

ARGUS OIL AND FUTURE FUELS FORUM 2025

Aviation Fuels: is the future here?

SAF & e-SAF

| Moderator



Louise Burke
Global Head
of Aviation
Argus

| Speakers



Alfonso Berrocal
VP Business
Development
Argus



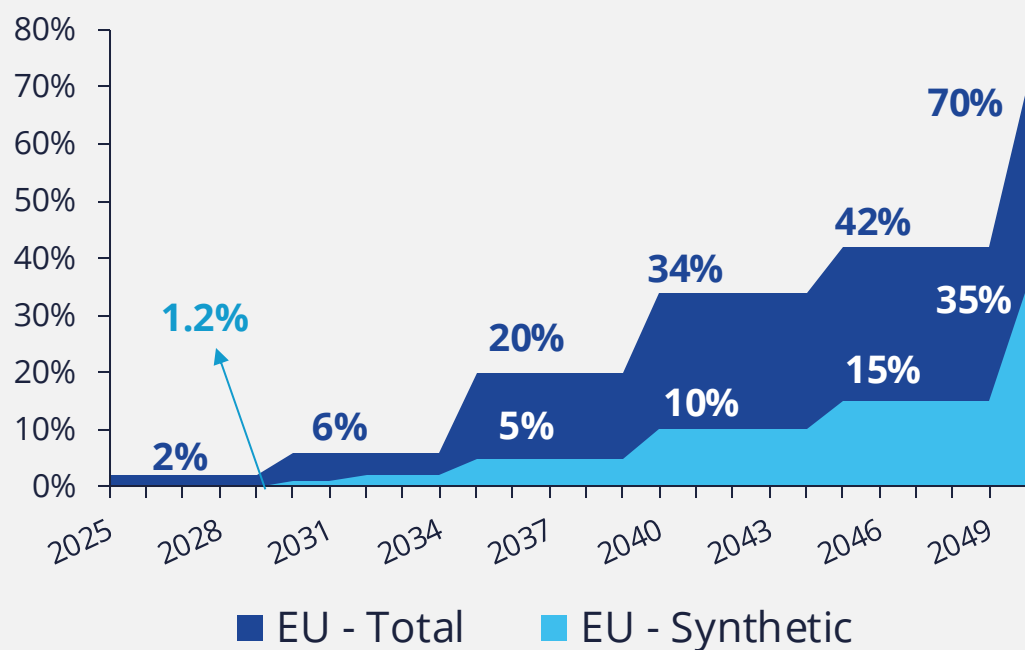
Giulia Squadrin
Associate Editor,
Biofuels
Argus



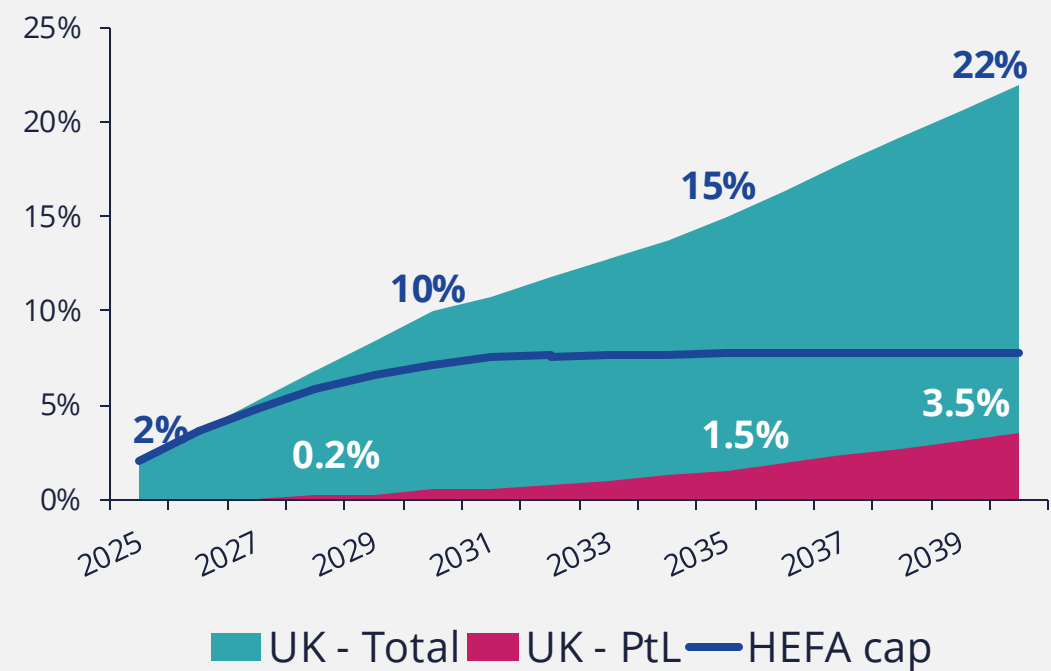
Tim Hard
SVP Business Development
Energy Transition
Argus

