

## Decision of the Governing Board on the selection of Associated Members of the Clean Aviation Joint Undertaking under the procedure laid down in Article 59(2) of the Single Basic act

THE GOVERNING BOARD OF THE CLEAN AVIATION JOINT UNDERTAKING,

Having regard to Council Regulation (EU) No 2085/2021 of 19 November 2021 establishing the Joint Undertakings under Horizon Europe<sup>1</sup> (hereinafter "Single Basic Act" or "SBA"), in particular Articles 7(3) and 59(2) (Part II, Title II) of the Single Basic Act;

#### WHEREAS:

In accordance with Article 59(2) of the SBA, the Governing Board may, during the first six months following the establishment of Clean Aviation Joint Undertaking (hereinafter referred to as "CAJU"), select Associated Members from a list drawn up after an open call for expression of interest launched by the Commission prior to its establishment:

The Commission launched on 26 August 2020 a call for expression of ideas/potential Members<sup>2</sup> (hereinafter the "CEI") to support the preparation of the European Partnership for Clean Aviation and to ensure a timely widening of the membership of the CAJU;

Under phase 1 of the CEI, the Commission received a total of 82 applications and, after an assessment carried out with the support of independent experts, a total of 17 applications reached the final panel assessment stage;

From the 17 applications, a total of 7 applications were short-listed as priority ideas to be considered for the finalization of the "SRIA," the applicant legal entities and a number of additional organizations were short-listed by the Commission as potential additional members to the Clean Aviation Joint Undertaking;

Under phase 2 of the CEI, the short-listed organizations were invited by the Commission to information workshops on the state of preparation of the CAJU and were asked to confirm their interest to become possible Members of the CAJU by providing a formal expression of interest and a statement form:

As a result of the phase 2, a total of 18 organisations each submitted an expression of interest to become a private Member of the CAJU;

As an outcome of the CEI, the 18 organisations having formalized their expression of interest were invited to provide additional information on their expected level of technical contribution to the objectives of the CAJU and to the "Strategic Research and Innovation Agenda" and an estimate of their long-term financial and in-kind contribution to the CAJU in the form of individual "Letter of Intent<sup>3</sup>" to assess their ability to commit under Article 6(3) of the SBA;

<sup>&</sup>lt;sup>1</sup> OJ L 427, 30.11.2021, p. 17.

<sup>&</sup>lt;sup>2</sup> https://ec.europa.eu/info/news/new-call-ideas-clean-aviation-partnerships-2020-aug-26\_en

<sup>&</sup>lt;sup>3</sup> LoI are confidential document of the CAJU



As a result of the above assessment process, a total of 15 organisations, established within the European Union or in a third country Associated to Horizon Europe has been concluded, were assessed as having provided an adequate level of documented information on their competences and technical contribution and an adequate assurance in terms of ability to provide financial and in-kind contribution to the CAJU in terms of Article 11(1) of the SBA;

The 15 organizations were invited to sign a "Letter of Commitment" as required in Article 6(3) of the SBA to endorse the provisions of the Single Basic Act and commit jointly with the Founding Members of the CAJU, to the financial and in-kind contribution obligations set in Article 61 of the SBA, subject to the selection of the Governing Board;

A total of 12 organisations have notified to the CAJU a signed "Letter of Commitment" while 3 organisations have notified to the CAJU their withdrawal from the membership procedure.

It should be noted that the organisations established in third countries with which an Association Agreement to the Horizon Europe Programme has not been concluded in terms of Article 16 of Regulation (EU) 2021/695<sup>4</sup> by the date of the Governing Board meeting adopting this Decision is held, may not be selected for membership in accordance with Article 7 of the SBA and have not been proposed by the Executive Director for the selection by the Governing Board;

Considering the knowledge, competences and capabilities that may be brought by these organisations to the CAJU, their commitment to bring financial and in-kind contribution to the CAJU and the importance of widening the membership of the CAJU from the early establishment of the CAJU in the interest of openness and inclusiveness in its governance and operating framework;

In its ordinary meeting of 16 December 2021, the Governing Board of CAJU has adopted the following decision:

#### **Article 1**

The 12 organisations listed in Annex II to the present Decision are hereby selected by the Governing Board based on the call for expression of interest launched by the Commission on the 26 August 2020 in accordance with Article 59(2) of the SBA and its subsequent assessment performed with the support of independent experts to draw up the list and the following the commitment process undertaken by such organizations.

These organisations shall become "Associated Members" of the CAJU in the meaning of Article 7 and 59(1)(c) of the SBA, with effect from the date of adoption of the present decision.

The Associated Members shall accede to the Membership Agreement required by Article 28(2) of the SBA.

