

Dinâmica e tendências nos mercados internacionais de biocombustíveis

Fabricio Cardoso

Head of Biofuels & Agriculture Analytics

Fabricio.Cardoso@argusmedia.com



Perspectiva global
dos
biocombustíveis

Os “três” biocombustíveis rodoviários

Etanol

- Misturado na gasolina, normalmente em proporções E5/E10

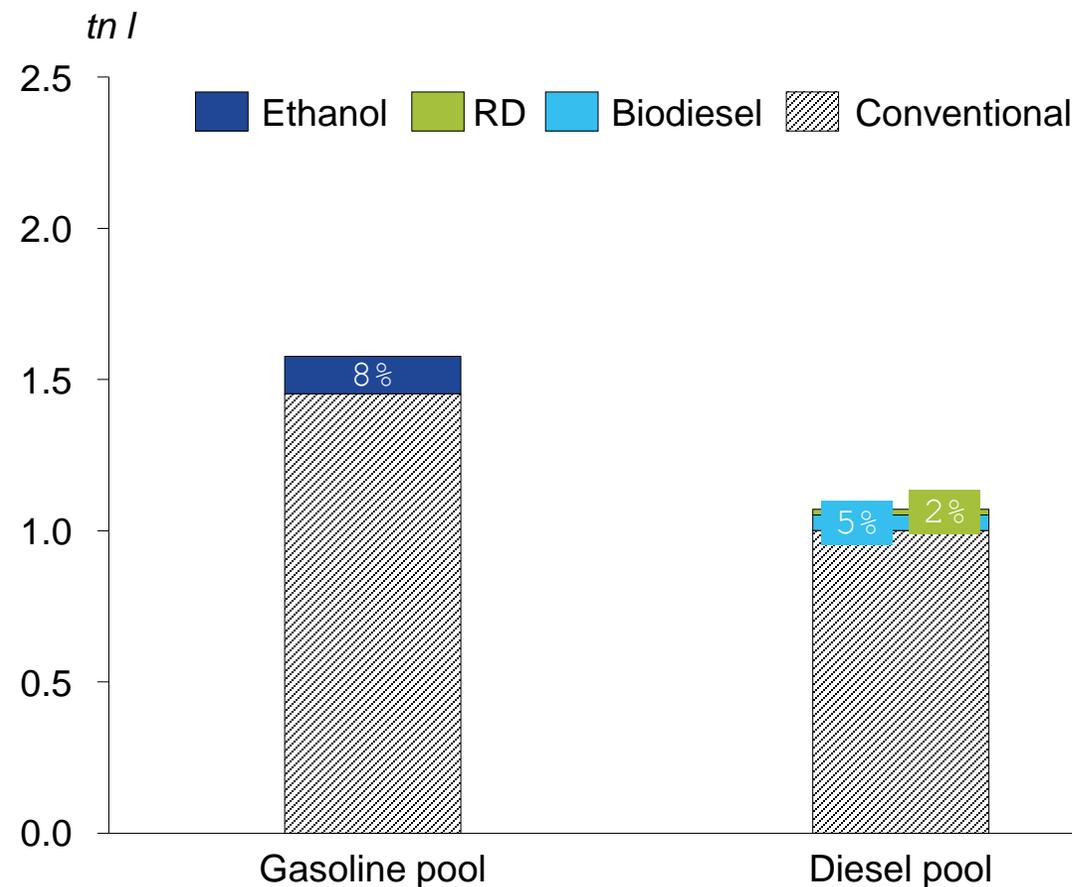
Biodiesel (FAME)

- Misturado no gásóleo, normalmente em proporções B5/B10

Diesel renovável (~HVO)

- Misturado no gásóleo, substituto sem limite de mistura (R100)

Demanda global de combustíveis rodoviários, 2025



Tipos de políticas de incorporação de biocombustíveis

Tipos principais

1 Mandatos em volume ou GEE
Metas de volume
Negociações de certificados possíveis

2 Padrões de pegada de carbono
Créditos e défices dependendo da intensidade de carbono
Estilo 'LCFS'

3 Subsídios diretos
Incentivos à mistura ou produção
Apoio para igualar preços face aos combustíveis convencionais

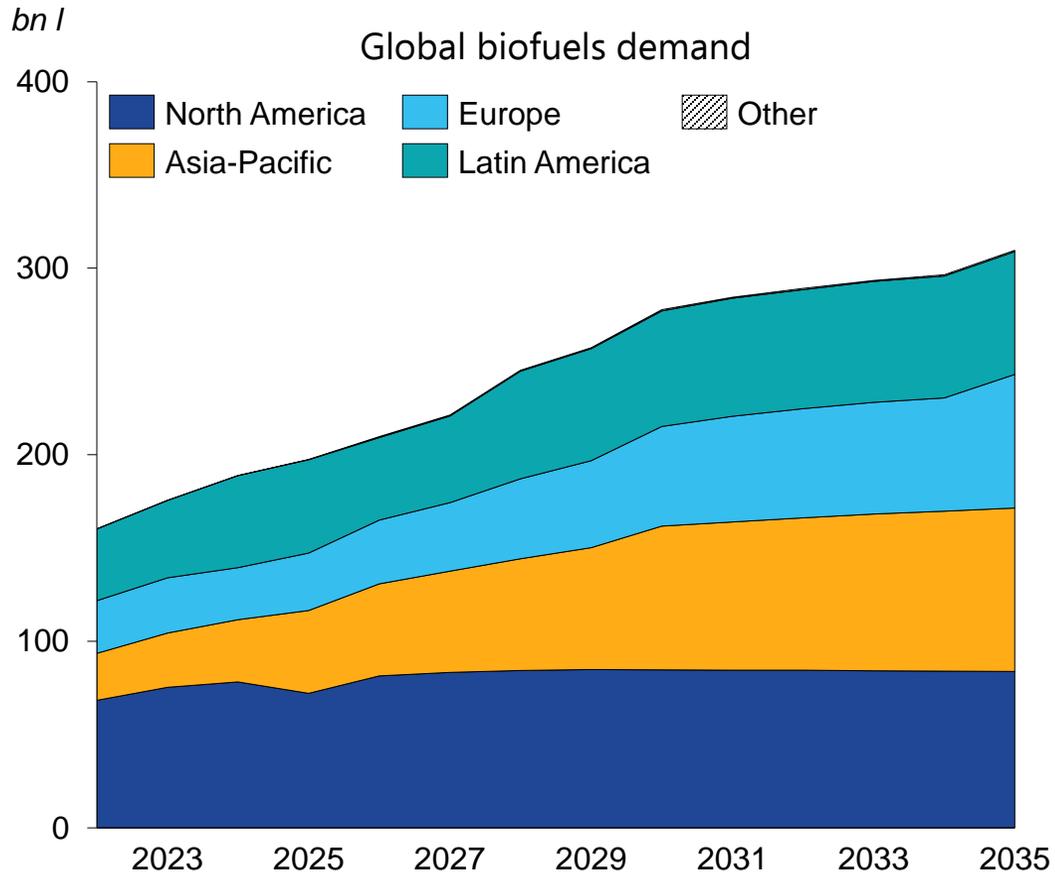
Absorção de custos

A Embutidos no preço do combustível
Custo do biocombustível como parte do preço final
Influenciado por dinâmicas de preços
Repasse para o consumidor final pode ser incompleto

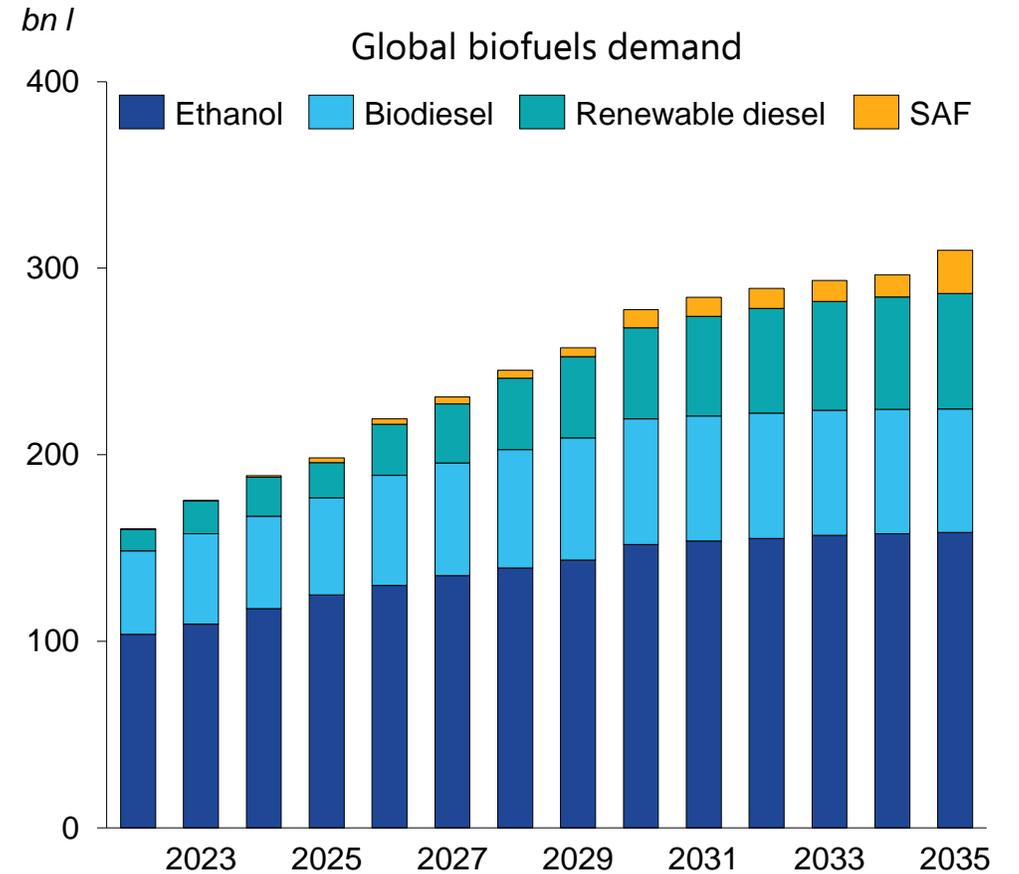
B Financiados por motoristas
Custo do biocombustível repassado mais diretamente
Preço do combustível na bomba aumenta