EU and UK mandates could drive >1.5mn t SAF demand in 2025

EU SAF mandate



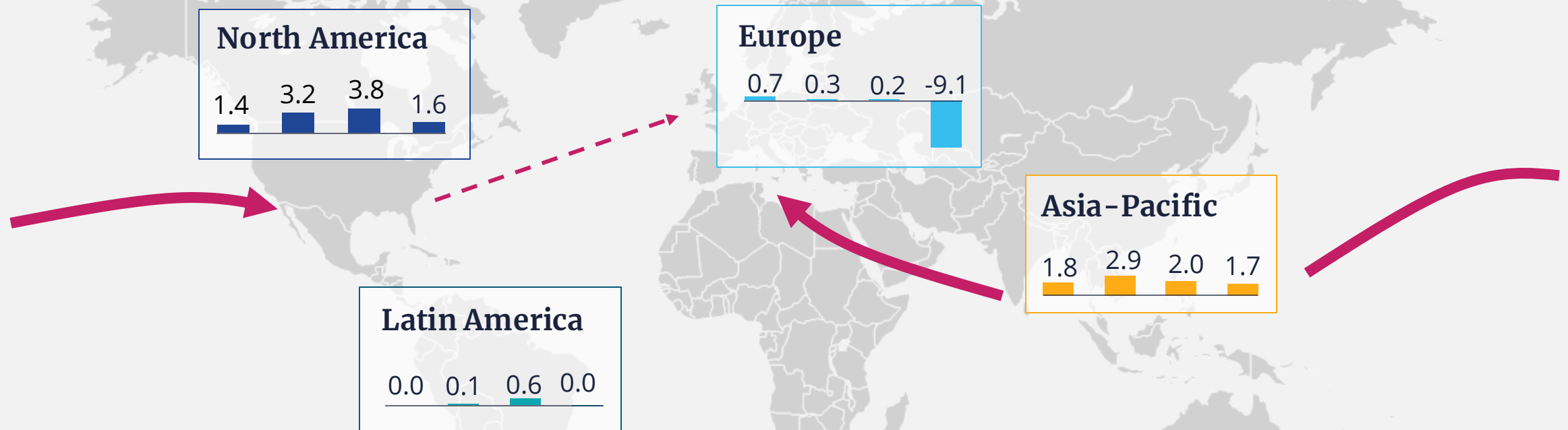
UK SAF mandate



- 2% SAF mandates started on 1 January in EU and UK: only firm targets to date globally
- Mandates set penalties/buy-outs in case of non-compliance

