

OPEN LETTER: FIVE KEY POLICY NEEDS TO UNLOCK THE SCALE-UP OF E-SAF IN THE EU

To:

European Commission President, Ursula von der Leyen; Executive Vice-President and Commissioner for a Clean, Just & Competitive Transition, Teresa Ribera; Executive Vice-President and Commissioner for Prosperity and Industrial Policy, Stéphane Séjourné; Commissioner for Climate, Net-Zero and Clean Growth, Wopke Hoekstra; Commissioner for Energy and Housing, Dan Jørgensen; and Commissioner for Sustainable Transport and Tourism, Apostolos Tzitzikostas

Cc:

Commissioner for Startups, Research and Innovation, Ekaterina Zaharieva; and Commissioner for Environment, Water Resilience and a Competitive Circular Economy, Jessika Roswall

Re: Five key policy needs to unlock the scale-up of e-SAF in the EU

Dear Madam President Von der Leyen, Executive Vice-President Ribera, Executive Vice-President Séjourné, Commissioner Hoekstra, Commissioner Jørgensen, Commissioner Tzitzikostas,

We, the 62 undersigned industry members, financial institutions, associations and NGOs from across the European e-SAF ecosystem are writing to propose five key policy interventions to unlock Final Investment Decisions (FIDs) for the first e-SAF projects in the EU.

E-SAF could increase the EU's energy resilience, unlock a EUR 350+ billion¹ global market opportunity and save 400 million tonnes of CO₂e annually by 2050²

As the EU strives to strengthen its domestic industry, increase energy security, create high-value jobs and become a global leader in cleantech innovation, e-SAF (sustainable aviation fuel produced from clean electricity) provides a strategic opportunity to progress these goals, whilst simultaneously contributing to achieving climate targets for aviation. Today, around 30 e-SAF projects (equivalent to two million tonnes of annual production capacity) have been announced in Europe, but none have reached FID. Domestic production of e-SAF could reinvigorate the EU's industry, with three key opportunities.

E-SAF could strengthen the EU's industry and improve energy security. The EU will continue to import the vast majority of fossil and bio-based jet fuel. Hence, European leadership in e-SAF represents a rare opportunity for the EU to bolster supply resilience, reshape global value chains and strengthen defense capabilities. With ~60% of the currently announced global e-SAF production capacity and access to all critical feedstocks – clean power, biogenic CO₂ and water – the EU is uniquely positioned to drive this first-of-a-kind innovation to commercial scale. Anchored in the robustness of [ReFuelEU Aviation](#), a domestic e-SAF industry could attract renewed investment into the chemical industry and create ~20,000 jobs by 2050.³

European industry could lead in exporting key e-SAF technologies, services and equipment, capturing a share of a EUR 350+ bn global market by 2050⁴. Given its strong chemicals, engineering and process sectors, political support and infrastructure availability, the EU is well-equipped to overcome technical challenges of first-of-a-kind commercial e-SAF production and be a first mover. With this critical know-how, the EU could position itself as a major exporter of intellectual

¹ This assumes a total SAF demand of ~350 Mt by 2050, an e-SAF share of ~35% and an indicative e-SAF price in the long run of ~3,000-4,000 EUR/tonne ([IATA \(2024\)](#))

² Based on an estimated e-SAF demand of 120 Mt in 2050 and a 90% reduction compared to fossil jet fuel well-to-wake emissions of 3.84 tCO₂e/tonne fuel ([WEF \(2022\)](#); [German Federal Office for Environment \(2022\)](#); [MPP \(2022\)](#)).

³ Based on [RMI \(2024\)](#), assuming ~20 Mt of e-SAF production in Europe by 2050 and approximately 40 jobs per 50 ktpa e-SAF plant.

⁴ This assumes a total SAF demand of ~350 Mt by 2050, an e-SAF share of ~35% and an indicative e-SAF price in the long run of ~3,000-4,000 EUR/tonne ([IATA \(2024\)](#))

property, services and equipment in the future (e.g. to regions where costs of clean hydrogen production, and thus of e-SAF production, are lower).

