

Regulation Node: **What will it take to scale eSAF?** Policy and industry perspectives

The project is supported by the Clean Hydrogen Partnership and its members.

Clean Hydrogen Partnership

Co-funded by the European Union

Agenda

10.00 Introduction to BalticSeaH2
Susanna Kupiainen, CLIC Innovation

10.05 Keynote speaker
Stephen Dooley, Trinity College Dublin & EU SAF Clearing House

10.20 Commentary speakers
Emmi Simonen, Ministry of Transport and Communications, Finland
Pasi Keinänen, CEO Liquid Sun
Riku Aho, VP of Sustainability Finnair

10.45 Panel discussion and Q&A session
Moderated by Oleg Todorov, CLIC Innovation

11.30 Closing

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MINISTRY OF TRANSPORT AND COMMUNICATIONS

EU Emissions Trading System (ETS1) in aviation

2.10.2026

Ministerial Adviser, Emmi Simonen
Ministry of Transport and Communications

EU ETS1

- Companies **pay for their greenhouse gas emissions**.
- The scheme covers 1) energy production, 2) large industrial installations, 3) **maritime and** 4) **aviation sectors.**
- **Proposal in July 2026** (COM (2026) 616 final)
- The aim is to implement the contribution of the sector towards **achieving the European Climate Law's 2040 target.**



Aviation



Geographical scope

- The Commission proposes **extension of the geographical scope of the EU ETS**.

- **From 2033**, the EU ETS would cover **all departing flights to third countries**, if the Carbon Offsetting and Reduction Scheme (CORSIA) has not been strenghtened enough.

- Before that, the proposal includes **limited extensions of the geographical scope**.
  - **Small operators,** departing and arriving flights - from the entry into force
  - Departing flights to **certain third-country airports from 2029**.

SAF support through free allocation 1/2

- **Free allowances to airlines** for the uptake of sustainable avaition fuels (SAF).
- Current framework: **20 million** allowances for 2024-2030.
- **The Commission's proposal**:
  - Up to 110 million allowances until 2040.
    - Linked to the proposed extension of the geographical scope.



SAF support through free allocation 2/2

- **Support rates** would **decrease by 10 to 35 percentage points**.
- Support for **synthetic fuels produced by using nuclear energy and other renewable non-fossil fuels than advanced biofuels** (eg. HEFA Part B) **would end by 2029**.
- Fuels produced in the EEA, in a country linked to the EU ETS, or in a country participating in EU ETS as a service arrangement.
- Airlines **with a long-term supply contracts of SAF** (at least 3 years) - an advance allocation of allowances up to 5 years.

MINISTRY OF TRANSPORT
AND COMMUNICATIONS

Thank you!

Emmi Simonen
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LIQUID SUN

BalticSeaH2 Regulation Node

What will it take to scale eSAF?

Liquid Sun

Pasi Keinänen, CEO & Co-founder

FRIDAY 2 OCTOBER 2026

Liquid Sun unlocks the critical carbon step for scalable eSAF

WHO WE ARE

A Finnish technology start-up building a new platform for turning CO_2 and renewable electricity into valuable products traditionally derived from fossil resources, with a particular focus on eSAF.

PRODUCTION PATHWAY

BIOGENIC CARBON CAPTURE

Point source CO_2 / DAC

LIQUID SUN RFNBO CRUDE ISLAND

CO_2 → CO conversion
Hydrogen production
FT process

DROP-IN eSAF

Upgrade · certify
blend · fly

DEVELOPMENT ROADMAP

MAR–APR 2026
PILOT PROVEN

End-to-end e-kerosene production run at VTT's Bioruukki facilities together with consortium partners Finnair, Fortum, ABB, Finavia

Q4/2026
FIRST FLIGHT

Plans to complete our first flight with the fuel produced in the pilot

2027–29
PRE-COMMERCIAL

Build and operate 250–300 t/y plant to validate our technology at commercial scale

2030
COMMERCIAL

First commercial facility producing 5 kt/y of eSAF

OUR ROLE IN SCALING eSAF

Make the RFNBO crude production bankable and deployable.