C Financiados por contribuintes
Subsídios e créditos fiscais explícitos
Repasse visíveis em orçamentos públicos
Preço do combustível na bomba pode cair – financiado por contribuintes

Demanda global de biocombustíveis

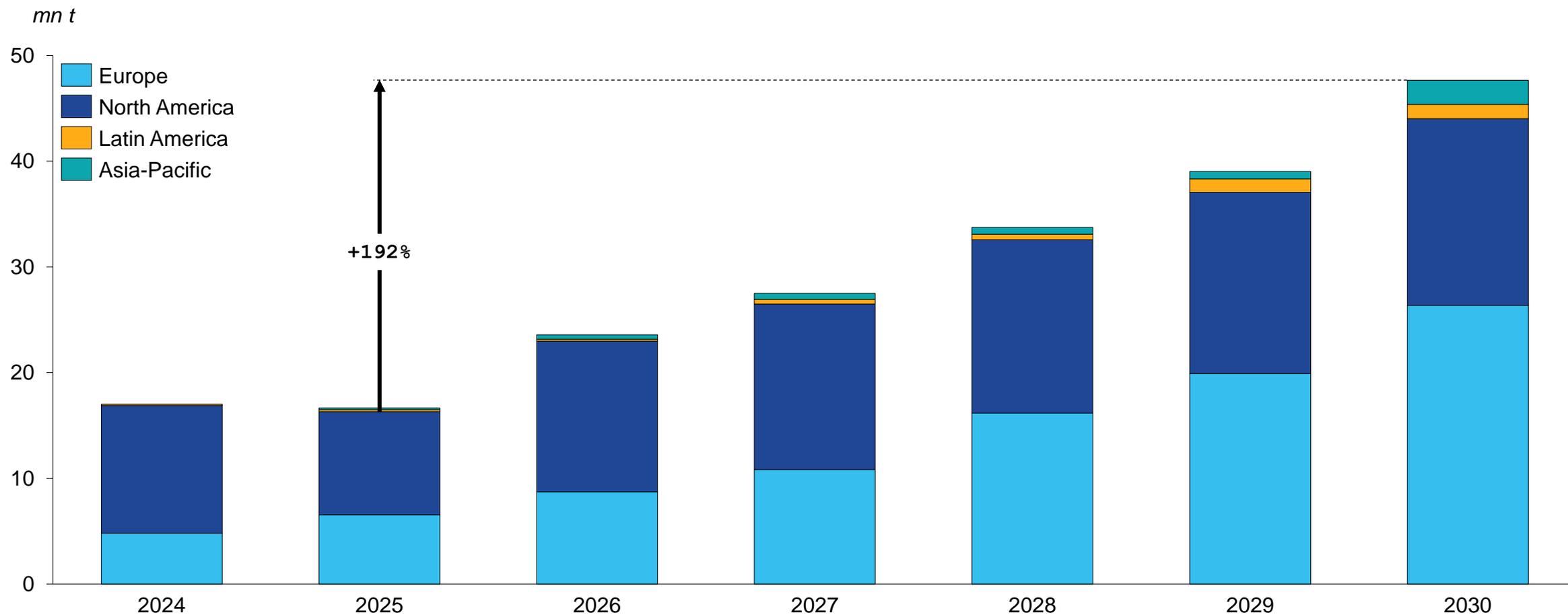


— Argus Biofuels Analytics 1Q26



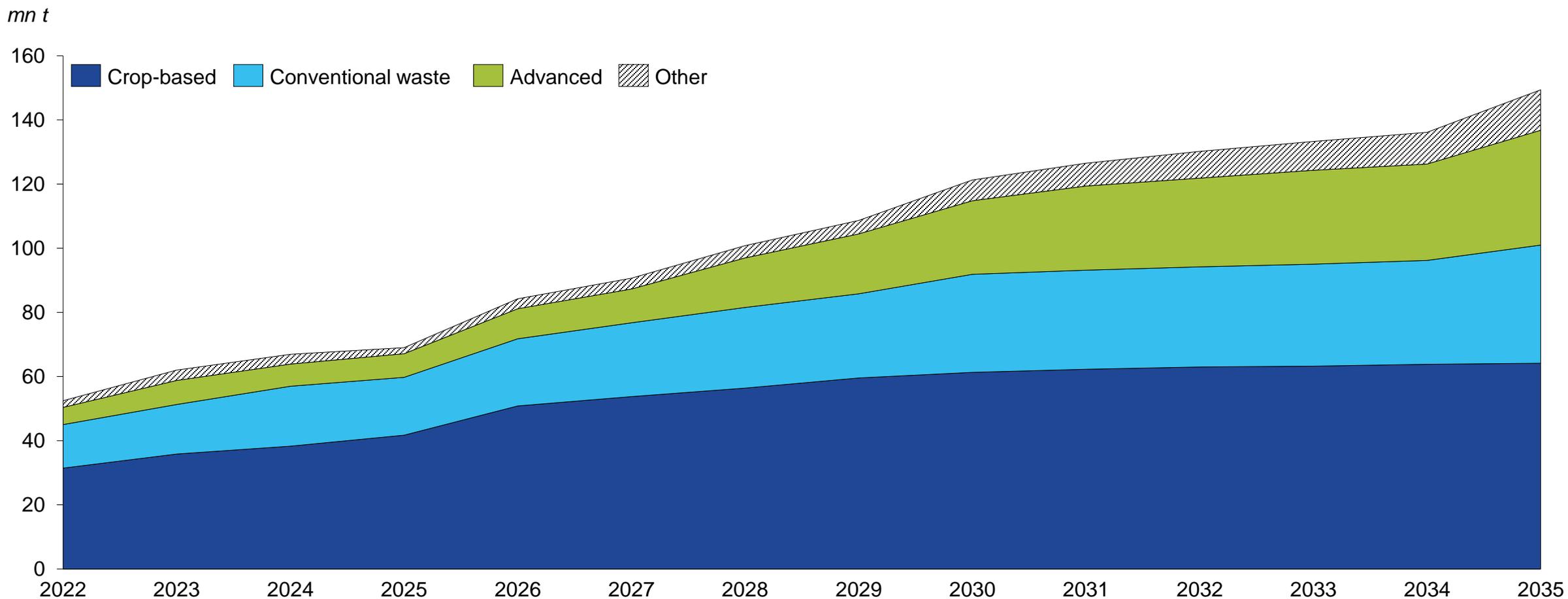
— Argus Biofuels Analytics 1Q26

A demanda global de diesel renovável e SAF deverá crescer 31 Mt até 2030



— Argus Biofuels
Analytics 1Q26

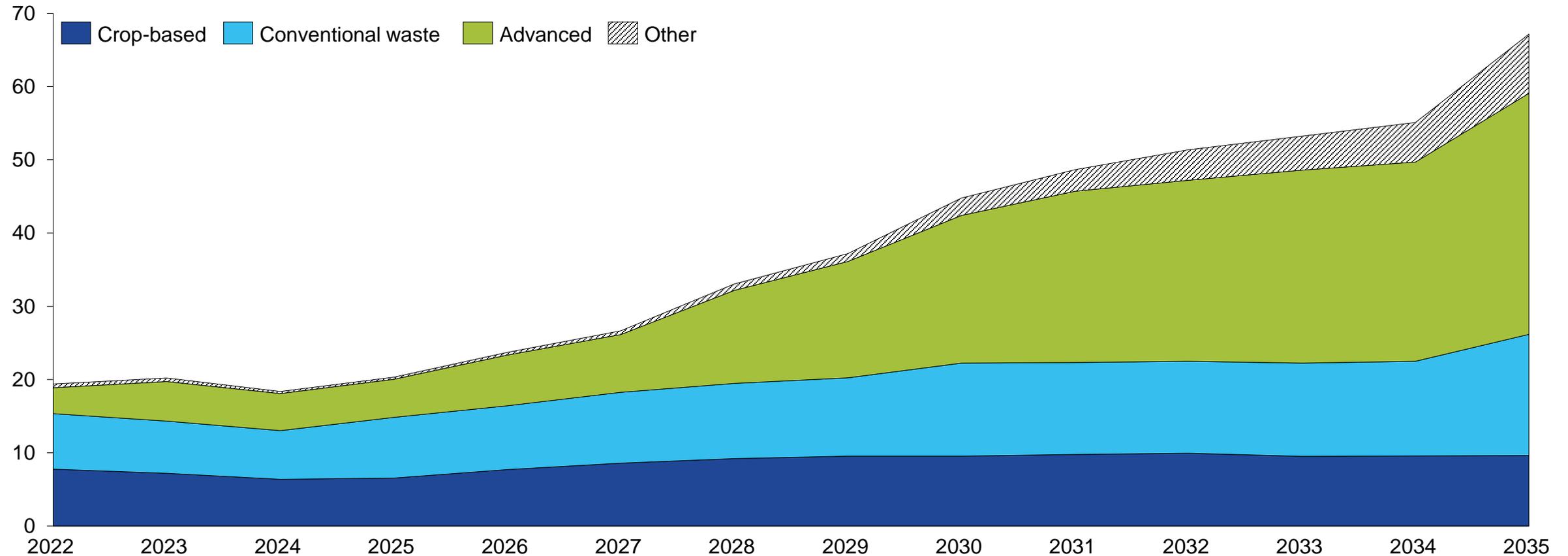
Demanda global de matérias-primas para biodiesel, diesel renovável e SAF



