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FONDO
DE SUSTENTABILIDAD
ENERGÉTICA

Los esfuerzos de Europa para implementar combustibles de aviación alternativos

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Europe efforts to implement alternative aviation fuels

Inmaculada Gómez (SENASA)

04/09/2018

ACTIVITIES



**SUPPORT TO
AUTHORITIES**

CONSULTANCY

TRAINING

**SERVICES AND
OPERATION OF
AIRCRAFT**

**SPORT
AVIATION**

ENVIRONMENT



Runway

1. Background: the long term strategy
2. The EU Advanced Biofuels Flightpath
3. Projects: past, current and future
4. Voluntary initiatives



Background: the long term strategy

1. Climate strategy – overall **policy** for carbon reduction
 - Implemented climate and clean energy regulations, ETS and RED.
2. Flightpath 2050 – overall **R&D** strategy for aviation
 - Implemented through R&D programs and projects, gradually increasing production capacity and user readiness
3. The Flightpath – specific group on **SAF deployment**
4. Voluntary measures



Climate Strategy & Flightpath 2050

- **EC is looking at cost-efficient ways to make the European economy more climate-friendly and less energy-consuming.**
- **By 2050, GHG 80% below 1990**
- **All sectors need to contribute**
- **The low-carbon transition is feasible & affordable.**



Europe is established as a centre of excellence on sustainable alternative fuels, including those for aviation, based on a strong European energy policy.



UE Advanced Biofuels Flightpath



[About](#) [Strategy](#) [Members](#) [News](#) [Events](#)

New Biofuels Flightpath

A new impulse to the
European Biofuels
Flightpath Initiative

[More info](#)





- Aims to **get SAF to the market faster**:
 - Establish a **network of strategic stakeholders** for the development, certification, production, distribution and use of SAF.
 - Facilitate stakeholder co-operation in Europe and internationally, as well as representation at events and forums.
 - Develop, maintain and monitor implementation of a **European Sustainable Aviation Fuel Vision and Roadmap**, with ambitious but achievable & quantified targets for 2030, with intermediate goals and R&D needs.
 - Develop and implement a **communication strategy**
 - Make strategic **policy and operational recommendations**



Regulations

- Use of SAFs is promoted in **EU ETS** (a mean to achieve emissions savings for the airlines) - and **CORSIA**
 - Factor zero applies to use of bioenergy, as for the IPCC recommendations for accounting emissions
 - EUAs in 20€/t CO₂, 63€/t saved on SAF use.
 - Only for SAF compliant with sustainability criteria according RED
 - Coordination with CORSIA still to be defined.
- Use of SAFs is promoted towards the States renewable energy targets (**RED**) – the opt-in.
 - It can achieve around 300€/t market value (variable among countries, fuel type, time, etc.)
 - Usually implemented by mean of blending mandates in road fuels.
 - Advanced fuels and low-ILUC feedstock provisions and incentives (aviation 1.2x)



MS policies

- **Norway:** mandate for SAF blend starting with 1% in 2019, increasing to 30% by 2030.
- **Sweden:** 'Fossil Free Sweden' (*Fossilfri Sverige*), domestic flights fossil-free by 2030 and all departing flights fossil-free by 2045.
- **Finland:** Finland's Air Transport Strategy 2015-2030, 40 % share of sustainable fuels in aviation by 2050.
- **UK:** The RTFO (UK the Renewable Transport Fuel Obligation) has been extended to include renewable aviation fuels and renewable fuels of non-biological origin.
 - **+ Sustainable Aviation UK Landscape**
- **Spain:** a blending mandate for SAF being discussed to entry in force in 2025

