

HORIZON EUROPE - CLUSTER 5

Work programmes 2026 - 2027

Climate, energy & mobility

Uroš FINK – uros.fink@gov.si

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2026		
Opening: 19 Dec 2025				
Deadline(s): 31 Mar 2026				
Cross-sectoral solutions for the climate transition				
HORIZON-CL5-2026-03-D2-01: Producing battery-grade materials for electrodes through sustainable processing and refining of raw materials or developing bio-based materials (BATT4EU Partnership)	RIA	30.00	Around 7.50	4
HORIZON-CL5-2026-03-D2-02: Development of direct recycling processes (BATT4EU Partnership)	RIA	15.00	Around 5.00	3
Sustainable, secure and competitive energy supply				
HORIZON-CL5-2026-03-D3-13: Long-lifetime and optimised use of materials in recyclable Ag and In-free Si PV modules (EUPI-PV Partnership)	RIA	15.00	Around 5.00	3
HORIZON-CL5-2026-03-D3-19: Grid-forming capabilities for more resilient and RES-based electricity grids	IA	20.00	Around 10.00	2
HORIZON-CL5-2026-03-D3-20: Affordable and sustainable primary equipment for Future-Ready multi-terminal HVDC Systems	IA	24.00	4.00 to 12.00	3
HORIZON-CL5-2026-03-D3-22: Novel solutions for off-grid storage of renewable energy for critical infrastructures	RIA	12.00	Around 4.00	3
HORIZON-CL5-2026-03-D3-30: Pre-commercial appraisal for CO2 aquifer storage	IA	25.00	Around 5.00	5
Overall indicative budget		209.00		

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2026		

Opening: 19 Dec 2025
Deadline(s): 31 Mar 2026 (First Stage), 20 Oct 2026 (Second Stage)

Sustainable, secure and competitive energy supply

HORIZON-CL5-2026-04-Two-Stage-D3-02: Next generation of renewable energy technologies	RIA	25.00	Around 3.00	9
Overall indicative budget		25.00		

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2026		
Opening: 18 Dec 2025 Deadline(s): 14 Apr 2026				
Cross-sectoral solutions for the climate transition				
HORIZON-CL5-2026-05-D2-03: Integrated Production and Product Development for Next-Generation Lithium-based Batteries for Mobility (BATT4EU and Made in Europe Partnerships)	IA	105.00	Around 35.00	3
Safe, Resilient Transport and Smart Mobility services for passengers and goods				
HORIZON-CL5-2026-05-D6-02: Geopolitical competition and socioeconomic resilience in CCAM: an innovation and policy roadmap for EU leadership	RIA	6.00	Around 3.00	2
HORIZON-CL5-2026-05-D6-06: Increasing competitiveness and resilience of multimodal freight transport and logistics for competitive supply chains	IA	21.00	Around 7.00	3
HORIZON-CL5-2026-05-D6-07: Supporting sustainable and smart urban mobility in Europe (CIVITAS)	CSA	4.00	Around 4.00	1
HORIZON-CL5-2026-05-D6-09: Road Safety and resilience of rural areas	IA	13.00	Around 6.50	2
HORIZON-CL5-2026-05-D6-10: Enhanced resilience in multimodal passenger transport through digital technologies and generative and discriminative AI	IA	10.00	Around 5.00	2
Overall indicative budget		159.00		

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2026		
Opening: 18 Dec 2025 Deadline(s): 14 Apr 2026 (First Stage), 08 Oct 2026 (Second Stage)				
Clean and competitive solutions for all transport modes				
HORIZON-CL5-2026-06-Two-Stage-D5-07: AI-assisted digital aircraft design, manufacturing and MRO, towards a competitive aviation	RIA	10.00	Around 5.00	2
HORIZON-CL5-2026-06-Two-Stage-D5-10: Disruptive Technologies and Innovative Concepts for Energy Saving Onboard of long-distance ships (ZEWTP Partnership)	RIA	15.00	Around 5.00	3
HORIZON-CL5-2026-06-Two-Stage-D5-20: Non-exhaust emissions in road and railway transport	RIA	7.00	3.50 to 4.00	2
Overall indicative budget		32.00		

