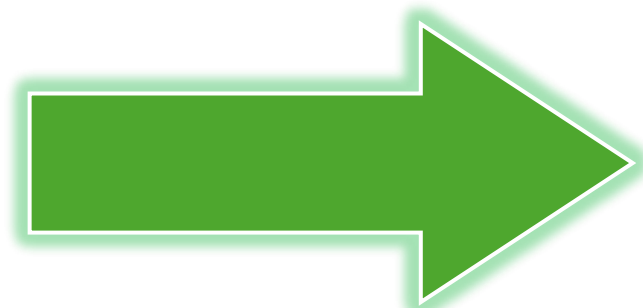
2. Objectives of the Icarus Project

The Icarus Consortium was formed to work on Sustainable Aviation Fuel (SAF) production by addressing critical technology limitations in three key routes:

- Biocrude from hydrothermal liquefaction
- Isobutanol from lignocellulosic biomass
- Synthetic Fischer-Tropsch from biomass gasification



These value chains have been strategically chosen due to their proximity to market deployment and their pivotal role in meeting European and international SAF deployment targets.



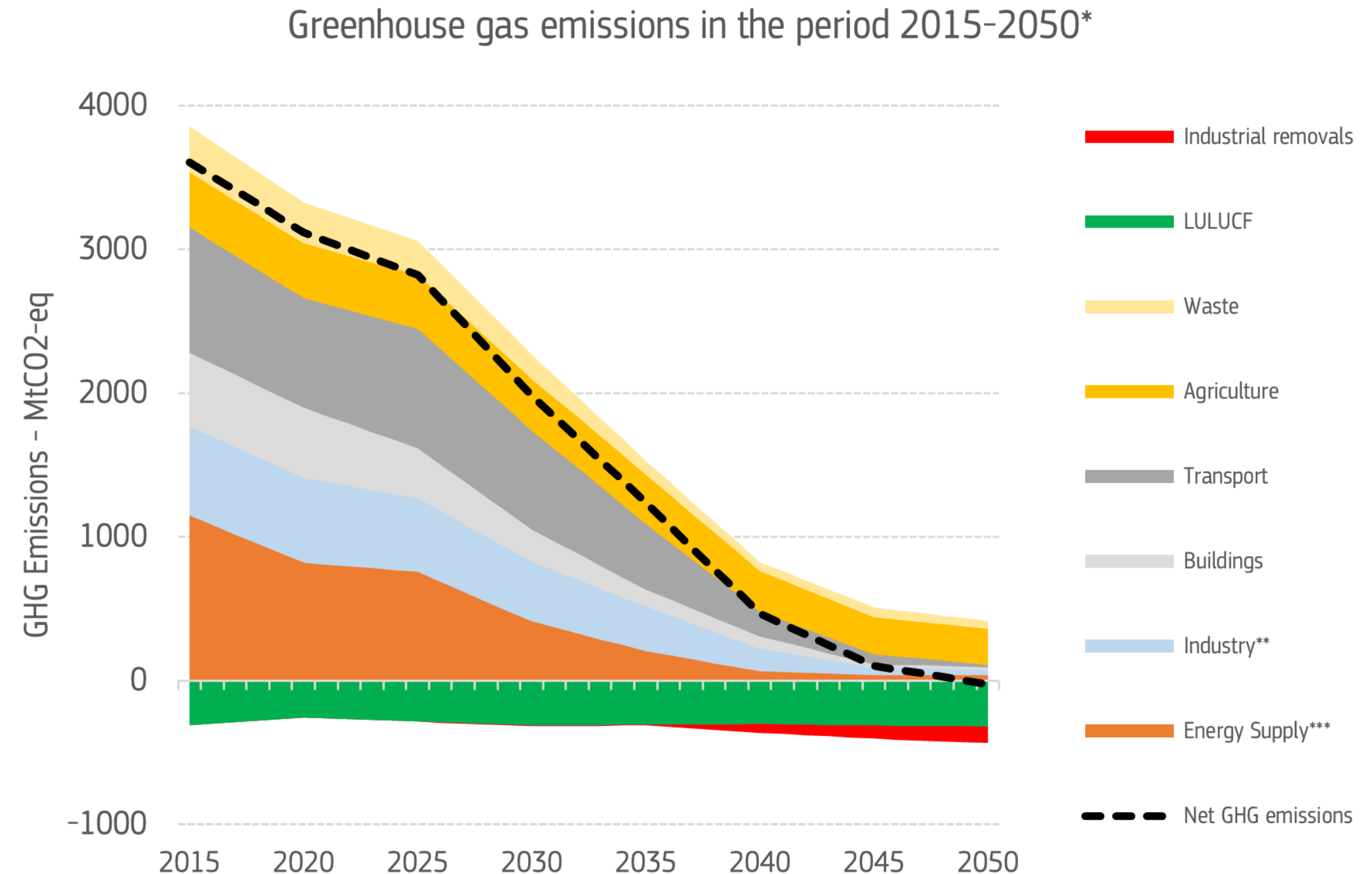
**Key goal: enabling scalable SAF
production through feedstock innovation**

