Europe should be the first climate neutral continent in the world.

“ALL OF US AND EVERY SECTOR WILL HAVE TO CONTRIBUTE TO REDUCE EMISSIONS, FROM AVIATION TO MARITIME TRANSPORT TO THE WAY EACH AND EVERYONE OF US TRAVELS AND LIVES. EMISSIONS MUST HAVE A PRICE THAT CHANGES OUR BEHAVIOUR.”
Energy
Clean Energy Package
Energy Union Governance
Energy Efficiency
Renewables
Electricity Market Design

- 32.5%
- 32%

Enabling Framework
Innovative
Socially fair
Digital

Inter-connected
Inclusive
Safe for all
Investment-friendly

Regulation and Directive on internal electricity market; Regulation on risk-preparedness, ACER regulation
Development of GHG emissions in transport

Greenhouse gas emission in the EU in percentage change since 1990:

Road transport = 22% of total EU emissions

RES in electricity: 30.8%
RES in Heating/Cooling: 19.5%
RES in energy use: 17.5%
RES in transport: 7.6%
GHG emission trajectory for 1.5 °C

Different zero GHG pathways lead to different levels of remaining emissions and absorption of GHG emissions.
Contribution of bioenergy to emissions reductions in 2DS and B2DS, (IEA 2018)

- 18% of the total of the annual savings in 2060
- 20% of the additional annual savings in 2060
1.5 LIFE relies heavily on bioenergy.
Energy

Biomass in Transport

% of Total Final Energy Consumption

- Biomass
- R&D
- Demonstration
- Scale up
- Saturation
• Obligation of fuel suppliers achieving 14% target
• Indicative trajectory
• Scope: biofuels, res electricity, RFNBOs, recycled carbon fuels
• Contribution of conventional biofuels optional and limited.
Advanced Biofuels FlightPath in Aviation

It all started in the EU in 2011 (World Biofuels Markets, Rotterdam March 2011) when the Commission invited Airbus, some airlines and some biofuel producers and agreed to coordinate their actions to promote biofuels in aviation.

The FlightPath policy position was announced via a Press Release on 22 June 2011 aiming to achieve a target of 2 million t/y biokerosene by 2020.

First actions were very intensive....

Then the EC established the “Coordination of Renewable Fuel Stakeholders Strategy in the field of Aviation” to support the Core Team of the FlightPath.
Biokerosene Critical Issues: Cost

Sustainable Aviation Fuels depend on the cost of the raw material.

They will always remain more expensive than fossil kerosene unless carbon tax will be adopted by the EU.

The cost of kerosene is very critical in the operations of an airline, +/- 33%
Biokerosene Critical Issues: Sustainability

REDII proposes a CAP for High ILUC Risk based biofuels and their subsequently gradual elimination by 2030.

This includes palm oil Hydrotreated Vegetable Oil (HVO) which at present is the cheapest resource to produce bio-kerosene.

Compatibility between REDII and CORSIA.

Conclusion: Sustainable Aviation Fuels come at a premium and this has to be recognised by all stakeholders
Smart Airport H2020 Call

The Call aims to foster the utilisation of low carbon renewable fuels (in particular biokerosene) in the EU market.

Efforts with airlines or biokerosene producers have proven difficult to unlock the present stalemate.

Using airports seems a way to avoid the chicken-egg situation by placing the emphasis on the hen house.
Conclusions

• The transport sector, and in particular aviation, is specifically challenging in terms of decarbonisation and the ambition of making the EU the first climate neutral continent by the middle of this century

• There are no single solution to decarbonising mobility: all options have to be explored and different modes of transport will – in all likelihood – require different technological solutions

• On renewables and biofuels, the current EU regulatory framework offers clear guidance on the way forward – but additional measures are needed if we are to deliver the Green Deal.

• The role of bioenergy and liquid biofuels will remain very strong for the next decades.
Thank you for your attention!

More information:

http://ec.europa.eu/energy/renewables/