— Argus Biofuels
Analytics 1Q26

Demanda europeia de matérias-primas para biodiesel, diesel renovável e SAF

mn t



— Argus Biofuels
Analytics 1Q26

Source: Argus Media – Consulting Services

© 2026 Argus Media group. All rights reserved. 8

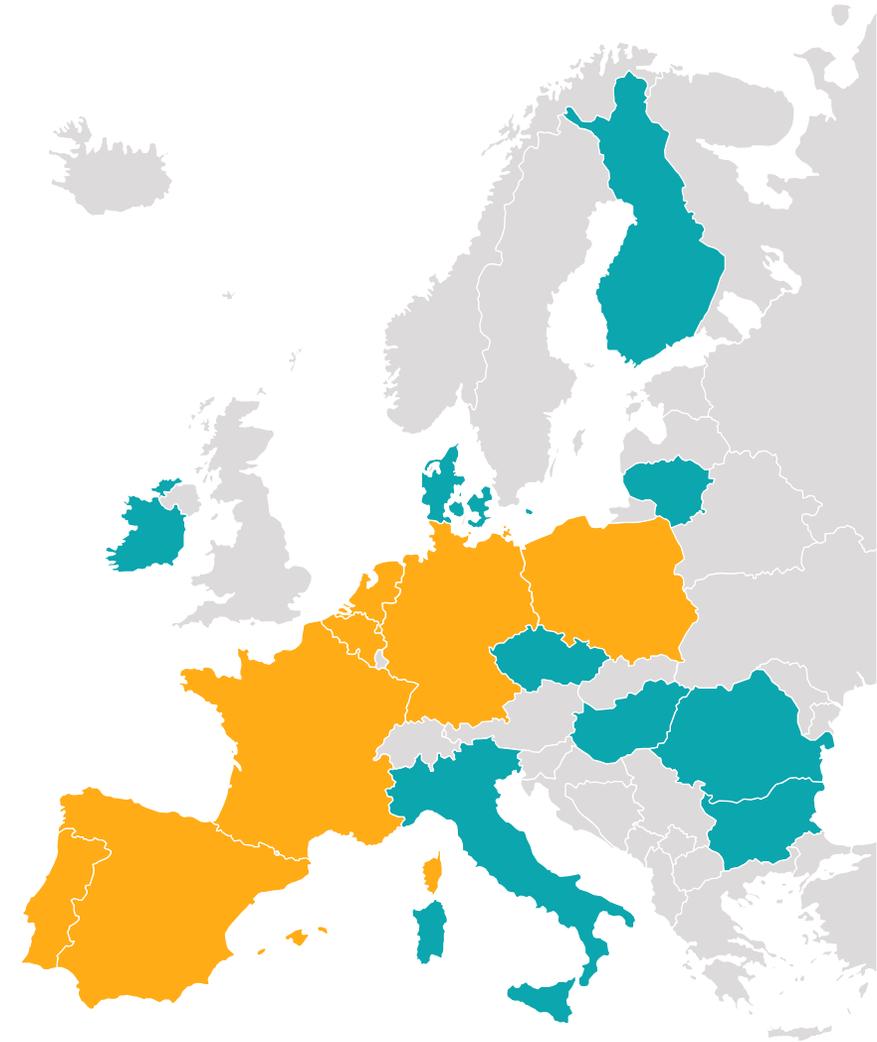
Mercado europeu de biocombustíveis

A Europa possui legislações vigentes para os principais setores de transporte

Sector		RED III	RED III transpositions	ReFuelEU Aviation	FuelEU Maritime
Obligation	Sector	All	Road + other sectors (country dependent)	Aviation	Maritime
	Status	Legislated	Ongoing	Legislated	Legislated
	Legislator	EU	Member state	EU	EU
	Obligated party	Member state	Fuel supplier	Fuel supplier, Airline	Ship operator
Targets	Basis	GHG or Energy	GHG, Energy or Volume	Volume	GHG
	Target level (2030)	14.5pc GHG reduction 14,5pc	?	6.0pc SAF share 6,0pc	6.0pc GHG reduction 6,0pc
Feedstocks	Crops	Up to 7pc cap	Varies	Banned	Banned
	Part B	1.7pc cap	Varies	Uncapped	Uncapped
	Intermediate crops	Sector-dependent	Part B (road)	Part A (aviation)	Part B (maritime)

O prazo de transposição do RED III já passou, mas os trâmites continuam

- 23 Dec 2024 ● **Finland** adopts RED III transposition
- 20 Feb 2025 ● **Czechia** adopts RED III transposition
- 13 Mar 2025 ● **Romania** adopts RED III transposition
- 12 May 2025 ● **France** proposes RED III draft (*delayed to 2027 in Aug 2025*)
- 13 May 2025 ● **Denmark** adopts RED III transposition
- 13 May 2025 ● **Belgium** proposes RED III draft
- 21 May 2025 ○ **Transposition deadline**
- 10 Jun 2025 ● **Bulgaria** adopts RED III transposition (partial)
- 25 Jun 2025 ● **Ireland** adopts RED III transposition
- 14 Jul 2025 ● **Lithuania** adopts RED III transposition
- 24 Jul 2025 ○ **European Commission** opens infringement procedures against all member states except Denmark for failing to communicate RED III transposition into national law
- 25 Sep 2025 ● **Portugal** proposes RED III draft
- 10 Dec 2025 ● **Germany** cabinet adopts RED III draft (*first draft proposed Jun 2025*)
- 31 Dec 2025 ● **Hungary** adopts RED III transposition (partial)
- 9 Jan 2026 ● **Spain** revises RED III draft (*first draft proposed Jul 2025*)
- 14 Jan 2026 ● **Poland** proposes RED III draft
- 19 Jan 2026 ● **Netherlands** revises RED III draft (*first draft proposed Nov 2024*)
- 26 Jan 2025 ● **Italy** adopts RED III transposition

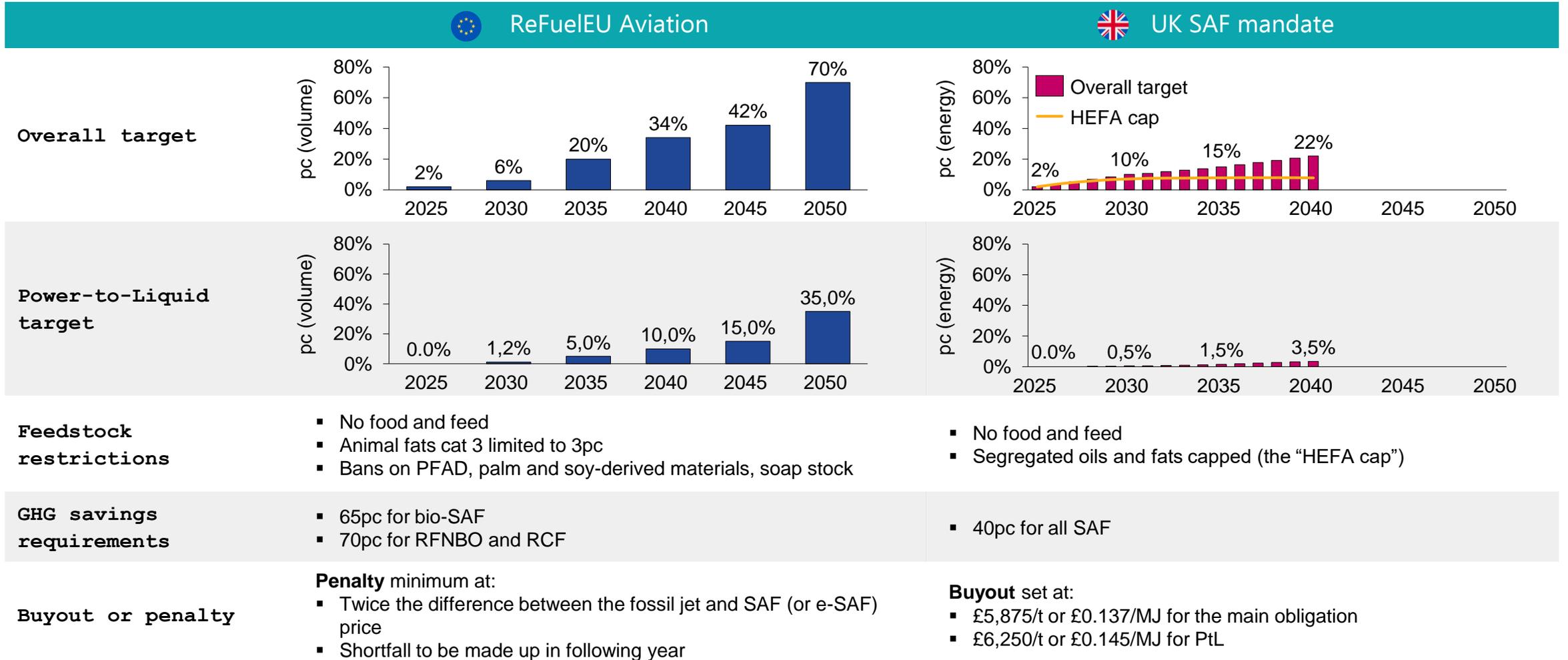


Não existe uma única direção para as transposições da RED III

Targets		Feedstocks	
Increased overall target	Most drafts	Increased 9A target	Most drafts
Switched from energy to GHG targets	 FR ES NL	Lowered crop cap	 NL CZ IE
Removed of double-counting	 DE FR ES NL	Lowered 9B cap	 NL BE
Introduced maritime target	 BE FR PT ES NL	Increased 9B cap	 DE FR IT
Introduced aviation target	 FR	Pome oil restriction	 DE* IE PT