3. EU Policy today

EU decarbonisation policies underpin strong push for emissions reduction



The EU has a very ambitious net-zero target for 2050



*Source: PRIMES, GAINS, GLOBIOM

**Excluding non-BECCS industrial removals

***Including Bioenergy with carbon capture and storage (BECCS)

3. EU Policy today

To get there, many EU policies need to work together
ReFuelEU Aviation Regulation is only one of them...



Note: Not an exhaustive list!

3. EU Policy today

Through a maze of EU Climate & Energy Targets

A fragmented and, at times, incoherent legal framework...

	RED Overall GHG target Compared to 1990 levels	RED Overall renewables target	RED Transport target (all modes)	RED Sub- target Annex IX- A	Sectorial transport targets		Effort Sharing Domestic transport (- aviation), buildings, agriculture, small industry and waste	ETS	ETS 2	Energy Efficiency
					FuelEU Maritime 	ReFuelEU Aviation 				
2025				1%	2%	2%				
2030	55%	42.5%	29% ener/vol or 14.5% GHGs	5.5%	6% 1.2% e-SAF	6%	40%	62%	42%	32.5%
2035		-	-	-	20% 5% e-SAF	14.5%	-			
2040	90%	Proposals expected (Q4 2026)			34% 10% e-SAF	31%	Proposal for this target expected in next years...	Proposal presented in July 2026		
2045	-	-	-	-	42% 15% e-SAF	62%	-			
2050	100% Climate neutrality	-	-	-	70% 35% e-SAF	80%	-			

Share of
Annex IX-A
fuel (2x)