MODULAR TECHNOLOGY

Stack-based LTE systems scale in repeatable increments and flex with renewable power.

CAPITAL-LIGHT DEPLOYMENT

License an RFNBO-crude package to project developers and industrial partners.

DISTRIBUTED PRODUCTION

Start at biogas and other captured-CO_2 sites to lower risk and accelerate capacity.

Industry can meet ambitious rules — but not moving goalposts

eSAF sits at the intersection of demand mandates, carbon pricing and fuel-eligibility rules.

THREE RULEBOOKS SHAPE ONE INVESTMENT CASE

ReFuelEU Aviation

The 2030 eSAF mandate creates demand — but the review in 2027 reopens the long-term signal.

EU ETS Aviation

The EU ETS incentivizes eSAF use by increasing the cost of fossil aviation fuel and providing financial support for eSAF uptake.

EU RED / RFNBO framework

Additionality, temporal and geographic correlation, GHG accounting and feedstock rules determine whether fuel qualifies and carries value.

BANKABLE?

THE POLICY SIGNAL DETERMINES THE OUTCOME

STABLE + PREDICTABLE

Industry conforms and adapts

Designs lock · offtake becomes bankable · financing commits · supply scales

CONSTANTLY CHANGING

Investment decisions pause

Assumptions reopen · contracts stall · capital waits · capacity arrives late

THE ASK

Set ambitious rules. Then keep them stable long enough for industry to build.

Predictability does not weaken regulation — it is what turns regulation into investment and physical capacity.

Contact Us

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e-SAF – an operator's view

BalticSeaH2 Regulation Node

2 October 2026

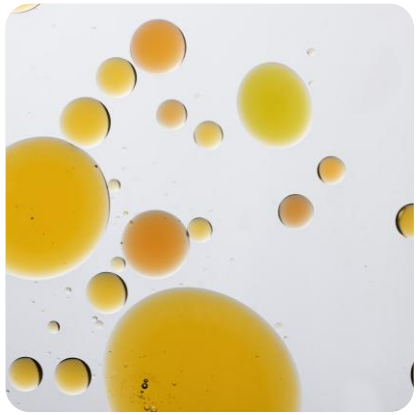
Riku Aho, Vice President Sustainability

Finnair Oyj

Our carbon toolbox....

34,5% smaller emissions intensity measured in CO2/RTK **by 2033***

Longer term horizon



Sustainable aviation fuel (SAF)

- Increasing our SAF usage **together with customers and partners.**



Investments in new technology

- Narrowbody fleet renewal: The new E190-E2 is estimated to burn around 30% less fuel per seat than the current E190-E1.



Network and fuel efficiency Improvements

- Right sized aircraft, short routes, full planes
- Airspace efficiency, reduced aircraft weight