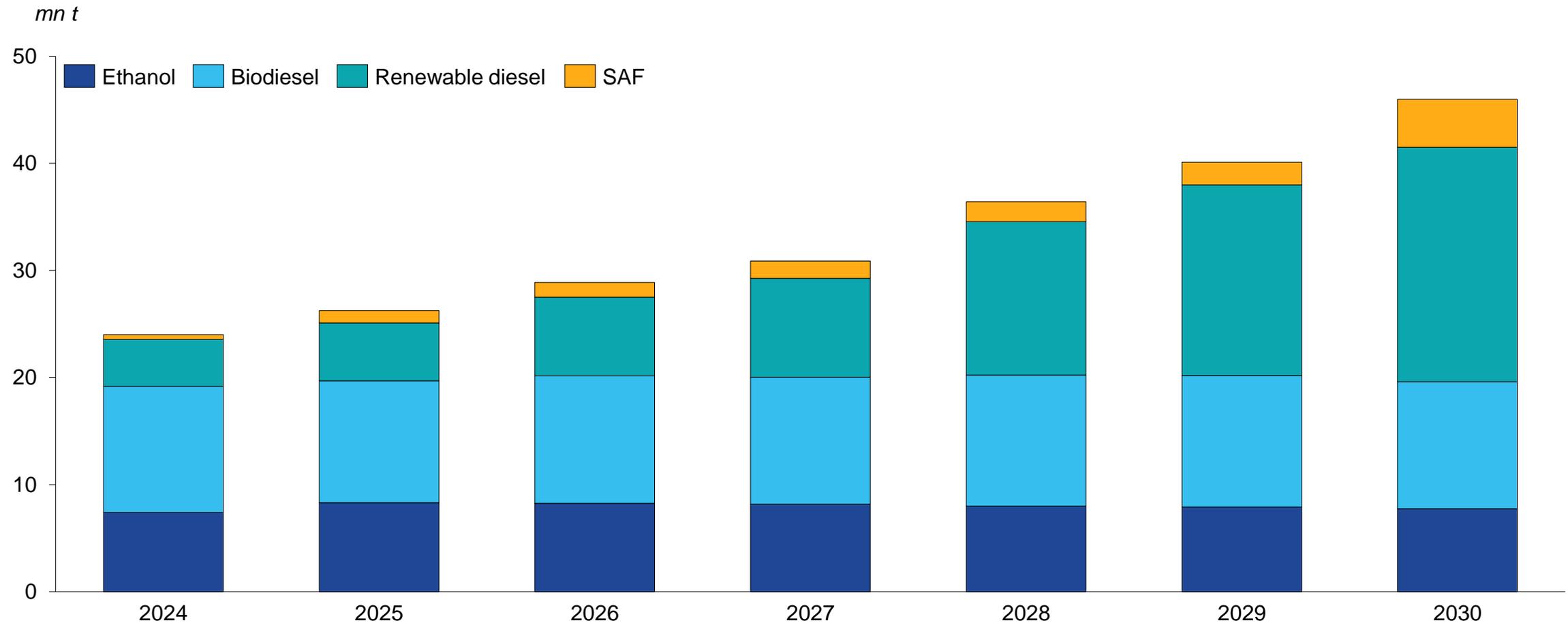
*applies from 2027

Os mandatos de SAF na Europa e no Reino Unido entraram em vigor em 2025



Oferta e demanda

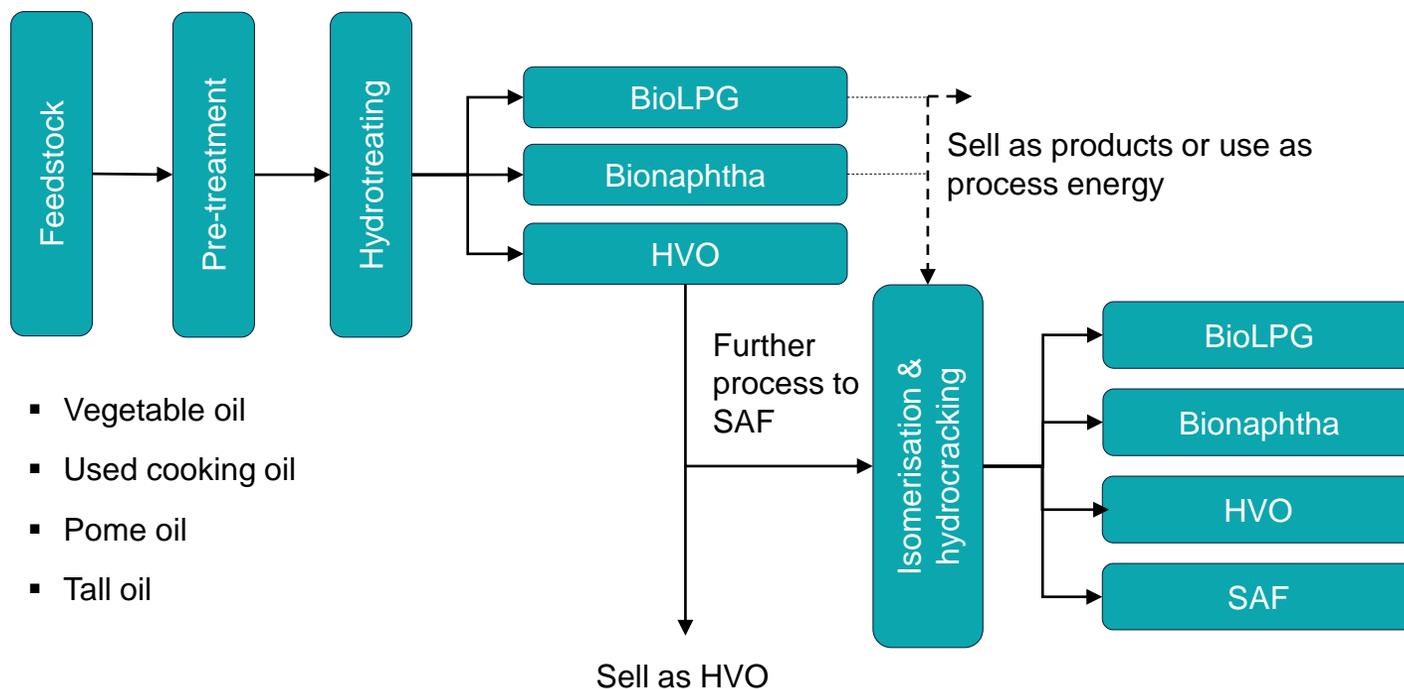
A RED III e a ReFuelEU vão impulsionar a demanda europeia por RD e SAF



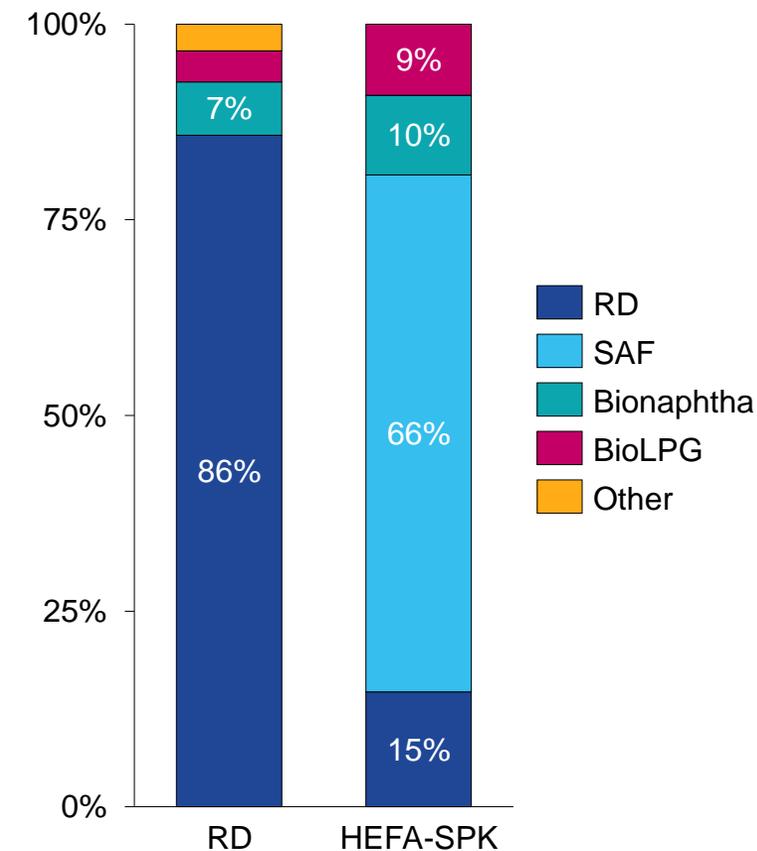
— Argus Biofuels
Analytics 1Q26

As unidades de hidrotreamento são flexíveis para a produção de diesel renovável e SAF

