

Research and aeronautics: setting up the Clean Sky Joint Undertaking

2007/0118(CNS) - 13/06/2007 - Legislative proposal

PURPOSE: to set up a Joint Undertaking: “Clean Sky”.

PROPOSED ACT: Council Regulation.

BACKGROUND: the [7th Framework Programme](#) 2007-2013 sets up four Specific Programmes: Co-operation, Ideas, People and Capacities. This proposal relates directly to the Specific Programme [Co-operation](#) and one of its core themes: “Transport” (Aeronautics).

Joint Technology Initiatives (JTIs) were introduced for the first time under the Co-operation programme as a way of realising **public-private partnership** for large-scale research projects being developed at a European level. JTIs are born out of the “European Technology Platforms”, (ETPs), which already existed under the previous, 6th Framework Programme.

JTIs are being proposed in the form of Joint Undertakings that have a legal structure. They are being proposed in a limited number of sectors only, including: hydrogen and fuel cells, aeronautics and air transport, embedded computing systems, nanoelectronics and global monitoring for environment and security.

CONTENT: the purpose of this proposal is to create a “Clean Sky” Joint Undertaking as a public-private partnership seeking to develop innovative technologies that reduce the negative impact of aeronautics on the environment.

The proposed objectives of Clean Sky are:

- to accelerate the development of clean Air Transport Technologies in the EU – as soon as possible; and
- to create a radically innovative Air Transport System that integrates advanced technologies in order to reduce noise emissions, gas emissions and to improve the fuel efficiency of aircraft.

Clean Sky will be established in Brussels for an initial period lasting up to 31 December 2017, although the Community’s financial contribution will cease as from 2013 in line with the EU’s financial perspective. The members of Clean Sky will be the European Commission (acting on behalf of the Community) as well as leaders and associations from the private sector. They are listed in Annex to the proposal.

In terms of financing for the Clean Sky JU the proposed Regulation states that the Joint Undertaking will receive contributions from its Members and their participating affiliates. The Commission will contribute 50% of the total with the Members contributing the remaining 50%. The maximum Community contributions (covering both running costs and research costs) will be EUR 800 million. This amount will be paid from the budget appropriations allocated to the Theme “Transport” from the Co-operation specific programme. The remaining members (i.e. ITD Leaders and Associates) will be expected to contribute the same amount as the Community – although 75% of industry’s contribution will be contributed in kind. The remaining 25% will be contributed in cash for the running costs of Clean Sky.

The main activities of the Clean Sky Joint Undertaking will be: to award grants following calls for proposals; to ensure the provision of services and supply contract (where appropriate) through Calls for Tender; to mobilise the public and private sector funds; to liaise with national and international activities in the technical domain; to maintain a relationship with National State Representative Groups; and to notify those eligible to participate about potential borrowing opportunities from the EIB.

Specifically speaking, the Commission is proposing the establishment of “Integrated Technology Demonstrator Steering Committees” responsible for steering six technology domains, referred to as Integrated Technology Demonstrators or ITD’s. For each ITD specific scientific targets are established. They are:

Smart Fixed Wing Aircraft: Receiving a proposed 24% of the Community’s contribution, this ITD is expected to focus on active wing technologies that sense the airflow and adapt their shape as required, as well as on new aircraft configurations to optimally incorporate these novel wing concepts.

Green Regional Aircraft: Receiving a proposed 11% of the Community’s contribution, this ITD is expected to focus on low-weight configurations and technologies using smart structures, low noise configurations and the integration of technology developed in other ITDs, such as engines, energy management and new configurations.

Green Rotorcraft: Receiving a proposed 10% of the Community’s contribution, this ITD is expected to focus on innovative rotor blades and engine installation for noise reduction, lower airframe drag, diesel engine and electrical systems for fuel consumption reduction and environmentally friendly flight paths.

Green and Sustainable Engines: Receiving a proposed 27% of the Community’s contribution, this ITD is expected to focus on integrating technologies for low noise and lightweight low pressure systems, high efficiency, low NOx and low weight core and novel configurations such as open rotors or intercoolers.

Systems for Green Operations: Receiving a proposed 19% of the Community’s contribution, this ITD is expected to focus on all electric aircraft equipment and systems architectures, thermal management, capabilities for “green” trajectories and mission and improved ground operations.

Eco-design: Receiving a proposed 7% of the Community’s contribution, this ITD will address the full life cycle of materials and components, focusing on issues such as optimal use of raw materials, decreasing the use of non-renewable materials, natural resources, energy, the emission of noxious effluents and recycling.

Technology Evaluator: Receiving a proposed 2% of the Community’s contribution, this will be the first available European complete integrated tool delivering a direct link between advanced technologies and high-level local or global environment impact.

The intellectual property policy of the Clean Sky Joint Undertaking will be incorporated in the grant agreements concluded by the Clean Sky Joint Undertaking. Clean Sky will establish close links with the SESAR Joint Undertaking which is working on Air Traffic management (ATM) technologies in line with the Single Sky initiative

Once adopted it is expected that Clean Sky will have a positive impact in terms of: a lessened impact on the environment from the aviation sector on a global level; increased aviation efficiency; increased passenger satisfaction; and a competitive European aviation industry whose activities are based on the principle of sustainable development.

Lastly, the Community will contribute a total of EUR 800 million in cash to the Joint Undertaking. This amount will be split between operational costs on the one hand and running costs on the other. The other

JU Members and their affiliates will commit EUR 776 million in kind and EUR 24 million in cash for the running costs. At the start of operations the ITD leaders have committed themselves to about 75% (equivalent to EUR 600 million) of the “in-kind” contributions, with the Associates contributing the remaining 25% (equivalent to EUR 200 million).