Share of
aviation fuel

GHG
reduction

EU MSs individual GHG
targets from 10 to 50%
compared to 2005 levels

Compared to
2005 levels

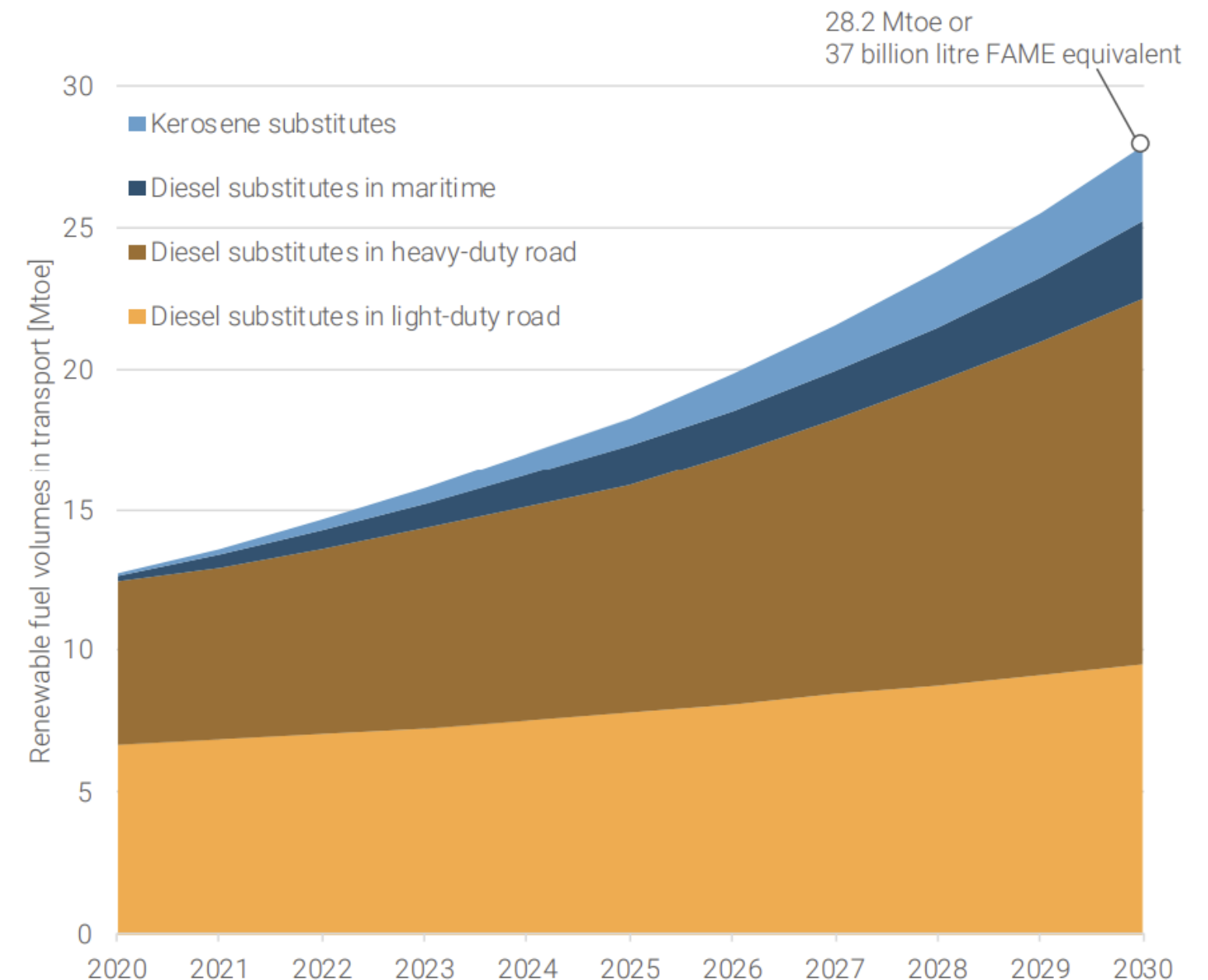
3. EU Policy today

EU “*legislation-driven demand*” expected to significantly increase for lipid-based fuels