E-SAF could abate 400 million tonnes of annual CO₂e emissions globally by 2050⁵ and accelerate the broader energy transition. E-SAF can reduce lifecycle emissions of aviation fuel by over 90%. Innovation in the core technologies of e-SAF production (clean hydrogen, carbon capture and Power-to-X) and the production of by-products will have spillover effects on more commoditised sectors, shipping fuels and chemical production.

Five policy interventions could help overcome key barriers and bring the first e-SAF projects towards FID

Leading companies across the EU's energy and aviation industry are actively laying the foundations to support first e-SAF projects in getting to FID. However, certain barriers are slowing this down, including the lack of revenue certainty, perceived regulatory uncertainty and the unique risk profile of first-of-a-kind e-SAF projects.⁶ These barriers need to be addressed for the private sector to accelerate action. As the e-SAF sub-mandates (1.2% or ~600 ktpa of e-SAF in 2030/31, and 2.0% or ~1,000 ktpa from 2032) are at risk of not being fulfilled, additional policy support is needed.

Industry leaders across the e-SAF ecosystem have unified their voice to propose five urgent policy interventions required to catalyse a wave of corporate action on e-SAF. Proposed interventions aim to recognise e-SAF as a strategic priority for the EU, to reduce revenue and price risk, to incentivise first movers, to provide long-term regulatory certainty and to mitigate first-of-a-kind technology risk.

- 1. Make e-SAF a strategic priority in the Clean Industrial Deal and the Sustainable Transport Investment Plan (STIP):** If investments into domestic e-SAF production were to be recognised as a critical part of the Clean Industrial Deal and the STIP, it would send an important signal to the industry, mobilising investment and unlocking the support required to scale e-SAF from innovation to commercialisation.
- 2. Recycle ETS revenues from aviation to capitalise a market intermediary that enters into auctioned, 10-15 year contracts with e-SAF producers and 3-5 year contracts with offtakers:** While recycling ETS revenues via SAF Allowances⁷ is critical for the continued competitiveness of airlines entering the SAF market, the scheme does not support first-of-a-kind e-SAF projects in getting to FID because offtakers are not enabled to enter long-term offtake contracts (due to the ex-post allocation on an annual basis), which are required for bankability of first-of-a-kind plants. To enable a more efficient use of public funds, ETS revenues collected from aviation could be used to capitalise a market intermediary which would provide the minimum level of public support required to create revenue certainty for producers and cost predictability for aircraft operators. In this model, a government-backed entity aggregates e-SAF supply and demand volumes. Supply-side contracts for European-based production are awarded for 10-15 years, and offtake contracts for 3-5 years, reducing revenue and counterparty credit risk for producers and market risks for offtakers. The intermediary would bridge the difference in prices yielded by qualified supply- and demand-side auctions (similar to a contracts-for-difference mechanism) or by average sales price setting. This mechanism should be operationalised as soon as possible, e.g. by Hintco (the executing subsidiary of [H2Global](#)), with a short-term funding volume to cover the price differential in the order of magnitude of EUR 3 bn for the first auctions. This would be equal to 20% of total cumulative ETS revenues expected from aviation in the period 2030-2039⁸, with 2030 being the expected start of production of the first e-SAF plants. Thereby,

⁵ Based on an estimated e-SAF demand of 120 Mt in 2050 and a 90% reduction compared to fossil jet fuel well-to-wake emissions of 3.84 tCO₂e/tonne fuel (WEF (2022); German Federal Office for Environment (2022); MPP (2022)).

⁶ For a description of current barriers, please refer to Chapters 2 and 3 of Project SkyPower's insights report '[Accelerating the take-off for e-SAF in Europe](#)'.

⁷ Currently, 20 million EU ETS allowances are available to support up to 100% level for cost difference for eligible fuels uplifted between 2024-2030, i.e. 13% of the ~153 million allowances auctioned according to [European Commission](#) (2023).

⁸ 20% of the total allowances from the EU ETS auctioned in 2030-2039 for the aviation sector would equal ~38 million allowances, yielding a revenue of ~EUR 3 bn under the assumption of a constant ETS price of 80 EUR/tCO₂. The planned review of the SAF Allowances (Fuels Eligible for ETS support) in 2026 is an opportunity to extend and expand the recycling of ETS revenues from aviation back into the sector.

