

Table 3 - Call 3 topic abstracts

Aircraft Concept Integration and Impact	
Topic ID / Funding	Topic Title / Abstract
HORIZON-JU-CLEAN-AVIATION-2025-03-ACI-01	Aircraft concept and key technologies integration and impact assessment
Call#3 - 15 M€ Up to 2 projects expected	Design studies of the aircraft concepts introduced in the CAJU SRIA, demonstrating a minimum -30% reduction in the CO2 emissions. The topic covers the integration and co-ordination of CAJU key technology projects into a comprehensive aircraft concept, demonstrating the aircraft performance, emissions and maturity. The aircraft will demonstrate a TRL enabling product launch decision, which is considered as a TRL6 for all the critical aircraft technologies.
Total Call#3: 15 M€	
Ultra-Efficient Regional Aircraft (REG)	
Topic ID / Funding	Topic Title / Abstract
HORIZON-JU-CLEAN-AVIATION-2025-03-REG-01	Demonstration of a Hybrid-Electric Propulsion System for Regional aircraft, including Pylon and Nacelle Integration and modification
Call#3 – 70 M€ Up to 1 project expected	Development and demonstration of a fully integrated hybrid-electric propulsion concept (thermal engine, electric motor and associated systems, propeller), including nacelle and pylon for integration on a regional aircraft flight-test demonstrator. The topic covers integrated ground demonstration to TRL5 and Flight Test Readiness for a TRL6 demonstration in Clean Aviation Phase 2.
HORIZON-JU-CLEAN-AVIATION- 2025-03-REG-02	Demonstration of On-board Systems relevant for hybridization of Regional aircraft
Call#3 - 40 M€ Up to 1 project expected	Development and demonstration of the on-board systems required for a hybrid-electric in-flight demonstration: electrical power generation and distribution system, thermal management system, and energy/power management system, including integration with a battery storage system. The topic covers ground demonstrations to TRL5 (including pre-integration), and flight test readiness for a TRL6 demonstration in Clean Aviation Phase 2.
HORIZON-JU-CLEAN-AVIATION- 2025-03-REG-03	Flight Test Demonstration of Hybrid-Electric Propulsion for Regional aircraft
Call#3 – 35 M€ Up to 1 project expected	Aircraft integration of the hybrid-electric propulsive system, the associated nacelle & pylon, on-board systems, battery system, all needed adaptations of the airframe for a hybrid-electric Flight-Test Demonstration based on battery electrical energy storage. The topic covers FTD platform adaptations, ground testing needed to achieve Permit to Fly, and the execution of Flight Tests for TRL6 demonstration.
Total Call#3: 145M€	
Short and Medium Range Aircraft (SMR)	
Topic ID / Funding	Topic Title / Abstract
HORIZON-JU-CLEAN-AVIATION- 2025-03-SMR-01	Ground Test Demonstration and Preparation of Flight Test of an Ultra High Bypass Ratio Ducted Geared Turbofan Engine for SMR Aircraft
Call#3 – 70 M€ Up to 1 project expected	Design, development, manufacturing and ground test demonstration of an Ultra High Bypass Ratio (UHBR) ducted geared turbofan engine, including advanced core engine and combustion technologies, advanced thermodynamic (variable) cycle; and hybridisation technologies targeting ultra-efficient propulsion systems for SMR aircraft, with a fuel burn reduction of minimum 20% at aircraft level compared to 2020 state-of-the-art. TRL 5 at ducted geared engine architecture system level from ground test demonstration at project completion.
HORIZON-JU-CLEAN-AVIATION- 2025-03-SMR-02	Flight Test Demonstration of an Unducted Engine Architecture for SMR Aircraft

Call#3 – 100 M€ Up to 1 project expected	Flight test demonstration of an installed Open Fan engine architecture at TRL6 to demonstrate a -20% of CO2 reduction at aircraft level and demonstration up to TRL 5 of enhanced performance technologies and advanced modelling capabilities for further efficiency and fuel burn improvements.
HORIZON-JU-CLEAN-AVIATION- 2025-03-SMR-03	Ground Test Demonstration up to TRL5 of On-Board NPE Systems Architecture for SMR Aircraft
Call#3 – 35 M€ Up to 1 project expected	Development and demonstration of a Non-Propulsive Energy (NPE) system architecture and components for SMR aircraft through validation of the ground demonstrator of optimized electrical energy provision system at TRL5, supported by the technology maturation of the most significant energy consumers such as electric engine start, eECS, Air supply and cabin heating, EIPS, and Electric Actuation matured to TRL5 via ground tests, to be ground tested in real operating conditions.
Total Call#3: 205 M€	
Fast-Track Activities (FTA)	
Topic ID / Funding	Topic Title / Abstract
HORIZON-JU-CLEAN-AVIATION-2025-03-FTA-01	Design and Integration of a High-Performance Battery System on a Hybrid-Electric Regional aircraft
Call#3 – 5 M€ Up to 1 project expected	Design and demonstration of a high gravimetric energy density battery system (comprising cells, battery management system, housing), the thermal management concept, and interfaces to relevant aircraft systems for hybrid-electric regional application. The topic covers ground demonstrations to TRL4, paving the way for further research to reach TRL5 and TRL6 demonstrations.
HORIZON-JU-CLEAN-AVIATION- 2025-03-FTA-02	Crashworthiness of fuselage integrated LH2 storage solutions
Call#3 – 5 M€ Up to 1 project expected	Develop and validate the crashworthiness of a fuselage integrated LH2 storage system (LH2 tank) through the development of transient numerical models for the complete system and validation through a complete barrel section ground test demonstration. Identification of the certification route challenges and development of adequate means of compliance to reach a TRL5 by the end of the project, supporting the development and the demonstration of safe operation of the future HPA aircraft.
HORIZON-JU-CLEAN-AVIATION- 2025-03-FTA-03	Advanced Concepts for Reliable Power Electronics Conversion and Distribution in Aviation
Call#3 – 5 M€ Up to 1 projects expected	Development of advanced concepts and technologies for auxiliary functions of the HVDC energy conversion, including the development and validation up to TRL4 of physics-based lifetime and reliability models for the latest semiconductor materials (such as wide-bandgap), together with new inductor and insulation designs. Demonstration up to TRL5 of an advanced Power Converter with functional integration of AFD (Arc Fault Detection), active EMI (Electro-Magnetic Interference) Filtering & Health Monitoring (HM).
Total Call#3: 15M€	