<sup>&</sup>lt;sup>4</sup> Regulation (EU) 2021/695 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination, and repealing Regulations (EU) No 1290/2013 and (EU) No 1291/2013 (OJ L 170, 12.5.2021, p.1.



### **Article 2**

The present decision shall enter into force the day of its adoption by the Governing Board.

Done at Brussels, 16 December 2021

Rosalinde van der Vlies

Chairperson of the Governing Board

### **Enclosures:**

- Annex I: List of legal entities drawn up as a result of the call for expression of interest
- Annex II: List of legal entities proposed for selection as Associated Members
- Annex III: List of key competences and capabilities
- Annex IV: Letter of Commitment signed by the Associated Members



## Annex I - List of legal entities drawn up as a result of the call for expression of interest

An overview of the legal entities candidate Associated Members drawn up as a result of the call for expression of interest including legal entities from third countries

|    | Company                           | MS/TC | Domain             | Sector                |
|----|-----------------------------------|-------|--------------------|-----------------------|
| 1  | Cranfield University              | UK    | UNI                | AERO                  |
| 2  | Hellenic Aerospace<br>Industry    | EL    | Aircraft           | AERO                  |
| 3  | Israel Aerospace<br>Industries    | IL    | Aircraft           | AERO                  |
| 4  | Karlsruhe Institute of Technology | DE    | University/<br>RTO | ELECTR.<br>COMPONENTS |
| 5  | NTNU                              | NO    | University         | ENERGY                |
| 6  | Politecnico di Torino             | IT    | University         | AERO                  |
| 7  | Siemens                           | DE    | Equipment /System  | DIGITAL               |
| 8  | SINTEF AS                         | NO    | RTO                | ENERGY                |
| 9  | SINTEF Energy<br>Research         | NO    | RTO                | ENERGY                |
| 10 | Solvay                            | BE    | Aircraft           | MATERIALS             |
| 11 | Sonaca                            | BE    | Aircraft           | AERO                  |
| 12 | TECNALIA                          | ES    | RTO                | AERO                  |
| 13 | Tecnam                            | IT    | Aircraft           | AERO                  |
| 14 | TU Braunschweig                   | DE    | University         | AERO                  |
| 15 | TU Delft                          | NL    | University         | AERO                  |
| 16 | Universita' di Napoli             | IT    | University         | AERO                  |
| 17 | University of Stuttgart           | DE    | University         | AERO                  |
| 18 | Zero Avia                         | UK    | SME                | PROPULSION            |



## Annex II - List of legal entities proposed for selection as Associated Members

List of the legal entities proposed for selection as Associate Members having signed a "Letter of Commitment" and considering the status of the Association Agreements to Horizon Europe.

Including overview of contributions to the three SRIA pillars (SMR, HER, H2)

|    | Company                        | MS  | Domain            | Sector    | SMR         | HER      | H2          |
|----|--------------------------------|-----|-------------------|-----------|-------------|----------|-------------|
| 1  | Hellenic Aerospace<br>Industry | EL  | Aircraft          | AERO      | <b>√</b>    |          | <b>✓</b>    |
| 2  | Israel Aerospace<br>Industries | IL* | Aircraft          | AERO      | <b>&gt;</b> | <b>√</b> | >           |
| 3  | NTNU                           | NO  | University        | ENERGY    | ✓           | ✓        | ✓           |
| 4  | Politecnico di Torino          | IT  | University        | AERO      | ✓           | ✓        | <b>✓</b>    |
| 5  | Siemens                        | DE  | Equipmen t/System | DIGITAL   | <b>√</b>    | <b>√</b> | <b>&gt;</b> |
| 6  | SINTEF**                       | NO  | RTO               | ENERGY    | ✓           | ✓        | <b>✓</b>    |
| 7  | Solvay                         | BE  | Aircraft          | MATERIALS | ✓           | ✓        | <b>✓</b>    |
| 8  | TECNALIA                       | ES  | RTO               | AERO      | ✓           | ✓        | <b>✓</b>    |
| 9  | Tecnam                         | IT  | Aircraft          | AERO      |             | <b>√</b> | <b>√</b>    |
| 10 | TU Braunschweig                | DE  | University        | AERO      | ✓           | ✓        | <b>✓</b>    |
| 11 | TU Delft                       | NL  | University        | AERO      | ✓           | ✓        | <b>√</b>    |
| 12 | University of Stuttgart        | DE  | University        | AERO      | <b>√</b>    | ✓        | <b>√</b>    |

<sup>\*</sup> For info, Association Agreement to Horizon Europe was signed on 6th December 2021

<sup>\*\*</sup> Includes both SINTEF AS and SINTEF Energy Research.