Mandates and incentives shaping global trade flows

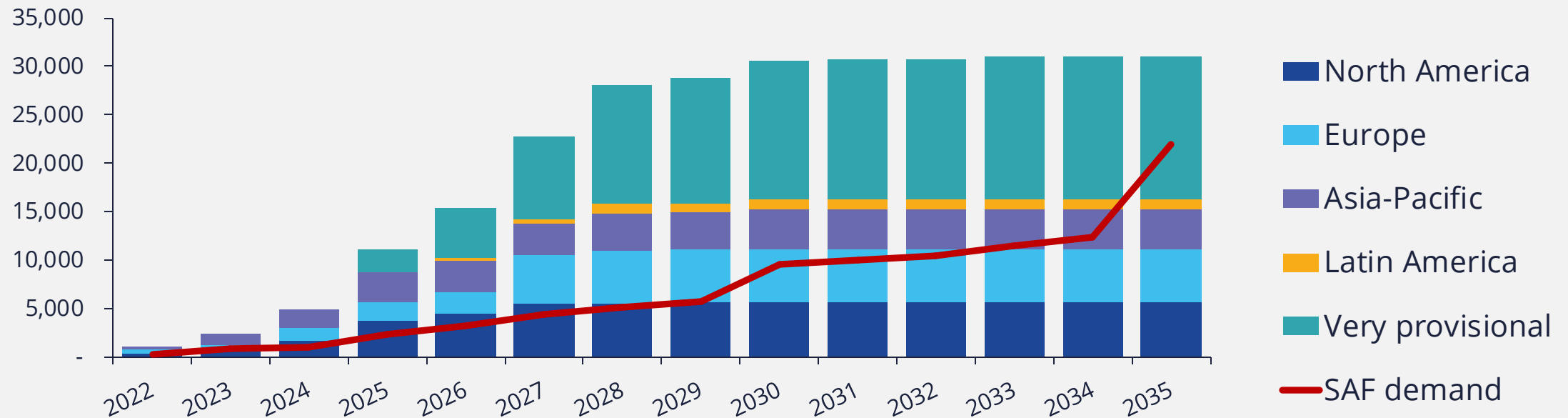
SAF balances: 2024, 2025, 2030 & 2035 *mn t*



- Europe key demand hub due to mandates, attracting global SAF volumes
- US demand voluntary, incentives could boost domestic production
- National initiatives to grow SAF uptake shaping up in the Asia-Pacific region

SAF supply to tighten after 2034 with current targets

Global SAF supply/demand balance, '000 tonnes



- Plentiful supply to meet mandated demand in the early stages of the obligations
- Supply/demand balance set to shift post 2034 with rising European targets
- More mandates (if announced), voluntary demand, projects delays could shift balance earlier

