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PART 7/9

**COMMISSION STAFF WORKING DOCUMENT**

**EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT REPORT**  
*Accompanying the document*

**Proposal for a Council Regulation establishing the Joint Undertakings under Horizon  
Europe**

**European Partnership on Clean Aviation**

{COM(2021) 87 final} - {SEC(2021) 100 final} - {SWD(2021) 37 final}

<b>Executive Summary Sheet (Max 2 pages)</b>
Impact assessment of the European Partnership on Clean Aviation
<b>A. Need for action</b>
<b>What is the problem and why is it a problem at EU level?</b>
The ecological footprint of aviation is growing because the growth of air transport outpaces the incremental technological and operational improvements that are being introduced. In addition, the path to climate neutral aviation is unclear, as solutions developed in other sectors cannot easily be introduced in aviation. During 2019 in the EU, aviation represented €823bn, or 4.1% of EU GDP, providing 12.2m jobs. To maintain the EU European industrial leadership and technological sovereignty on a global scale, while at the same time achieving the Green Deal in aviation, there is a strong need to accelerate the deployment of EU R&I aviation solutions. A mobilisation of the currently fragmented R&I capacity of the entire European aviation value chain is required to develop climate neutral technologies within the Green Deal's timescale.
<b>What should be achieved?</b>
The primary objective is, responding to the European Green Deal, to contribute to climate neutrality by 2050, with an intermediate step around 2030, by accelerating the development of climate neutral aviation technologies. Together with the large-scale deployment and use of new, net-zero or fully decarbonised sustainable aviation fuels such as power-to-liquid synthetic fuels, methane and/or hydrogen, the operating fleet in 2050 could achieve a 90+% improvement in carbon efficiency compared to today's fleet. The second general objective would be to ensure that aeronautics-related R&I activity contributes to the global competitiveness of the EU aviation industry by ensuring that cleaner aviation remains safe, secure and efficient for the transportation of passengers and goods by air. The third objective would be to further advance the European R&I capacity to accelerate and optimise the R&I process. Beyond industrial leadership, aviation research will also focus on education, strengthening and integrating the EU scientific capacity and creating more R&I intensive SMEs.
<b>What is the value added of action at the EU level (subsidiarity)?</b>
The rationale for EU intervention stems from the enormous complexity of the endeavour, and the related need for risk sharing, considering the high costs of developing and demonstrating innovative technological solutions. Neither a single aeronautics company, nor all the companies from a single country combined, could design a new civil aircraft, and achieve climate neutrality for aviation. Furthermore, all research needs should be coherent with market measures and incentives, as well as requiring a robust and modern regulatory and standardisation framework, which can only be designed at the EU level and via international co-operation. At the same time, EU action allows for effective co-operation at European scale, creating synergies with other sectors, and with countries without a large aviation industry.
<b>B. Solutions</b>
<b>What are the various options to achieve the objectives? Is there a preferred option or not? If not, why?</b>
The preferred option is to support the collaborative and fundamental research through traditional Horizon Europe calls, next to an institutionalised public-private partnership (PPP) under Article 187 TFEU dedicated to the acceleration of the development of climate neutral aviation technologies for earliest possible deployment. An institutionalised PPP, unlike the other options of only traditional calls or a contractual PPP, offers the necessary level, depth and length of commitment.

<b>What are different stakeholders' views? Who supports which option?</b>
During the public consultation on the Impact Assessment study, 80% of the respondents suggested that a European institutionalised partnership would have a significant (positive) effect on and be “very relevant” to increasing industrial leadership in clean aviation technologies and the uptake of new technologies. Traditional calls are not considered fit for ensuring technology uptake. The stakeholders confirmed their commitment in a Joint Declaration (2019 Le Bourget Paris Airshow) and developed a Strategic Research and Innovation Agenda (SRIA) for the partnership. The public consultation held on the SRIA, underscored the high stakeholders and public interest. Stakeholders underlined that Clean Aviation should maintain its focus on climate neutrality despite the hard-hitting COVID-19 crisis.
<b>C. Impacts of the preferred option</b>
<b>What are the benefits of the preferred option (if any, otherwise of main ones)?</b>
The implementation of the Clean Aviation initiative through an institutionalised partnership would best ensure that the private and public sectors remain fully engaged in the research needed for development and deployment of climate neutral solutions in line with the Green Deal requirements. It is consistent with leveraging industrial financial and in-kind resources, to maximise the impact of EU funding.
<b>What are the costs of the preferred option (if any, otherwise of main ones)?</b>
The existing Clean Sky 2 Joint Undertaking receives €1.755bn in EU funding, and at least €2.19bn from private members. The collaborative aviation R&I programme in Horizon 2020 and FP7 were €0.5bn and €0.8bn respectively. The ambitious targets of climate neutrality by 2050 and the new coherent cycle of aviation research towards 2050, and not forgetting that aviation is hard affected by the COVID-19 crisis, justify an increase (of the order of 25% for each of the two pillars of R&I).
<b>What are the impacts on SMEs and competitiveness?</b>
Similar to the calls of the other programmes about 20% of the partners are SMEs. In the Clean Sky 2 programme, just over 40% of the partners selected in the 10 calls for proposals to date (60% of total programme) were SMEs, about a quarter of funds in these calls. Leading in climate neutral aviation, would benefit EU aviation’s competitiveness.
<b>Will there be significant impacts on national budgets and administrations?</b>
No particular impact is expected on national budgets.
<b>Will there be other significant impacts?</b>
The proposed partnership would naturally create synergies with the proposed European Partnership on Integrated Air Traffic Management, but also other relevant PPPs. Both the hydrogen initiative and the batteries initiative could have a huge impact as enablers of climate neutral aviation, if their deliverables respond to the needs of the aviation sector.
<b>Proportionality?</b>
The preferred option is proportionate to the scale of the problem, given the trans-national nature and complexity and cost of aviation and its R&I.
<b>D. Follow up</b>
<b>When will the policy be reviewed?</b>
Using an interim evaluation, biennial Strategic Research and Innovation Agenda review, and the option of an independent Impact Evaluator is being investigated for R&I uptake. The role of the Clean Aviation Governing board will be strengthened compared to H2020 Clean Sky 2 for better strategic guidance and

project follow-up.