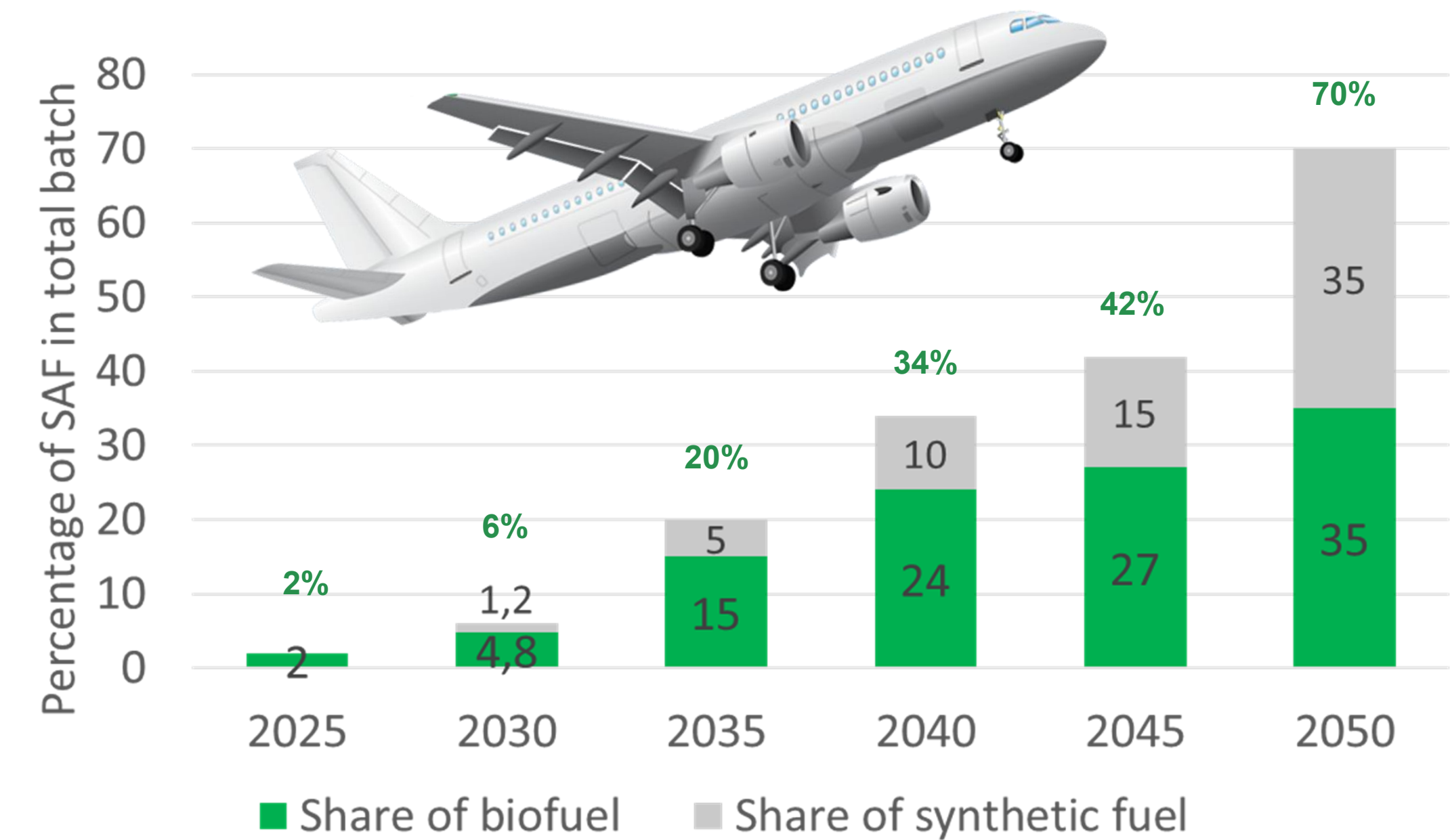
Volume mandated by Fit-for-55

Demand for renewable fuel in diesel will double by 2030

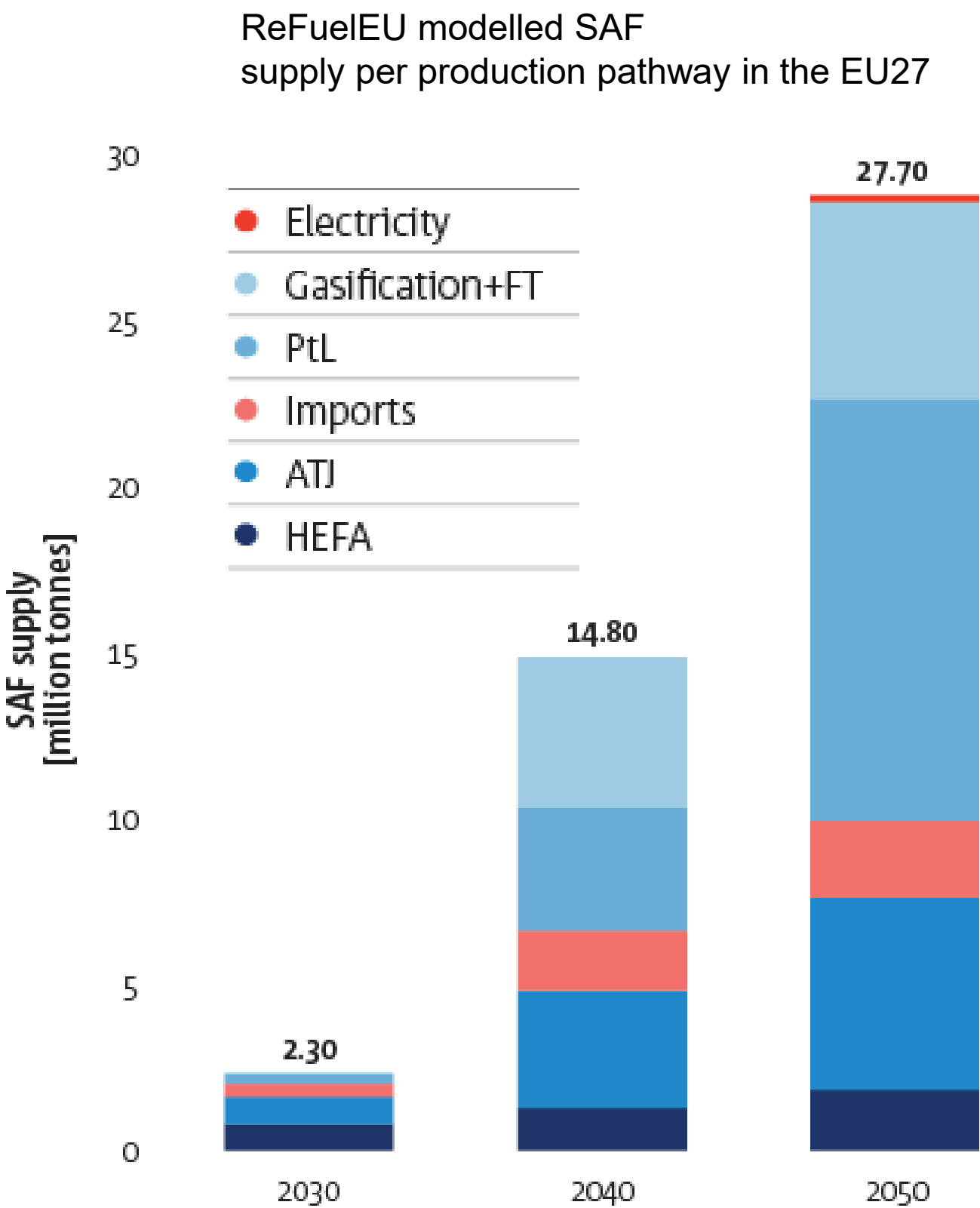
- Mandated volume by Fit-for-55:
RED III, FuelEU Maritime & ReFuelEU Aviation combined
- Demand for renewable fuels grows in all diesel segments
- From 13 Mtoe in 2020 to 28 Mtoe in 2030
(17 billion litre in 2020, 37 billion litre in 2030)
- Road transport represents 80% of the demand for renewable fuels in diesel, fuel oil and kerosene segments in 2030
- By 2030 fraction of renewable fuels in road diesel ~18%
→ Could be combination of FAME and HVO
- Strong growth in demand for renewable fuels in maritime and aviation