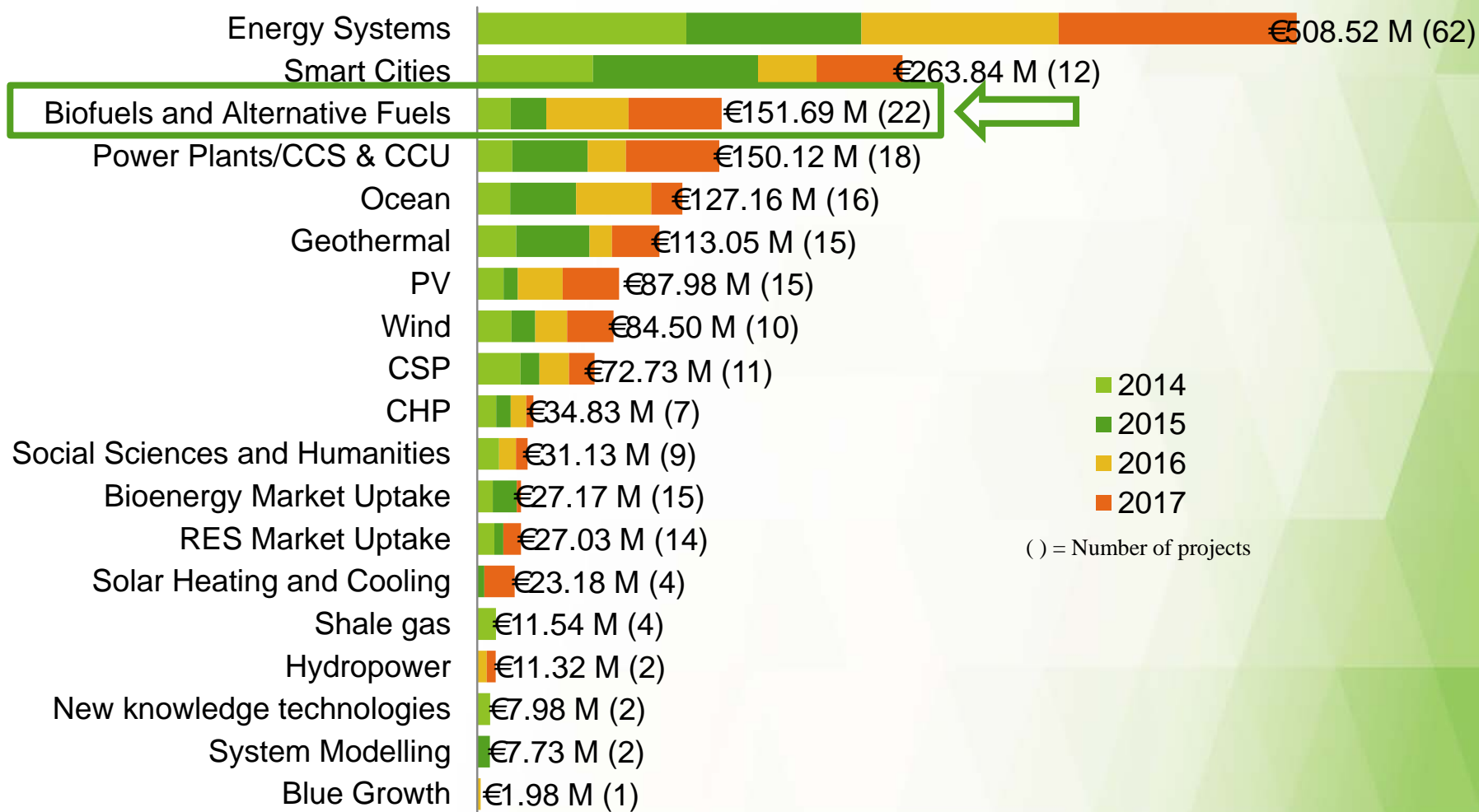


R&D Projects

- AlfaBird
- SWAFEA
- ITAKA 20 M€ (2012-16)
- Biorefly 25 M€ (2015-18)
- JETSCREEN 7M€ (2017-20)
- FLEXJET 15 M€ (2018-22)
- BIO4A 17M€ (2018-22)
- REWOFUEL 20M€ (2018-21)
- KEROGREEN 5M€ (2018-22)



INEA-managed H2020 Energy Projects



Voluntary initiatives

- **Airports:**

- AVINOR: Dec 2016, SAF at Oslo Gardenmoen Airport through the airport's main fuelling infrastructure [ITAKA fuel, first in the world hydrant supply] and continued the supply. Extended to Bergen.
 - Avinor targets 30% of SAF in all Avinor's airports by 2030
- SWEDAVIA: Jan 2017, SAF at Stockholm's Arlanda Airport through the airport's main fuelling infrastructure. Part made available from Göteborg Landvetter in May 2017.
- Geneva: 1% Q4 -2018

- **Airlines:**

- KLM – Corporate BioFuel Programme since 2012
- AirFrance - Engagement for Green Growth (ECV) French program (2017)
- IAG involved in Velocys MSW to SAF project in London





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Be ready to take off!



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Questions?