HEFA SAF SPK physical market coming into place

Physical market forming in ARA -
basis for a liquid SAF assessment

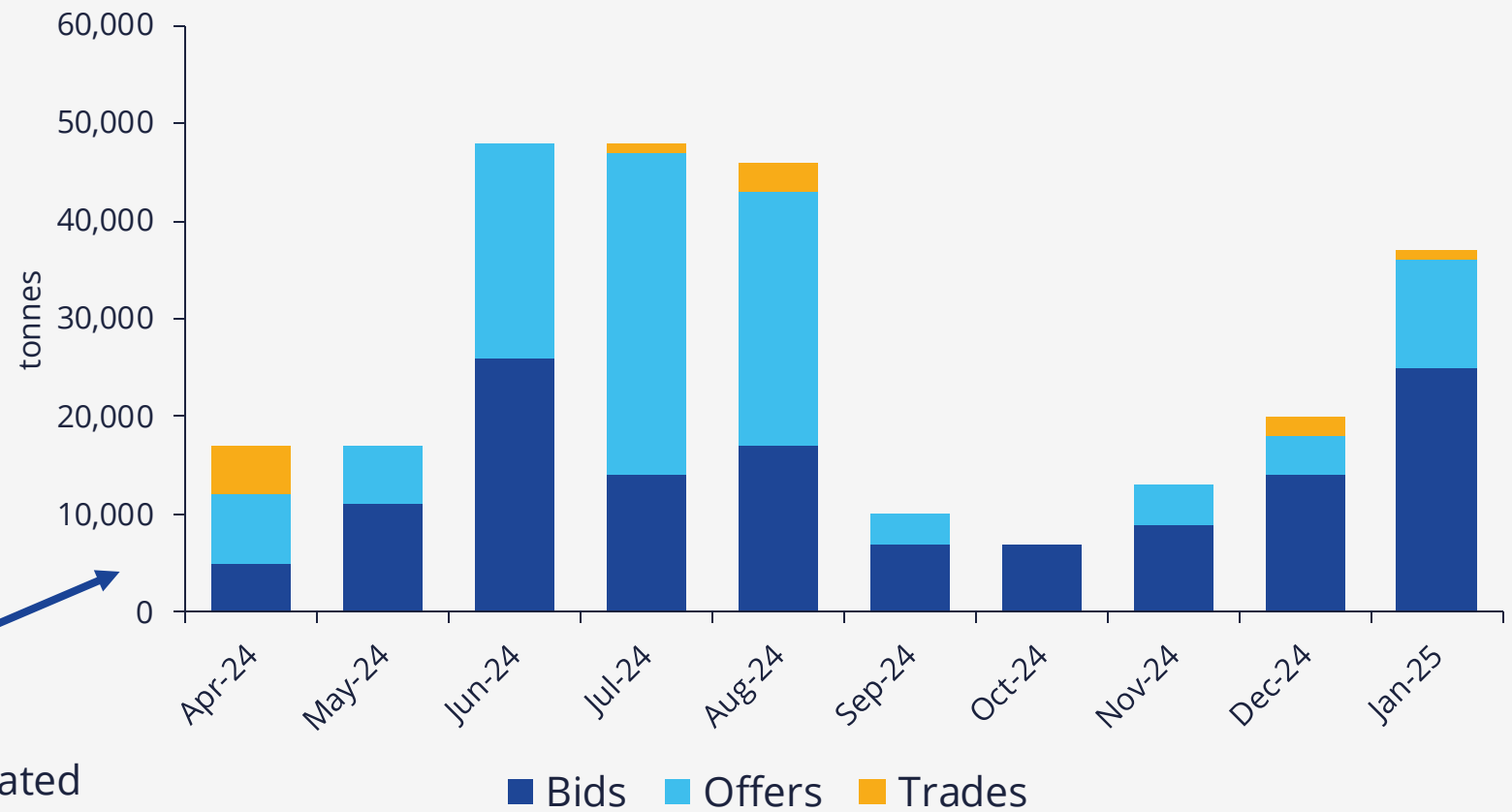
ICE Gasoil + Bio-premium = Argus SAF
index gaining ground