3. EU Policy today



European biofuels market will require large quantity of new feedstocks and innovative technologies to respond to the expected increase in demand, specially in aviation



***What will EU
climate & energy
policy look like
after 2030?***



3. EU Policy tomorrow

Latest EU policy developments

The 2027 ReFuelEU Aviation review

By 1 Jan 2027, the European Commission is required to present a report assessing whether the SAF market is developing sufficiently, the regulation's impact on competitiveness and decarbonisation, and whether adjustments to targets, fuel definitions, or scope are needed.

ReFuelEU review might stay a report, with no legislative update expected

- [Responding](#) to an MEP question, EU Transport Commissioner Tzitzikostas indicated that **the 2027 review of the ReFuelEU Aviation Regulation will take the form of an assessment report rather than a legislative amendment**. The review will examine the state of the SAF market, the SAF mandate's impact on competitiveness and the internal market, and the regulation's overall effectiveness and enforcement.

European Parliament's TRAN Committee report on SAF incentives

- TRAN is working on an own-initiative report calling on the Commission to establish a European Book and Claim mechanism for sustainable aviation fuels (SAF), with the aim of improving market access, price transparency, and decarbonisation outcomes across EU aviation.

3. EU Policy tomorrow

Latest EU policy developments

The post 2030 EU Renewables Framework

Current RED (III) framework focuses on achieving the EU's 2030 renewable energy target; European Commission is now developing a longer-term framework that supports the EU’s 2040 climate objectives.

Rumours circulating seem to indicate a significant revamp of the existing EU Renewable Energy Directive. With impact on biofuels, some of the ideas currently on the table seem to include:

Changes under consideration	Likely impact	FOR DISCUSSION
Food/feed cap harmonised at 7% for all MS , replacing the 2020-share + 1 p.p. (percentage point)	Effectively giving more space for food & feed crops	
Supplier (blending) obligation <u>retained</u> , but removal of standalone transport target (29% RES/ 14.5% GHG), leaving MS to pursue their own ambition -	Further potentially fragmenting the market	
Advanced sub-target <u>removed</u> (5.5% RFNBO/ Annex IX-A)	Potentially (and significantly) disrupting existing investments	
MS allowed to count high ILUC-risk protein crops (notably soy) towards the target; an ‘emergency break’ allowing MS to reduce or stop supply obligations for these high-ILUC-risk protein crops (unclear whether high ILUC specific or food/feed overall) during global food price spikes.	Additional compliance route to meet EU targets	
Multiplier retained (but only for) for ‘resilient’ EU-sourced advanced biofuels	‘Resilient’ pending definition – potential restriction for imported feedstock likely to make it difficult to meet the demanding targets	
Third-country certification permitted only where certification bodies are allowed to conduct in-person inspections	Additional restriction on imports from third countries	

Likely proposal in November / December 2026

Thank you

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