Carbon (CO2) compensation

- Nature-based carbon reduction

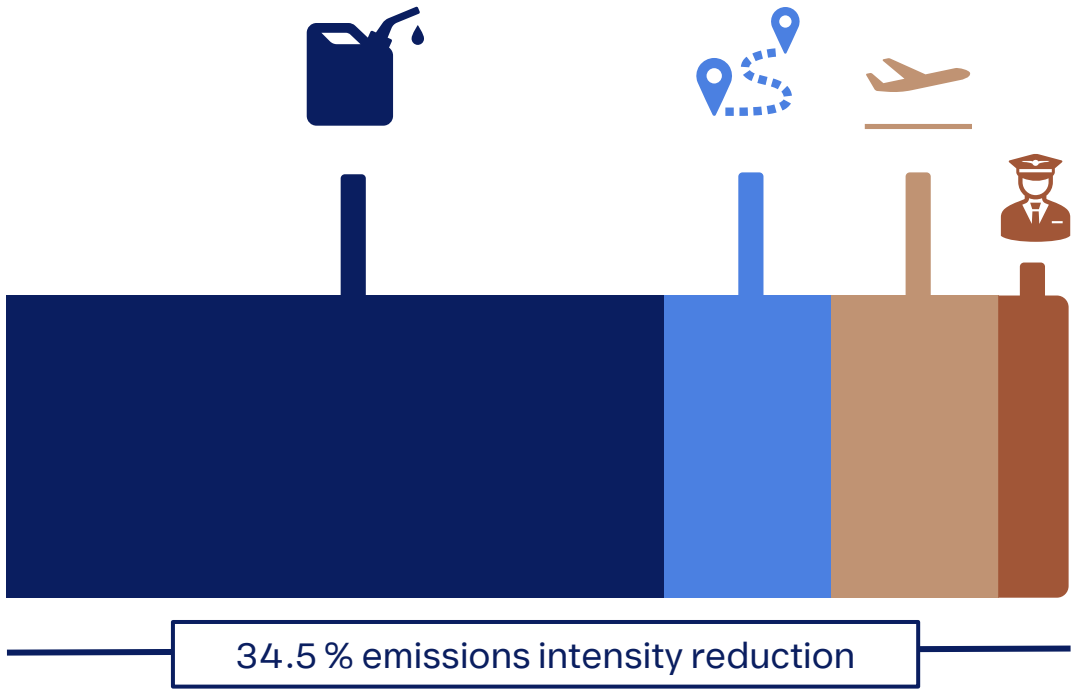


Carbon removals (CDR)

- Technology- based carbon removal

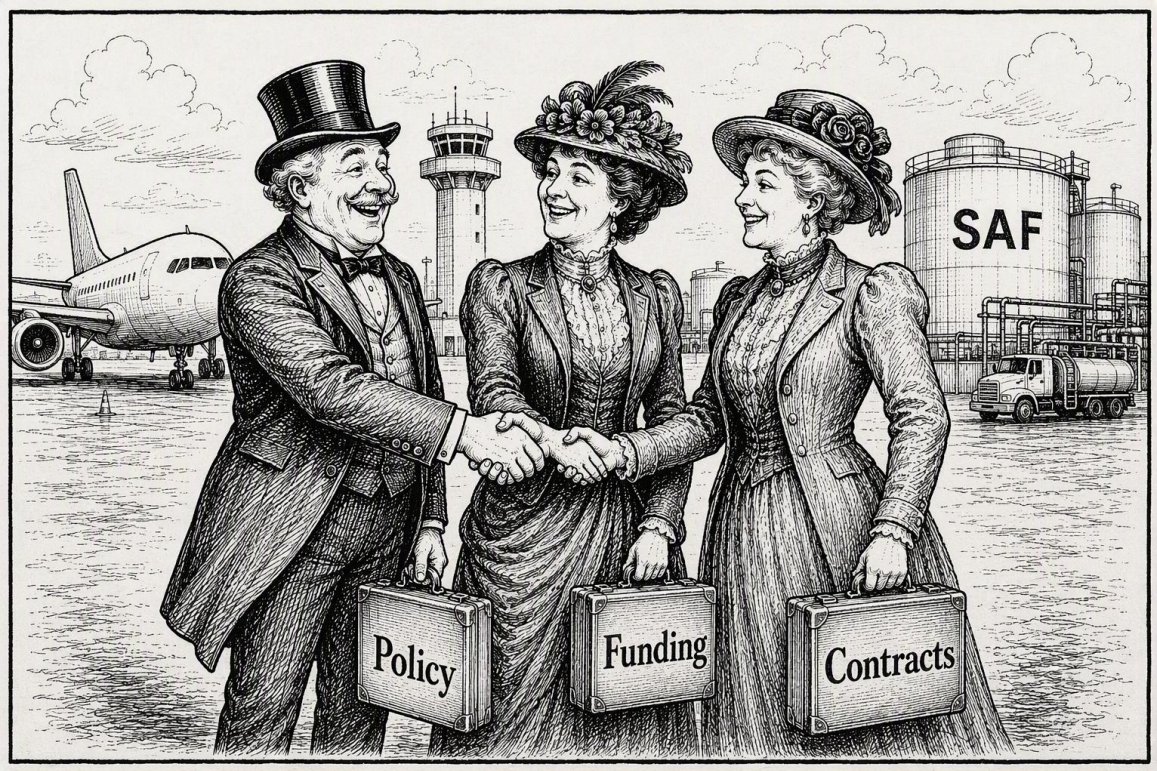
Additional tools
- will contribute only with a limited share

