Brussels, 7 March 2022

Negative Emissions Platform and Transport & Environment joint statement:

How can the ReFuelEU Aviation Proposal enable investment in Direct air capture (DAC), which holds one of the keys to sustainable aviation.

The EU has set the target of reducing net greenhouse gas emissions by 55% in 2030, compared to 1990. This will set the EU on its trajectory to climate neutrality by 2050 and net-negative thereafter. A key aspect of this effort is to reduce greenhouse gas (GHG) emissions from the transport sector, and while most modes of ground transport can shift to clean electricity, others – such as aviation – will continue to require liquid fuels with high energy densities, like kerosene.

Some members of the Negative Emissions Platform engaged with Direct Air Capture (DAC) have developed fuel-production pathways for synthetic aviation fuels from atmospheric carbon dioxide (CO_2) and green hydrogen, which are known as Direct Air Capture-fuels (DAC-fuels). These fuels are included in a category known as "synthetic aviation fuels" or "e-kerosene". They have the potential to lower greenhouse emissions from the aviation sector and should therefore be scaled-up to drive the sector's decarbonisation.

E-kerosene from atmospheric carbon provides a clear climate benefit because it is zero carbon compatible. The carbon is captured from the atmosphere and therefore doesn't add to the total amount of carbon in the atmosphere upon combustion. Capturing atmospheric CO_2 should thus be the preferred solution for e-kerosene production as this leads to near carbon neutral fuels on a cradle-to-grave life cycle basis. However, the ReFuelEU initiative does not currently provide any incentive for DAC to be used in e-kerosene production. Instead, the Fit for 55 package still favours

CO_2 reuse or carbon monoxide (CO) refining from industrial installations which will ultimately add to the total amount of CO_2 in the atmosphere, lead to a lock-in of fossil sources of CO_2, and is therefore only a transitional solution on the pathway to climate neutrality.

We therefore ask for policy signals in the ReFuelEU Aviation proposal to scale up investment in DAC and propose that a share of DAC be mandated within the synthetic aviation fuel sub-target.

Co-signatories:

Amendment suggestions ReFuelEU Aviation - Summary

Introduced	**Recital 19** - (see next page) - Reinforce the policy signals on DAC, which should provide 100% of the carbon needed for synthetic aviation fuel production by 2050, at the latest **Article 3** - define DAC (see next page) - 'direct air capture' means the chemical process by which carbon dioxide (CO_2) is captured from ambient air **Article 4** and **Annex I** (see next page) - Specific sub-obligation within the synthetic aviation target for DAC carbon feedstock, growing from 10% in 2030 to 100% of the carbon needed for synthetic aviation fuel production by 2050, as detailed below. **Article 9** - reporting obligation to include information on the origin of the carbon feedstock and the share of it sourced from DAC.

AMENDMENT SUGGESTIONS

Recital 19
Amendment

(...) When produced from renewable electricity and carbon captured directly from the air, synthetic aviation fuels can achieve as high as 100% emissions savings compared to conventional aviation fuel. **This regulation should therefore mandate that a minimum share of the carbon feedstock needed to produce synthetic aviation fuel is sourced from direct air capture, in order for this pathway to provide 100% of the carbon needed for synthetic aviation fuel production by 2050 or earlier.** (...)

Article 3 - paragraph 1
Amendment (new)

- **'Direct air capture' means the chemical process by which carbon dioxide (CO_2) is captured from the ambient air**

Article 4 - Share of sustainable aviation fuel available at Union airports

Amendment

Aviation fuel suppliers shall ensure that all aviation fuel made available to aircraft operators at each Union airport contains a minimum share of sustainable aviation fuel, including a minimum share of synthetic aviation fuel in accordance with the values and dates of application set out in Annex I. **Where these synthetic aviation fuels are produced with a carbon feedstock, a minimum share of that carbon feedstock must be produced by direct air capture in accordance with the values and dates of application set out in Annex I.**

Article 9 - Reporting obligation for fuel suppliers

Amendment

(c) The lifecycle emissions, origin of feedstock, and conversion process of each sustainable aviation fuel type supplied at Union airports. **When sustainable aviation fuel is being supplied, the origin of the carbon feedstock must also be reported, as well as the share of the carbon feedstock sourced from direct air capture.**

Annex I

Amendment

To be added at the end of each:

(b) From 1 January 2030 (...) Where these synthetic aviation fuels are produced with a carbon feedstock, 10% of that carbon feedstock must be produced by direct air capture;

(c) From 1 January 2035 (...) Where these synthetic aviation fuels are produced with a carbon feedstock, 20% of that carbon feedstock must be produced by direct air capture;

(d) From 1 January 2040 (...) Where these synthetic aviation fuels are produced with a carbon feedstock, 40% of that carbon feedstock must be produced by direct air capture;

(e) From 1 January 2045 (...) Where these synthetic aviation fuels are produced with a carbon feedstock, 80% of that carbon feedstock must be produced by direct air capture;

(f) From 1 January 2050 (...) Where these synthetic aviation fuels are produced with a carbon feedstock, 100% of that carbon feedstock must be produced by direct air capture;