100-300 ktpa of e-SAF production capacity (e.g. two to six 50 ktpa plants) could potentially be accelerated to FID⁹, fulfilling up to half of the mandated e-SAF volumes of 600 ktpa in 2030/31.

3. **Establish a bridging mechanism until a capitalised market intermediary comes online, to give first movers priority access to the new funding instrument:** The first few pioneering large-scale e-SAF projects aim to reach FID by 2025-27. Given construction times, only these projects will have a realistic chance to start operation by 2030/31 and contribute to the EU's initial e-SAF sub-mandates. As the capitalised market intermediary is expected to take 1 to 2 years to operationalise, this could delay corporate action (as is being seen in the UK after the announcement of its Revenue Certainty Mechanism which is due to take effect in 2026). To turn the first-mover disadvantage¹⁰ into a first-mover advantage, it is critical that the European Commission guarantees priority access to the market intermediary once it gets online.
4. **Provide long-term certainty over mandates, production criteria and penalties:** Investment decisions are currently hindered by perceived uncertainty around (i) the continued enforcement of the e-SAF sub-mandates after the ReFuelEU Aviation review in 2027 and (ii) the continued enforcement of current e-SAF production criteria.¹¹ To dismiss this perception, the European Commission could issue communications in early 2025 on potential implications for its Climate Target Plan 2040 from an (expected) e-SAF supply shortage situation in 2030. In addition, grandfathering principles¹² for current production criteria should be introduced to de-risk investments into first-of-a-kind projects. Member States should also be urged to publish transparent and harmonised penalty systems in Q1/2025 based on recent guidance by [EASA](#), to provide adequate lead time for non-compliance risk to be assessed.
5. **Mitigate project-on-project risk via government-backed safeguards and financing structures:** A key challenge for e-SAF project developers in Europe is ensuring a steady supply of two critical inputs – clean electricity and CO₂ (and intermediate products thereof) – upon project completion, as compliance with ReFuelEU Aviation's additionality requirements often necessitates the construction of new, dedicated facilities. Delays in building these facilities due to unforeseen events can prevent developers from starting production, creating significant project-on-project risks that hinder their ability to secure financing. To mitigate these challenges, the European Commission should establish a financial backstop¹³ ensuring that debt service payments can be made until the production facility becomes operational. This could also include a minimum return for equity providers under certain conditions. Strict eligibility criteria should be applied to all projects to minimise the triggering of this support. Additionally, the EU Innovation Fund could be made more accessible to e-SAF projects, and more blended finance instruments (like the [EU-Catalyst partnership](#)) could help attract private capital.

The signatories of this letter are united in their support of the five critical policy interventions outlined in this letter. While their support underscores the importance of collective action, it does not imply full agreement with every specific recommendation or the views of other signatories. **If the recommended policy interventions are adopted, the signatories of this letter believe the private sector can accelerate action** towards (i) scaling e-SAF production capacity to ensure the success of ReFuelEU Aviation and (ii) supporting the EU's e-SAF leadership on a global stage. The signatory airlines are exploring e-SAF offtake with producers. The supporting financial institutions are assessing the opportunity to provide financing to e-SAF projects and are proactively identifying tools to de-risk investment. The supporting project developers, technology licensors and EPCs are actively collaborating to advance e-SAF projects. In short, the European e-SAF ecosystem stands ready to grasp this opportunity with you.

Yours sincerely,

⁹ This assumes winning bids with an average difference of 1,000-3,000 EUR per tonne of e-SAF between the lowest supply price and the highest demand price. The volume of e-SAF supported would be lower if the average price difference supported is higher.

¹⁰ The risk of a first mover disadvantage emerges from potential cost reductions for second- and third-of-a-kind e-SAF production plants enabled by the demonstration of the first-of-a-kind e-SAF plants (e.g. resulting from technological innovation, economies of scale and better-informed risk assessments).

¹¹ Production criteria for e-SAF as defined in Renewable Energy Directive II Delegated Act for Renewable Fuels of Non-Biological Origin.

¹² For e-SAF projects built today, grandfathering principles would allow these facilities to operate under the original criteria, protecting initial investments in the case of regulatory changes.

¹³ A financial backstop ensures debt obligations are fulfilled if delays prevent timely completion. This could potentially be provided by the European Commission, for example by InvestEU.

Industry and industry associations:



NGOs:

