

AVIATION CO₂ REDUCTIONS



STOCKTAKING SEMINAR
TECHNOLOGY · OPERATIONS · SUSTAINABLE AVIATION FUELS



SAF competitiveness and scale-up

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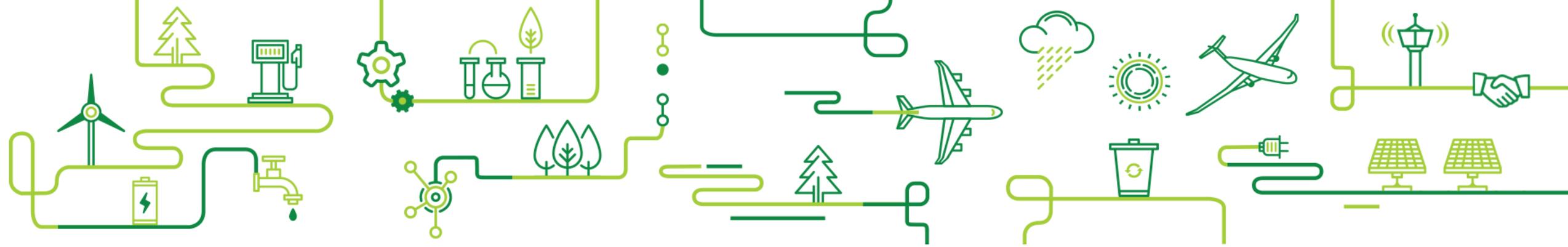


SAF competitiveness and scale-up: The European Landscape

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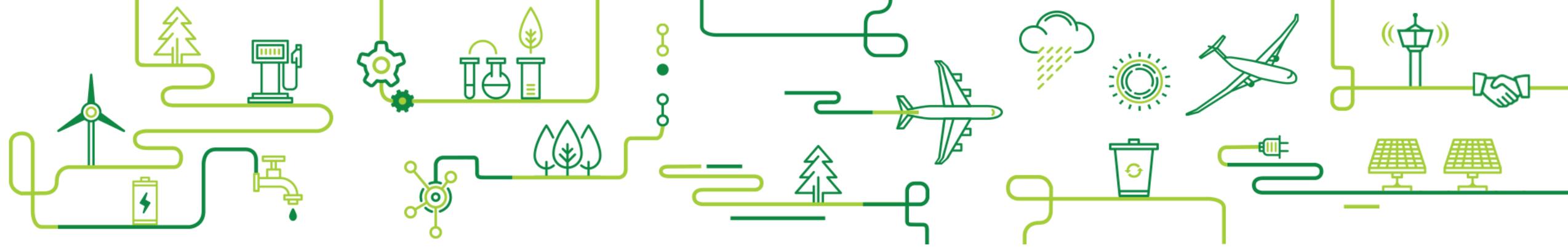
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SAF competitiveness and scale-up: The European Landscape

- ✓ Many industry, research and state's initiatives for the promotion of sustainable aviation fuels have been discussed and launched in the last decade in Europe.
- ✓ Nevertheless, still today SAF large-scale production and supply has not become a reality, except in **Norway** where a **mandatory use** started in 2020.
- ✓ Industrial scale-up has faced major **challenges** that has limited its development, being the most important ones in the European context:
 - **feedstock sustainability and availability**
 - **and high production cost**



SAF competitiveness and scale-up: The European Landscape

- ✓ During 2019 and 2020 we have seen a significant switch in European policies and state's regulatory initiatives:
 - In addition to **Norway**, several states such as **Denmark, France, Germany, The Netherlands, Spain** and **Sweden** are planning the introduction of SAF supply objectives (or join a common EU supply objective if that comes through).
 - Others like the **UK** have established important support schemes for industrial scale-up.
- ✓ Furthermore, the EC has launched the **ReFuelEU Aviation** regulatory initiative aiming to boost SAF supply in the EU.



<https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12303-ReFuelEU-Aviation-Sustainable-Aviation-Fuels>



SAF competitiveness and scale-up: The European Landscape

The UK

The **Renewable Transport Fuel Obligation (RTFO)** rewards SAF production with the same economic incentives given to road vehicles.

The Netherlands

SAF Roadmap under development with a blending mandate at the national -or EU- level. Focus on **advanced feedstocks**. First SAF plant (SkyNRG) in 2022

Germany

National legislation for **GHG-reduction of fuels** (to transpose the RED II) and the German National Hydrogen Strategy foresee a **SAF energetic sub-quota of 2 % in 2030 and ONLY for PtL-kerosene**.

France

SAF roadmap to reach a SAF supply of **2% in 2025 and 5% in 2030**. Focus on **advanced feedstocks**

Spain

Climate Change Law: **2% SAF supply objective in 2025**. Several new bio-refineries under planning with special focus on **wastes and residues**.

Portugal

Roadmap for Carbon Neutrality (RNC2050): integrated approach to **transport decarbonisation including aviation**

Norway

SAF blend 0,5% mandate started in 2020. Considering a **30% target for 2030**.