# Annex III - key competences and capabilities of the legal entities proposed to be selected as Associated Members

Table 3 provides an overview of the candidate Associated Members key competences and capabilities relevant to the objectives of the CAJU. The list is based on the CEI applications and assessment carried out with independent experts and information provided under the LoC process

Table 3 - Candidate Associated Members: overview of key competences and capabilities<sup>5</sup>

| 1 | Hellenic Aerospace Industry | EL | Design, development, manufacturing and<br>testing of hydrogen storage tanks and<br>aero-structures   |
|---|-----------------------------|----|--|
| 2 | Israel Aerospace Industries | IL | <ul> <li>Aircraft and wing design</li> <li>Hybrid-electric architectures</li> <li>Hydrogen-powered aircraft</li> <li>Hydrogen storage, distribution and safety</li> </ul>  |
| 3 | NTNU                        | NO | <ul> <li>Light-weight design and integration of power electronics with electrical motors</li> <li>Insulation management of multi-MW electrical machines and design of ground tests</li> <li>Optimization of hybrid electric propulsion architectures and cryo-electric propulsion technologies</li> <li>Hydrogen combustion technologies, including contrail formation</li> <li>Design and monitoring of prognostics associated with risk of H2 accidents</li> </ul> |
| 4 | Politecnico di Torino       | ΙΤ | <ul> <li>Testing and validation of hybrid-electric propulsion architecture</li> <li>Design of structures and manufacturing processes</li> <li>Aircraft maintenance and training concepts</li> </ul>  |
| 5 | Siemens                     | DE | <ul> <li>Digital design, simulation, optimization, safety analysis, virtual/physical testing propulsion systems (e.g. H2-powered, hybrid electric) and components, and structures</li> <li>Simulation and testing of cryogenic and superconductive technologies, and new electric, electrochemical and magnetic components</li> </ul>  |
| 6 | SINTEF**                    | NO | - Power electronics, power flow management, electrical system  |

<sup>&</sup>lt;sup>5</sup> The list of competences and capabilities is not exhaustive

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| 7  | Solvay          | BE | architecture, including safety and certification  - Thermal management of hybrid-electric aircraft  - Superconducting propulsion systems  - Hydrogen combustion concepts and simulation, Fuel Cells for aviation, H2 storage and handling (including LH2 boiloff)  - Lightweight, cost-effective, and multi-   |
|----|-----------------|----|--|
| •  | Colvay          |    | material solutions, e.g. composites for primary structure applications  - Light-weight multi-functional materials for hydrogen storage and distribution  - Design and development of functional new materials to increase fuel cell stack performances   |
| 8  | TECNALIA        | ES | <ul> <li>Development of lightweight fuselage and wing-type structures, and composite materials</li> <li>Design &amp; Simulation of power and thermal management systems and components</li> <li>Power &amp; Energy Storage systems integration</li> <li>Development of materials of H2 storage tanks and distribution</li> </ul>   |
| 9  | Tecnam          | IT | <ul> <li>Full electric propulsion architecture</li> <li>Aircraft integration of batteries, e-motor drivers, (hydrogen) fuel cells and systems</li> </ul>   |
| 10 | TU Braunschweig | DE | <ul> <li>Aero-structural optimisation of ultraperforming wing</li> <li>Ultra-high efficiency propulsive system development and integration</li> <li>Hybrid electric architectures, turbo generator, propellers/propulsors, energy storage, power management</li> <li>Design of distributed propulsion and wind tunnel testing</li> <li>Light-weight hydrogen tanks, hydrogen fuel cells, cooling system</li> </ul> |
| 11 | TU Delft        | NL | <ul> <li>Aerodynamics, flight performance and propulsion, structures and materials, aircraft concept design</li> <li>Electrical power architecture, energy storage and conversion, thermal management</li> <li>Materials for hydrogen storage, disruptive aircraft designs and new propulsion systems, thermal management, assessment of climate effects (direct burn)</li> </ul>                                  |



|    |                         |    | <ul> <li>Experimental testing (e.g. wind tunnels,<br/>thermal management and waste heat<br/>recovery, H2 conversion and production,<br/>advanced manufacturing)</li> </ul>   |
|----|-------------------------|----|--|
| 12 | University of Stuttgart | DE | <ul> <li>Turbine water condensation and water recovery, including numerical/experimental testing</li> <li>Hybrid-electric propulsion for regional aircraft</li> <li>Technologies to enable hydrogen-powered aircraft (e.g. fuel-cell integrated power system)</li> </ul> |

<sup>\*\*</sup> Includes both SINTEF AS and SINTEF Energy Research