**Argus Open Markets for HEFA SAF
SPK launched in April**

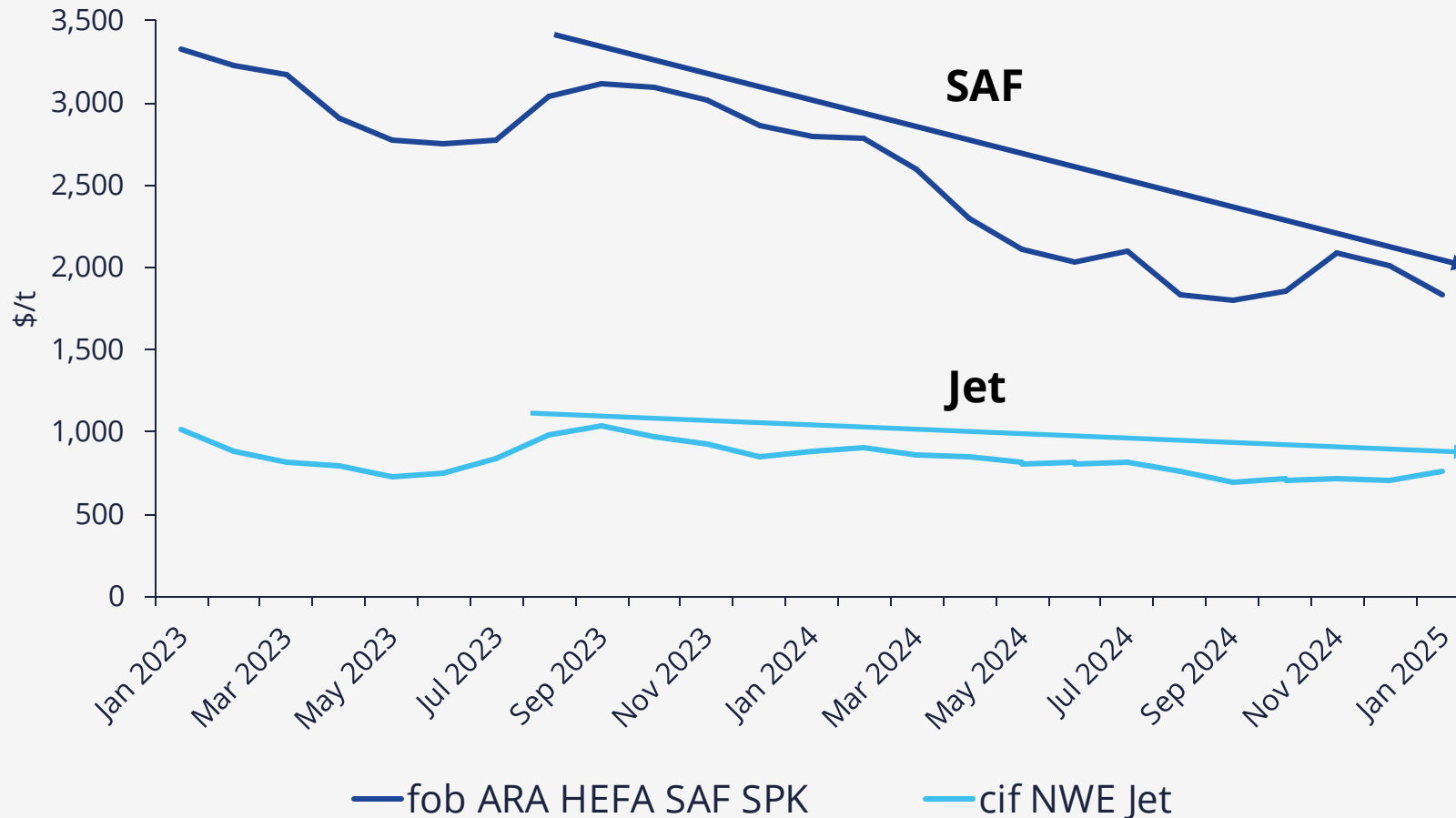
RED SAF (HEFA-SPK) FOB ARA RANGE									
+ BID					+ ASK				
DATE	BRO	PRI	QTY	PRICE	PRICE	QTY	PRI	BRO	DATE
19 Apr-10 May	*	BP	1,000	900.00	1,050.00	1,000	STR	*	19 Apr-10 May

250,000 t of bids/offers & 12 trades initiated

AOM SAF activity April 24 - January 25



SAF value disconnects from conventional Jet fuel

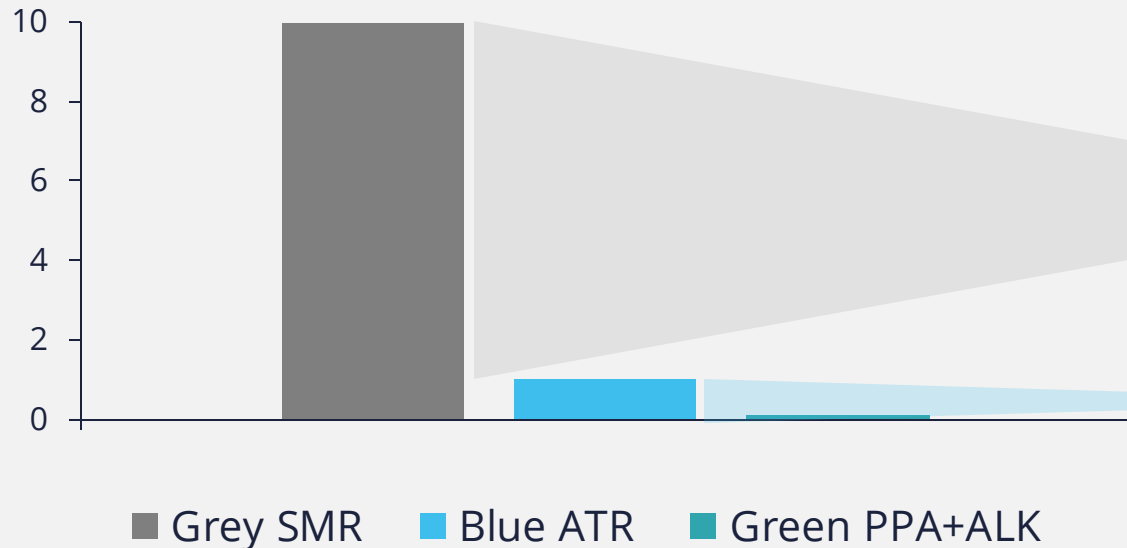


- 45 % drop in SAF vs 25% drop in Jet
- Different supply & demand fundamentals
- Fixed premium to Jet unpredictable SAF price needs to be reflective of Biofuels dynamics
- Airlines need hedging fuels risk