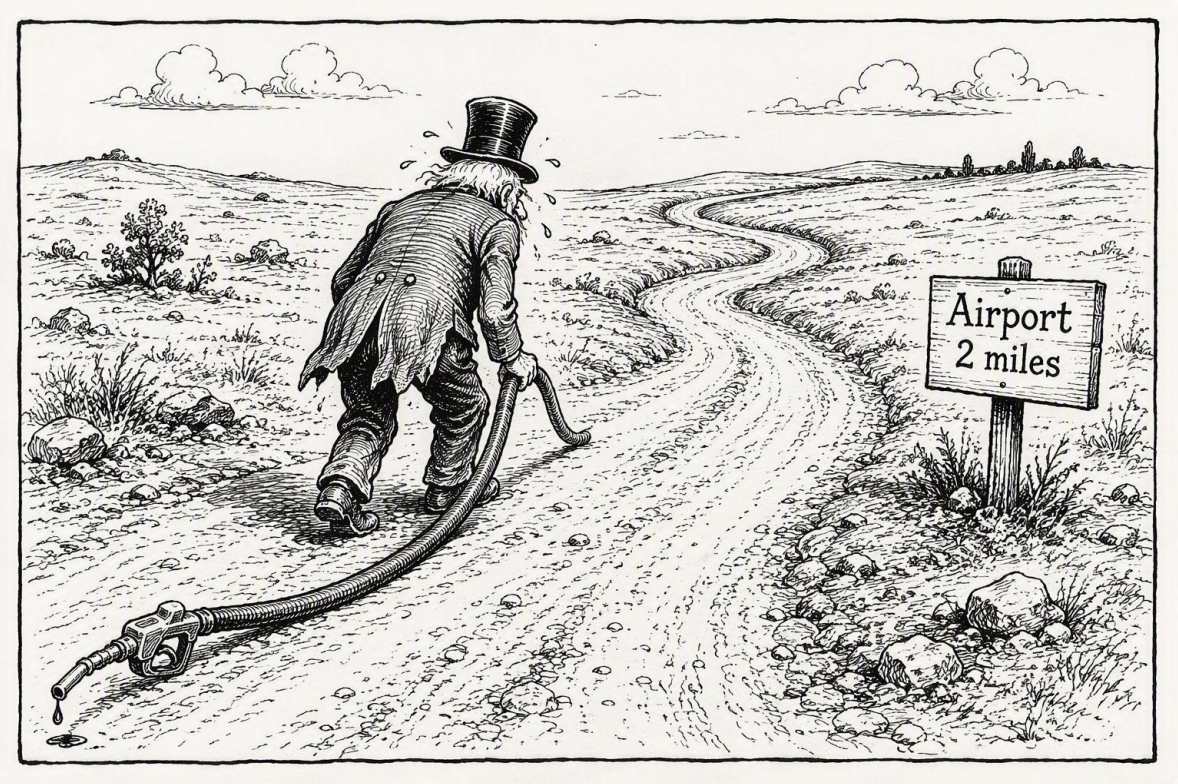
...with SAF as the most important tool



- Finnair has set a target to reduce its carbon emissions intensity (CO2e/RTK) by 34.5% by 2033, using 2023 as the baseline year.
- The target has been approved by the Science Based Target initiative (SBTi).
- Our key levers in achieving the target:
  - **Sustainable aviation fuel (SAF)**
  - Network optimisation
  - Investments in new aircraft technology
  - Weight and fuel optimisation

Imagining an eSAF ecosystem






FINNAIR