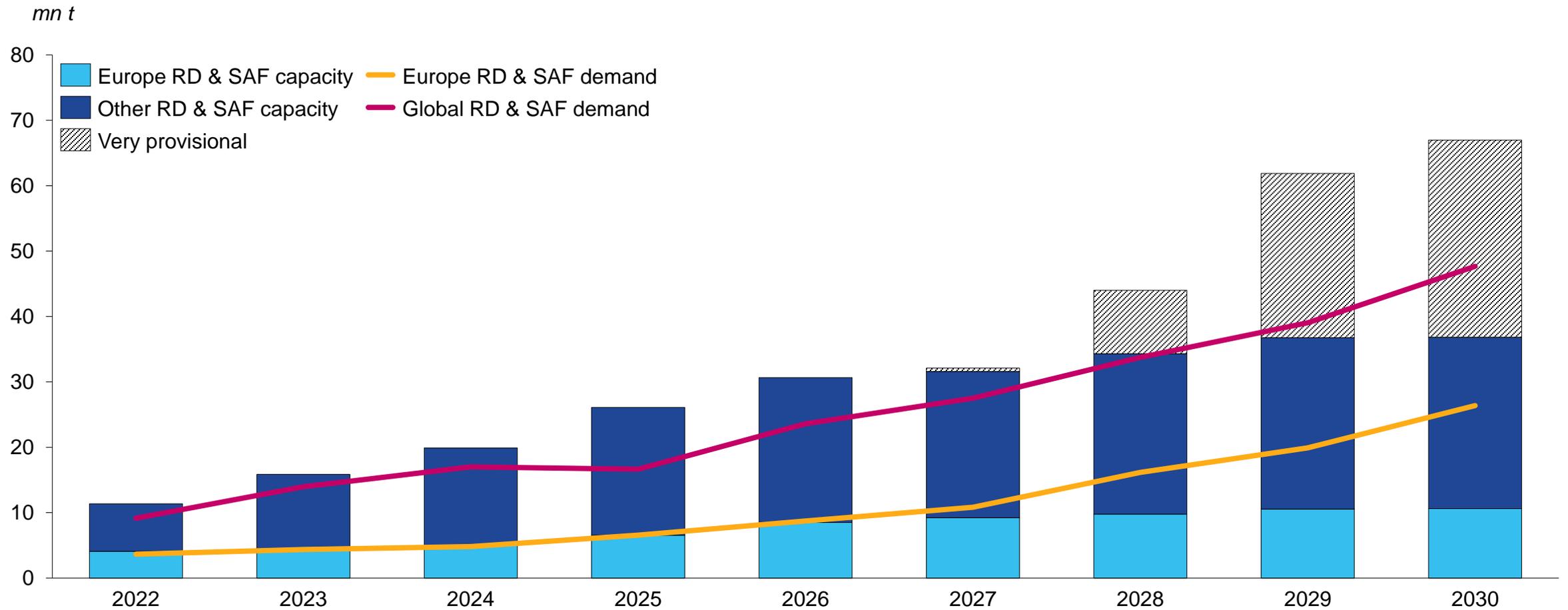
Hydrotreatment production pathway



Standard product split assumptions

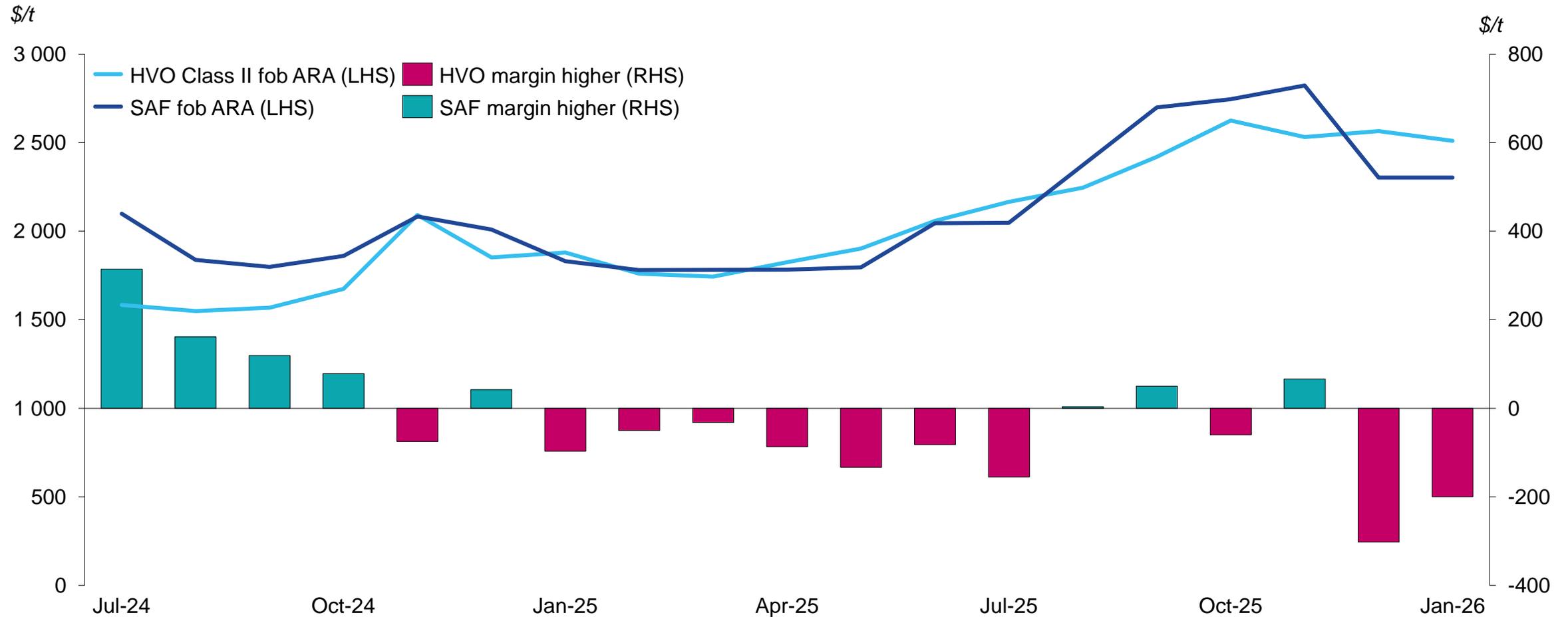


A capacidade europeia de RD e SAF está a crescer, mas atrás da demanda futura



— Argus Biofuels
Analytics 1Q26

Os preços de HVO e SAF se mantêm voláteis, margens estão a favorecer a produção de HVO

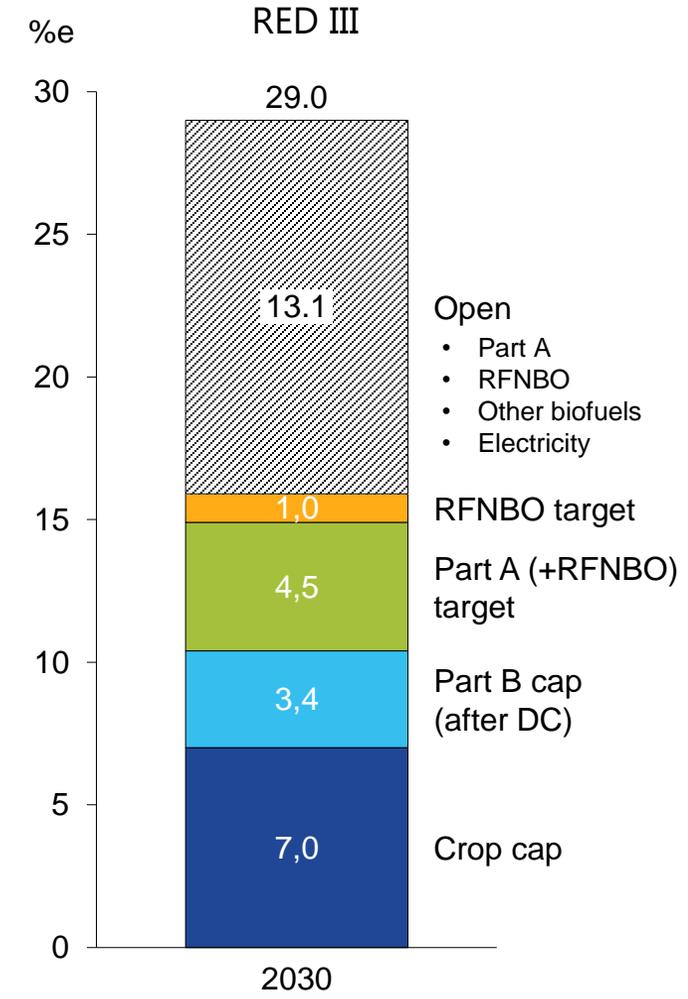


Matérias-primas e tecnologias de produção

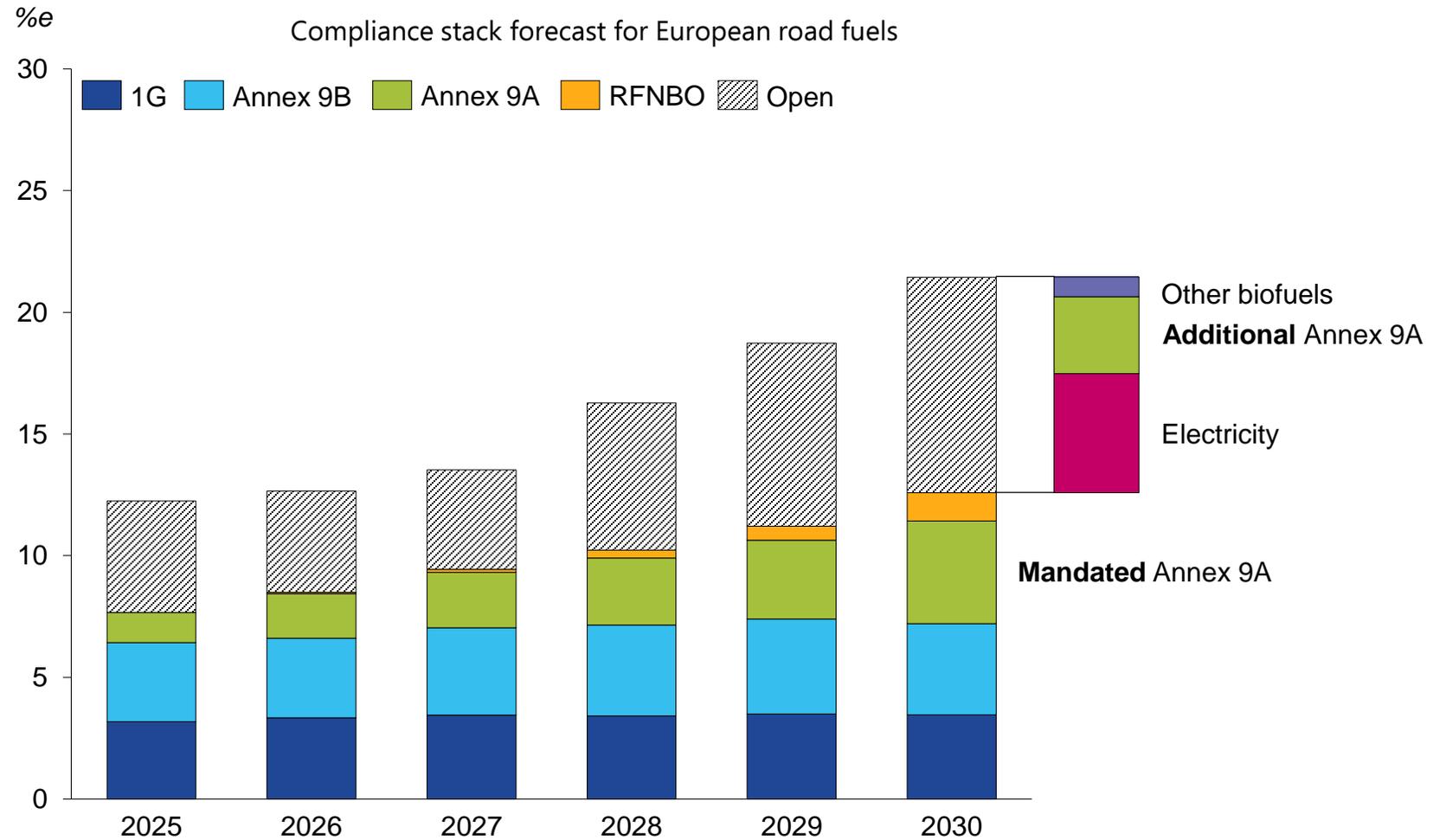
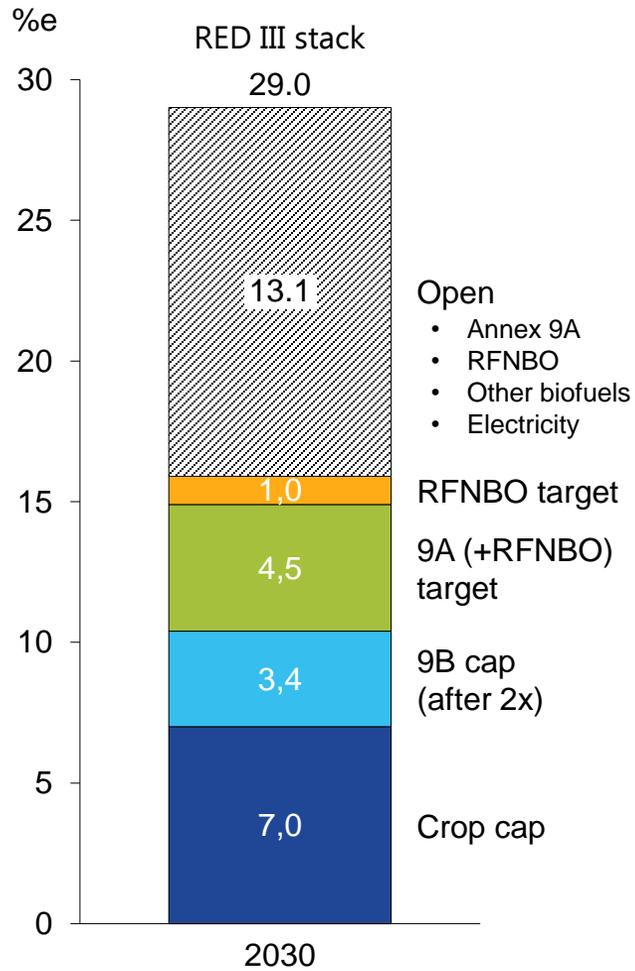
A RED III define metas, sub-metas e tetos para 2030

		Type	RED III
Capped		Crop-based (low ILUC risk)	Capped
		Crop-based (high ILUC risk)	Capped, to be phased out
		Part B Conventional waste	Capped
Uncapped		Part A Advanced	Uncapped, Sub-targets
		RFNBO	Uncapped, Sub-targets
		Other biofuels	Uncapped
		Electricity	Uncapped

	ReFuelEU Aviation	FuelEU Maritime
	Banned	Banned
	Banned	Banned
	Uncapped	Uncapped
	Uncapped	Uncapped
	Uncapped, Sub-targets	Uncapped, Sub-targets
	Capped	Uncapped
	Uncapped	Uncapped

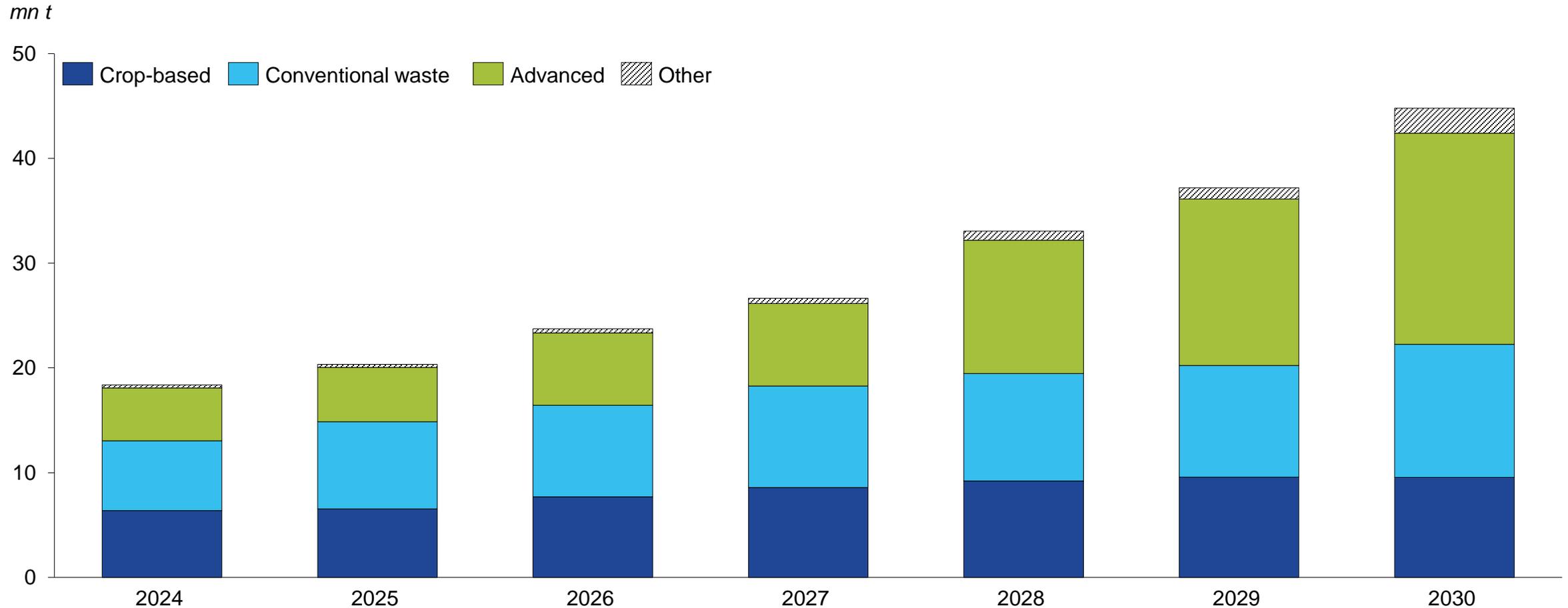


Metas mais elevadas dependerão cada vez mais de matérias-primas avançadas



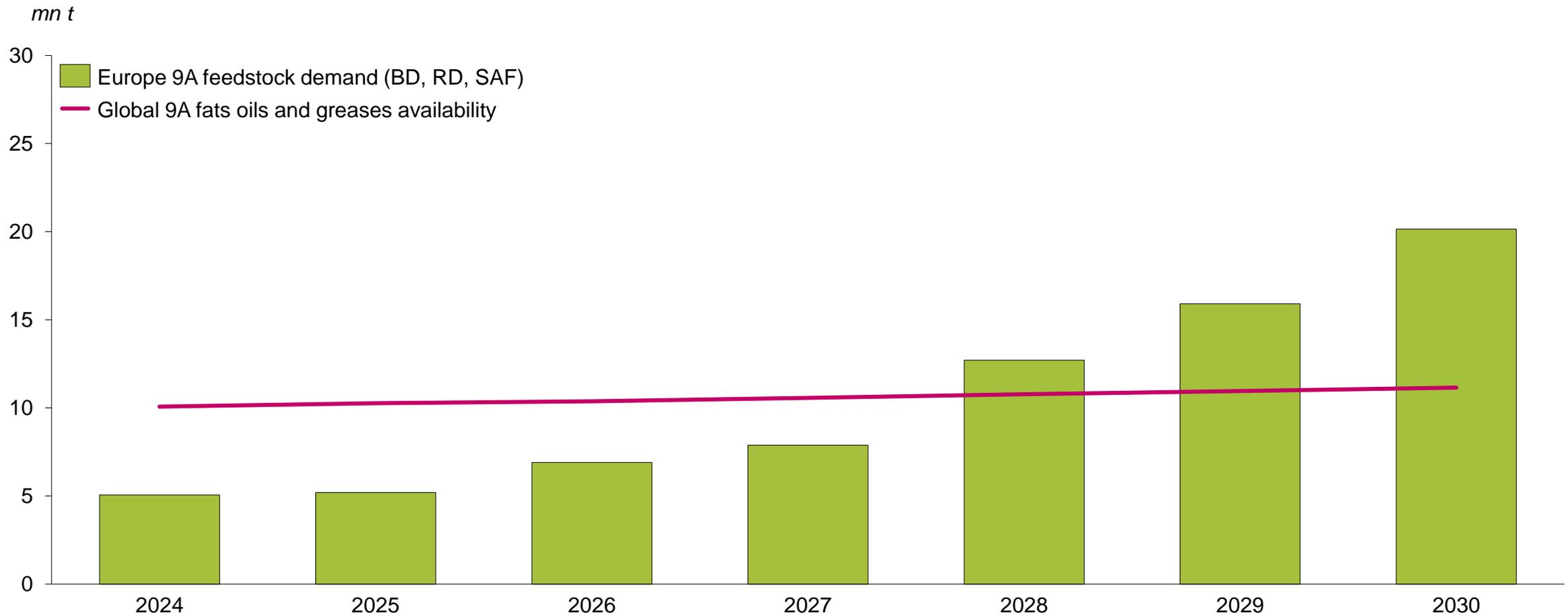
— Argus Biofuels Analytics 4Q25

Demanda europeia de matérias-primas (BD, DR, SAF)



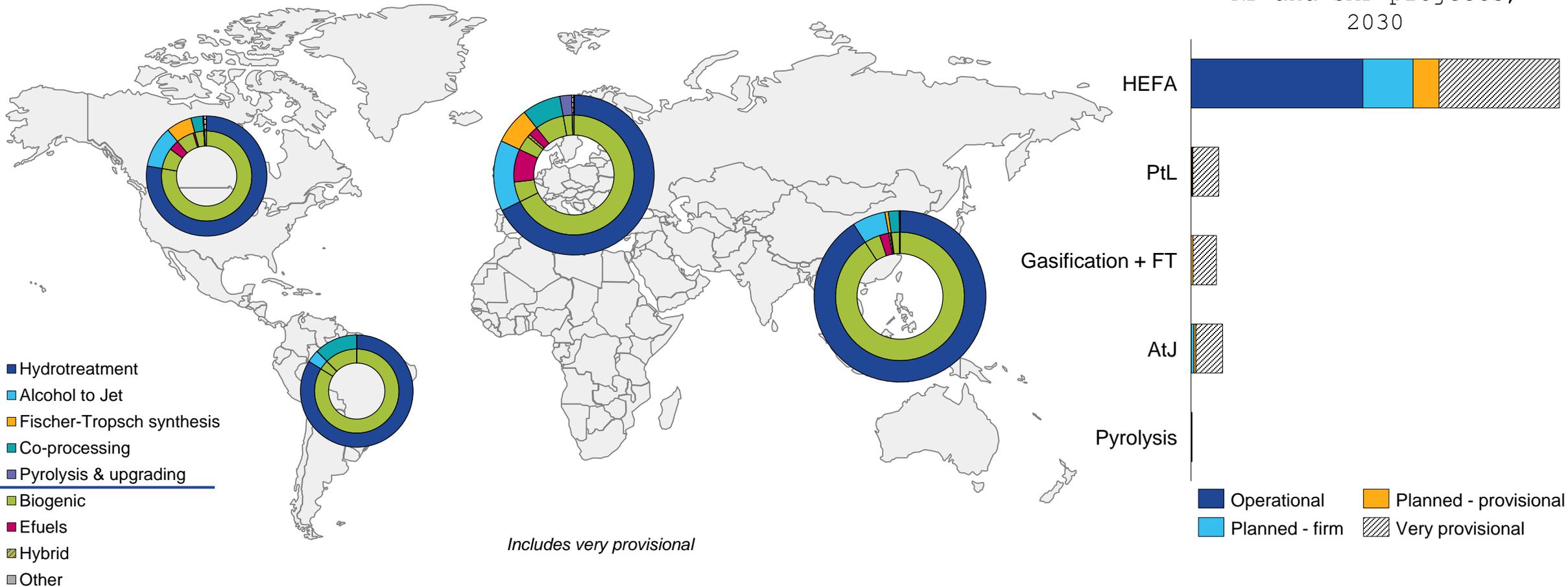
— Argus Biofuels
Analytics 1Q26

A disponibilidade de gorduras, óleos e graxas avançados pode não ser suficiente antes de 2030



— Argus Biofuels
Analytics 1Q26

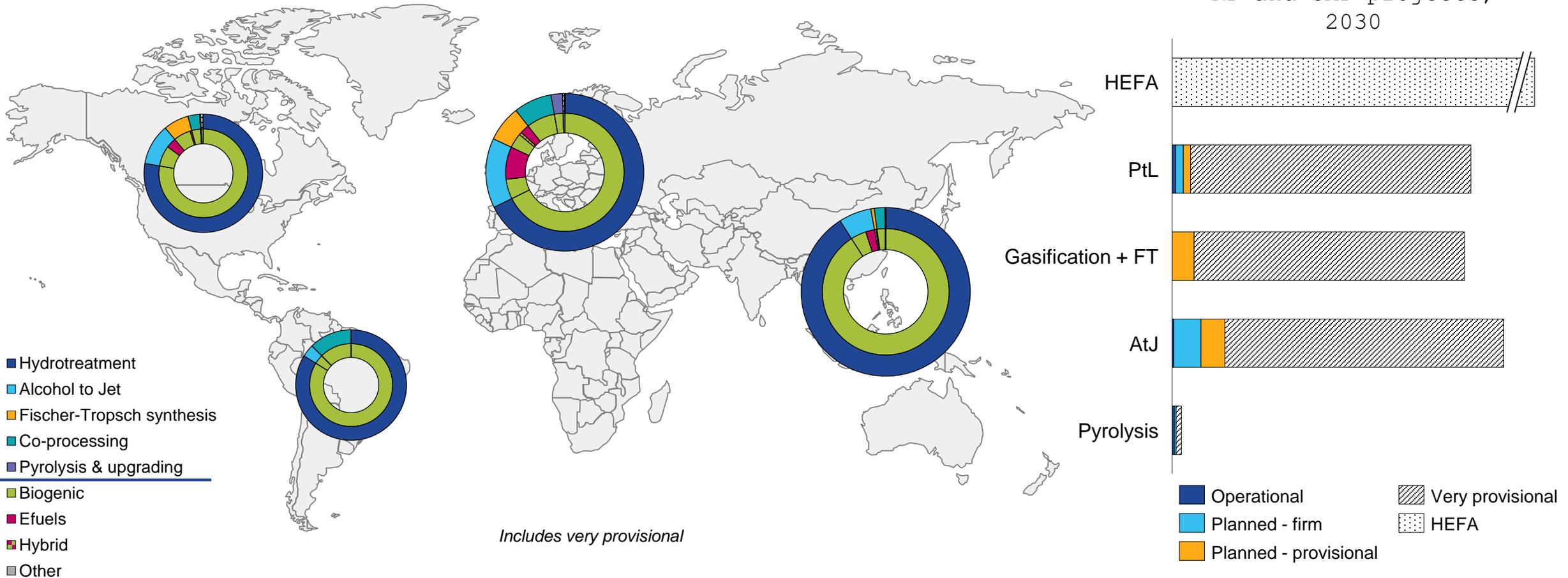
Capacidade de produção de diesel renovável & SAF por tecnologia em 2030



— Argus Biofuels
Analytics 1Q26

Source: Argus Media – Consulting Services. Includes very provisional capacity.

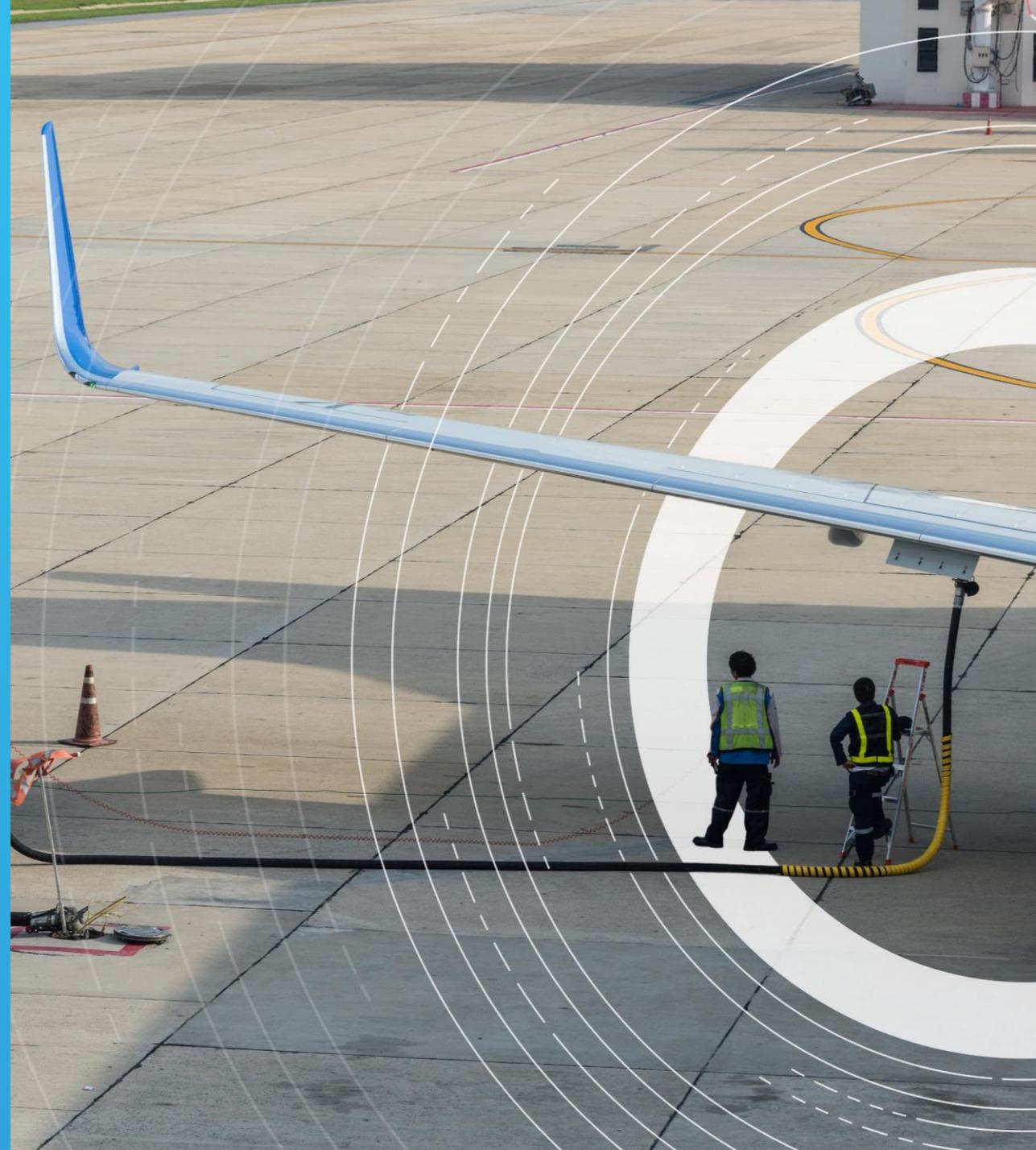
Capacidade de produção de diesel renovável & SAF por tecnologia em 2030



— Argus Biofuels
Analytics 1Q26

Obrigado!

Fabricio Cardoso
Head of Biofuels & Agriculture
Analytics
Fabricio_Cardoso@argusmedia.com



Argus biofuels portfolio

Argus biofuels portfolio

Daily news and price reporting, short-term and medium-term outlooks and bespoke consulting

Price reporting / Current market coverage

Short-term outlook (→ ~2027)

Long-term outlook (→ 2060)



Argus Biofuels: Daily report providing key insights into biofuels, feedstocks and ticket markets.



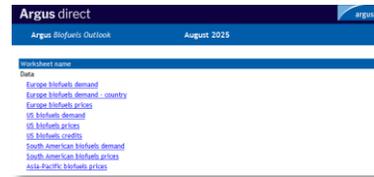
Argus Americas Biofuels: Daily report providing key insights into biofuels, feedstocks and credits across the Americas.



Argus International Biofuels Forward Curves and Argus Americas Biofuels Forward Curves: Independent market valuation tool to support investment and trading decisions for international biofuels markets



Argus Biofuels Outlook: Monthly 15-month forecast for demand, supply and pricing of key biofuels and feedstocks



Medium-term outlook (→ 2035)

Argus Biofuels Analytics: Quarterly 10-year forecast for demand, supply and pricing of key biofuels and feedstocks to 2035



Related services

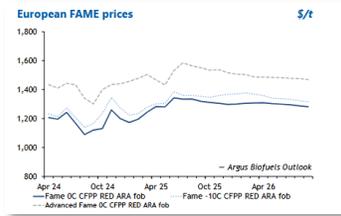
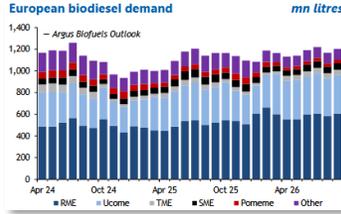


Bespoke consulting assignments uncovering longer-term market trends, strategic advice and future fuels. Selected credentials include:

- Biomethane market analysis
- German GHG quota study
- RINs and LCFS prices related to bigas
- European cellulosic ethanol study
- HVO investment analysis and due diligence
- HVO feedstock analysis
- SAF market entry support
- e-SAF market study

Argus Biofuels Outlook

Monthly 15-month forecasts for demand, supply and pricing of key biofuels and feedstocks



Content

Overview

Europe

- Summary
- Regulation
- Demand: Biodiesel, HVO, SAF, Ethanol, Feedstock
- Prices: Biodiesel, HVO, SAF, Bionaphtha, Ethanol, ETBE
- Fundamentals: Agricultural prices, Fossil fuel demand and prices

North America

- Summary
- Regulation
- Demand: Ethanol, Renewable diesel, Biodiesel, Feedstocks
- Credits: RINs/RVO, LCFS
- Prices: Ethanol, Biodiesel, Renewable diesel, SAF, Feedstock
- Fundamentals: Agricultural prices, Fossil fuel demand and prices

South America

- Regulation
- Demand: Ethanol, Biodiesel
- Price: Ethanol, Biodiesel

Asia-Pacific

- Regulation
- Prices: HVO and SAF, Biodiesel, Feedstocks
- Trade: Biodiesel, UCO, Palm oil

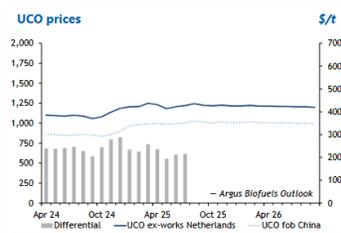
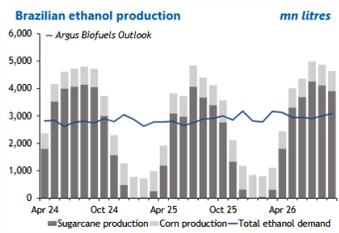
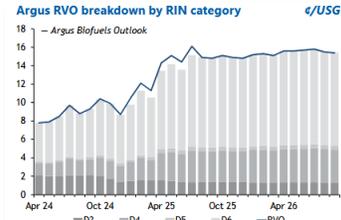
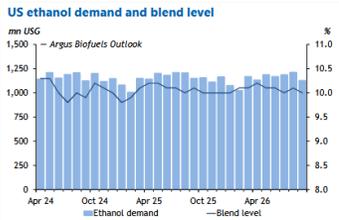
Global Supply

Key features

- **Update frequency:** Monthly
- **Geographical coverage:** Global coverage
- **Time period:** 15-month forecast, monthly
- **Deliverables:** PDF report, Excel dataset and price forecasts via API
- **Expert access:** Ad hoc access to Argus experts to discuss report contents
- **Approximate number of pages:** 35

Data & Downloads

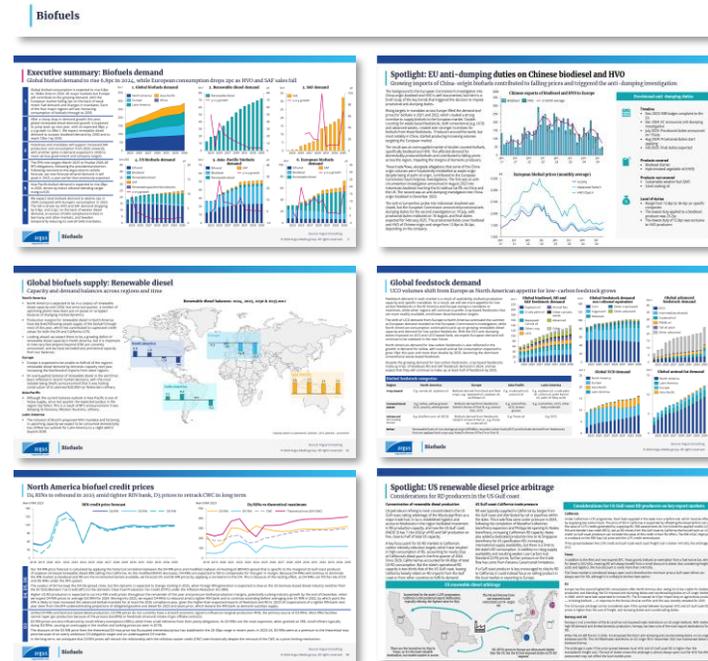
- Biofuel demand outlook by type and country
- Feedstock demand outlook
- Biofuel, feedstock and credit price outlook
- Biofuel production capacity database
- Legislative overviews



Commodity	Unit	Apr 24	Oct 24	Apr 25	Oct 25	Apr 26
Biodiesel	\$/t	1,100	1,150	1,200	1,250	1,300
Ethanol	\$/t	1,000	1,050	1,100	1,150	1,200
SAF	\$/t	2,500	2,600	2,700	2,800	2,900
Feedstock	\$/t	1,500	1,550	1,600	1,650	1,700

Argus Biofuels Analytics

Quarterly 10-year forecasts for demand, supply and pricing of key biofuels and feedstocks to 2035



Content

Executive summary

Biofuels demand

- Global demand overview
- Regional demand and legislation updates: North America, Latin America, Europe, Asia-Pacific
- Biofuels demand by type: Ethanol, biodiesel, RD (HVO), SAF

Biofeedstock demand

- Crop feedstocks
- Conventional wastes (e.g. UCO, tallow)
- Advanced feedstocks

Supply

- Supply outlook
- Capacity maps
- Supply and demand balances

Trade

- Biofuels and feedstock trade

Prices

- North America: Biofuel, feedstock and credit prices
- Latin America: Biofuel prices
- Europe: Biofuel and feedstock prices
- Asia-Pacific: Biofuel and feedstock prices

Spotlights

Product or project review

Key features

- **Update frequency:** Quarterly
- **Geographical coverage:** Global coverage
- **Time period:** 10-year forecast to 2035, annual
- **Deliverables:** PDF report and Excel dataset
- **Expert access:** Ad hoc access to *Argus* experts to discuss report contents
- **Approximate number of slides:** 60-70

Data & Downloads

- Biofuels demand by type and country
- Feedstock demand by type and country
- Biofuel production capacity database
- Biofuel capacity by country
- Legislative overviews

Spotlight examples

- Impact of RED III drafts on HVO demand
- US policy update: RVOs, SREs and 45Z
- Brazil's decarbonisation strategy and Cbios
- Asia-Pacific feedstock export restrictions
- RED III and advanced feedstock shortages