Denmark

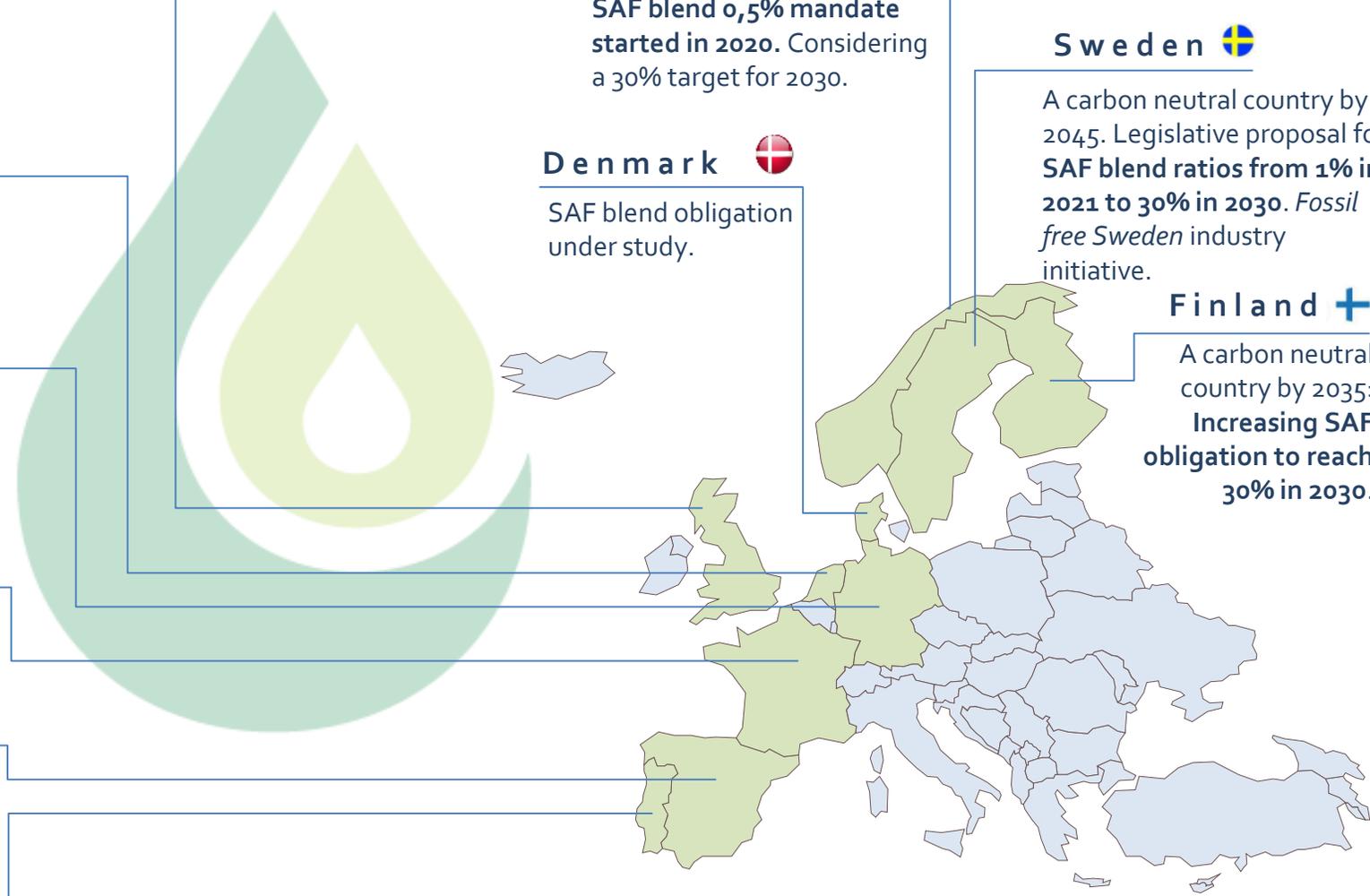
SAF blend obligation under study.

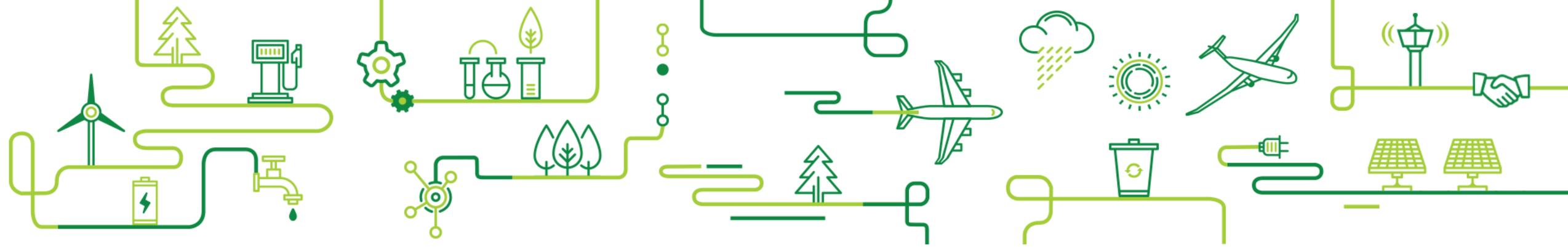
Sweden

A carbon neutral country by 2045. Legislative proposal for **SAF blend ratios from 1% in 2021 to 30% in 2030**. *Fossil free Sweden* industry initiative.

Finland

A carbon neutral country by 2035: **Increasing SAF obligation to reach 30% in 2030**.





SAF competitiveness and scale-up: The European Landscape

SUMMARY

- ✓ The current policy context in Europe brings a unique momentum for the promotion of large-scale and competitive SAF supply in the region and other world areas.
- ✓ European States, institutions and industry have expressed intention to maintain aviation's climate ambitions even in the current very difficult sectorial context due to the COVID-19*
- ✓ A **BALANCED COMPROMISE** between **policy action** and **dialogue with the industry** is the main competitiveness and scale-up facilitator.



* <https://www.permanentrepresentations.nl/documents/publications/2020/06/04/joint-statement-on-sustainable-aviation>

Thank You



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