First trade on 15th January ICE SAF futures settled on Argus fob ARA HEFA SAF SPK price

What price hydrotreatment feedstock decarbonisation?

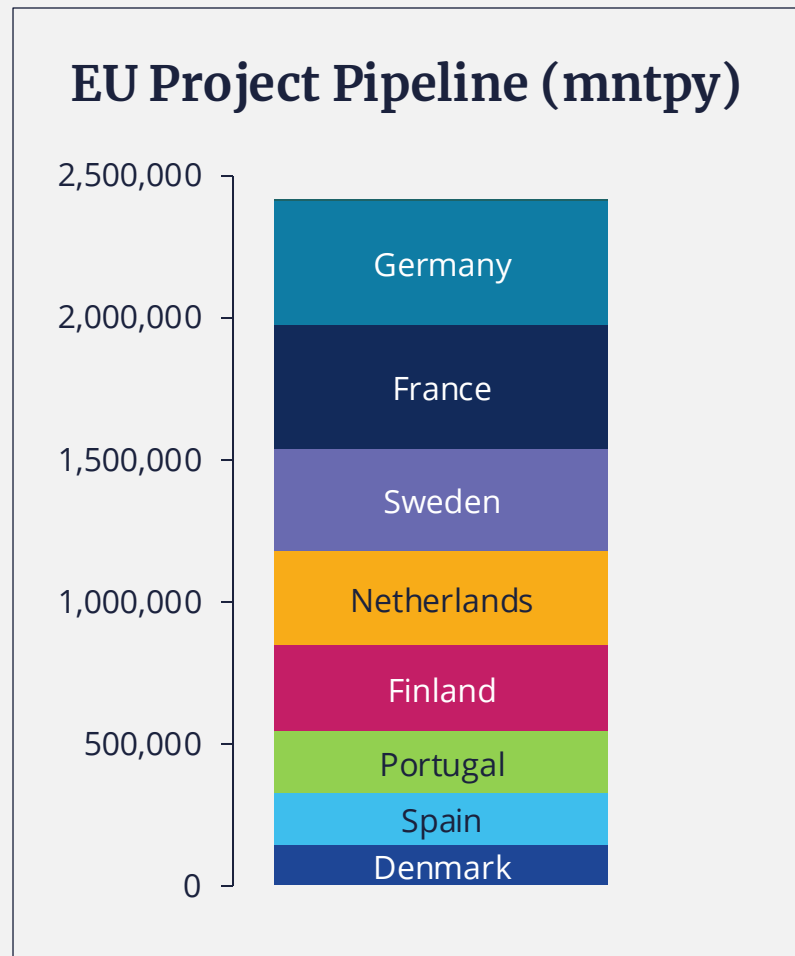
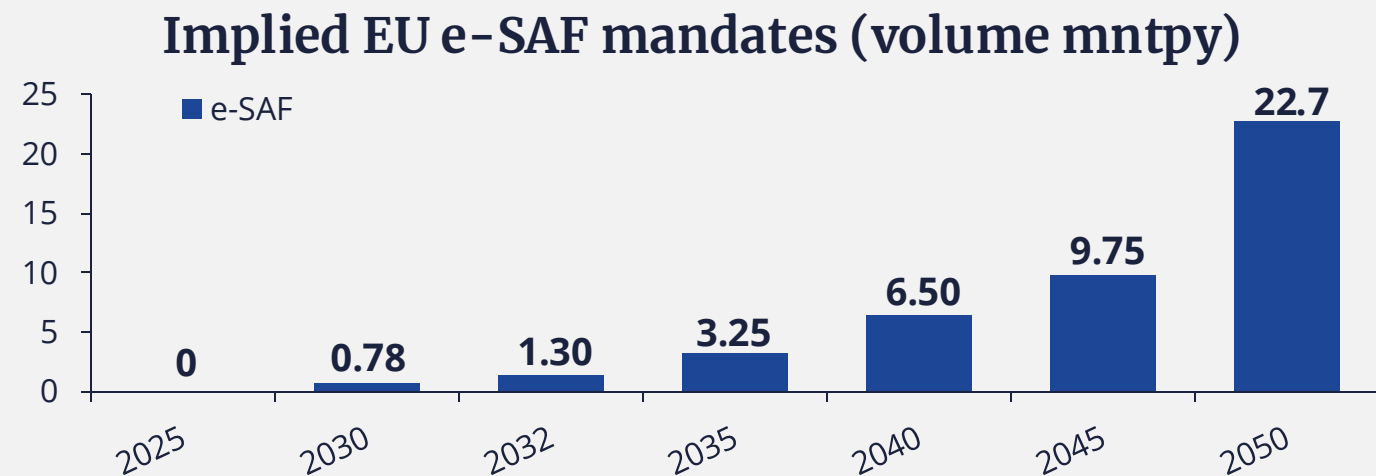
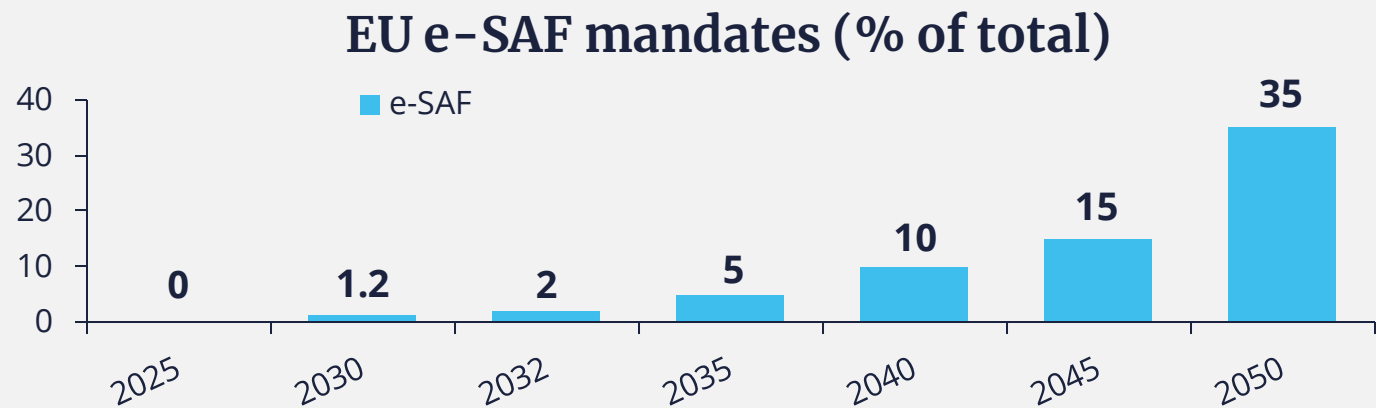
KG CO₂/KG H₂



- Two-year average +€1.02/KG
- -9KG decarbonisation @ €0.113/KG.
- Two-year average €2.93/KG
- 10KG decarbonisation @ €0.295/KG.

- Incremental 'last KG' of decarbonisation costs a further €1.91 for facilities using a grid-connected RNFB0-compliant PPA linked power feed.
- Dedicated feed (island projects with a vertically integrated renewable energy feed can do the same for less cost but take longer to bring on-stream and are at larger scale than many projects progressing through FID.

e-SAF: European mandated demand/announced supply



Hydrogen feedstock costs: scaling is failing...so far

Has not begun in earnest, due to sustained global delays to project installations. Yet, plenty of opportunity for costs to fall from increased electrolyser efficiencies, targeting of lowest LCOE sites and scaling effect on Balance of Plant.

RNFBO compliant offshore wind + PEM US\$/t

