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PART 9/9

**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 Hydrogen**

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

<b>Executive Summary Sheet (Max 2 pages)</b>
Impact assessment on clean hydrogen
<b>A. Need for action</b>
<b>What is the problem and why is it a problem at EU level?</b>
While hydrogen is a clean fuel, with no emissions, it is still more expensive than other energy sources, and mostly comes from natural gas, generating carbon dioxide (CO <sub>2</sub> ). We need to produce ‘ <b>clean hydrogen</b> ’ from renewable energy resources that would eliminate CO <sub>2</sub> emissions from the process. Clean hydrogen applications are more expensive than competing technologies, and not yet fully reliable or of sufficient quality for uptake. There is also limited large-scale deployment of clean hydrogen generation capacity. European hydrogen industrial and research stakeholders along with the power, transport, and construction industrial stakeholders are most affected.
<b>What should be achieved?</b>
Contribute quantifiably to the achievement of the 2030 climate targets and to climate neutrality by 2050. Strengthen and integrate EU scientific capacity to accelerate the development and improvement of advanced clean hydrogen applications ready for market, across energy, transport, building and industrial end-uses. Strengthen the competitiveness of the EU clean hydrogen value chain (notably SMEs).
<b>What is the value added of action at the EU level (subsidiarity)?</b>
Clean hydrogen has complex and interlinked value chains, which require effective cooperation and inter-sectoral collaboration at European level to enable successful, large-scale demonstration and deployment.
<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 following options were considered as a means to support hydrogen R&I: <ul style="list-style-type: none"> <li>• traditional Horizon Europe calls;</li> <li>• a co-programmed European partnership; or</li> <li>• an institutionalised partnership under Article 187 TFEU.</li> </ul> <p>The institutionalised partnership is the preferred option since it is the best at providing a long-term strategy and commitment from industry as well as from Member States and the European Commission.</p>
<b>What are different stakeholders' views? Who supports which option?</b>
80% of the respondents to the open public consultation suggested that a European institutionalised partnership would have a significant (positive) effect on and be ‘very relevant’ for increasing industrial leadership in hydrogen technologies and the uptake of new technologies.
<b>C. Impacts of the preferred option</b>
<b>What are the benefits of the preferred option (if any, otherwise of main ones)?</b>

<p>The implementation of the clean hydrogen initiative through an institutionalised partnership would best ensure that the private and public sectors remain fully engaged in the development and implementation of a <b>long-term strategy</b> for clean hydrogen RD&amp;I. It is consistent with leveraging industrial financial and in-kind resources, to maximise the impact of Commission funding. It would support the development of a strategy for hydrogen that is fully aligned with the European Green Deal priorities and the European climate commitment.</p>
<p><b>What are the costs of the preferred option (if any, otherwise of main ones)?</b></p>
<p>The annual costs of running an institutionalised partnership based upon the 2018 costs of the existing FCH 2 joint undertaking are €2.9 million (27 staff) plus €2.1 million other direct costs. For the period 2014-2015, the FCH 2 JU has generated €1.63 of total leverage, i.e. €1.63 support by industry for every €1 support of the European Commission.</p>
<p><b>What are the impacts on SMEs and competitiveness?</b></p>
<p>Similar to the calls of the LEIT programme, about 25% of the partners in FCH 2 JU projects are SMEs and half of Hydrogen Europe members are SMEs. The partnership would allow smaller companies, which have developed niche products to serve growing hydrogen markets and to connect with larger industrial players that can support their development.</p>
<p><b>Will there be significant impacts on national budgets and administrations?</b></p>
<p>No particular impact is expected on national budgets or administrations, though an institutionalised partnership would help rejuvenate and harmonise national hydrogen research programmes.</p>
<p><b>Will there be other significant impacts?</b></p>
<p>Additional demonstration projects are likely to generate further public interest in hydrogen. At the same time, increased public outreach and education on hydrogen should create a basis of public support for hydrogen applications. Standards and norms will be more easily addressed at international level, where the EU should have only one voice.</p>
<p><b>Proportionality?</b></p>
<p>The implementation of an institutionalised partnership should ensure that the private and public sectors remain fully engaged in the development and implementation of a <b>long-term strategy</b> for clean hydrogen RD&amp;I. It would leverage industrial financial and in-kind resources, to maximise the impact of Commission funding and support the development of a strategy for hydrogen that is fully aligned with the European Green Deal priorities.</p>
<p><b>D. Follow up</b></p>
<p><b>When will the policy be reviewed?</b></p>
<p>There should be an interim evaluation of the proposed institutionalised partnership 3 years after the start of its operation.</p>