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2026		
Opening: 18 Dec 2025				
Deadline(s): 15 Apr 2026				
Climate sciences and responses for the transformation towards climate neutrality				
HORIZON-CL5-2026-07-D1-01: Advancing understanding, modelling and prediction of extreme events in a changing climate	RIA	21.00	6.00 to 7.00	3
HORIZON-CL5-2026-07-D1-02: Advancing European climate risk assessments	RIA	20.00	4.00 to 5.00	4
HORIZON-CL5-2026-07-D1-03: Economics of climate change and cost of inaction	RIA	20.00	4.00 to 5.00	4
HORIZON-CL5-2026-07-D1-04: Fighting disinformation and effectively communicating on climate change	RIA	15.00	4.00 to 5.00	3
HORIZON-CL5-2026-07-D1-05: Improving climate and weather models for Africa	RIA	24.00	7.00 to 8.00	3
Overall indicative budget		100.00		

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2026		
Opening: 18 Dec 2025				
Deadline(s): 15 Apr 2026 (First Stage), 08 Oct 2026 (Second Stage)				
Climate sciences and responses for the transformation towards climate neutrality				
HORIZON-CL5-2026-08-Two-Stage-D1-06: Closing knowledge gaps on Earth system science in support of global and regional assessments and climate policy	RIA	45.00	5.00 to 9.00	7
Overall indicative budget		45.00		

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2026		
Opening: 05 May 2026				
Deadline(s): 10 Sep 2026				
Cross-sectoral solutions for the climate transition				
HORIZON-CL5-2026-09-D2-04: Coordinated topic with India on recycling of EV batteries	IA	10.00	Around 10.00	1
CID-1-2026: R&I in Support of the Clean Industrial Deal: Clean Technologies for Climate Action	IA	150.00	15.00 to 25.00	8
Sustainable, secure and competitive energy supply				
HORIZON-CL5-2026-09-D3-03: Strategic Energy Technology (SET) Plan wind energy research and innovation joint programme	IA	95.00	Around 95.00	1
HORIZON-CL5-2026-09-D3-04: De-risking renewable fuel technologies through transnational pre-commercial procurement of renewable fuel industrial value chains	PCP	40.00	Around 40.00	1
HORIZON-CL5-2026-09-D3-06: Concentrated solar thermal systems for decarbonising industrial processes	IA	12.00	Around 6.00	2
HORIZON-CL5-2026-09-D3-07: Resource assessment for deep sedimentary and basement reservoirs	RIA	20.00	Around 5.00	4
HORIZON-CL5-2026-09-D3-08: Inducement Prize - Lithium production from geothermal plants in Europe	CSA	5.00	Around 5.00	1
HORIZON-CL5-2026-09-D3-15: Improved system design for innovative PV applications (EUPI-PV Partnership)	IA	30.00	Around 7.50	4
Efficient, sustainable and inclusive energy use				
HORIZON-CL5-2026-09-D4-01: Researching the technical, social & economic factors impacting the energy performance of Smart Buildings (Built4People Partnership)	RIA	20.00	Around 5.00	4
HORIZON-CL5-2026-09-D4-02: Low disturbance prefabrication approaches for deep renovation of multi-storey buildings	IA	26.00	Around 6.50	4
HORIZON-CL5-2026-09-D4-03: Advanced data platforms to integrate whole life carbon in building information tools, assessments, and certification (Built4People Partnership)	IA	16.50	Around 5.50	3
HORIZON-CL5-2026-09-D4-04: Validating policies and business models for affordable and sustainable housing (Built4People Partnership)	RIA	15.00	Around 5.00	3
Overall indicative budget		503.50		

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2026		
Opening: 04 Jun 2026 Deadline(s): 08 Oct 2026				
Clean and competitive solutions for all transport modes				
HORIZON-CL5-2026-10-D5-01: Large Scale Demonstration of Heavy-Duty Battery Electric Vehicles (HD BEV) towards long-haul logistics operations	IA	68.00	Around 34.00	2
HORIZON-CL5-2026-10-D5-02: Energy-efficient software-defined EVs	IA	16.00	Around 16.00	1
HORIZON-CL5-2026-10-D5-11: Scalability of Solid Oxide Fuel Cells for waterborne transport (topic in collaboration between the Zero-Emission Waterborne partnership and the Clean Hydrogen Joint Undertaking)	RIA	16.00	Around 8.00	2
HORIZON-CL5-2026-10-D5-12: Shipyards of the future (ZEWT Partnership)	IA	21.00	Around 10.50	2
HORIZON-CL5-2026-10-D5-13: Safety of renewable low and zero-carbon waterborne fuels in port areas: risk assessment, regulatory framework, and guidelines for safe bunkering, handling and storage (ZEWT partnership)	CSA	2.00	Around 2.00	1
HORIZON-CL5-2026-10-D5-14: Ports of the future (ZEWT Partnership)	IA	21.00	Around 10.50	2
Safe, Resilient Transport and Smart Mobility services for passengers and goods				
HORIZON-CL5-2026-10-D6-01: Flagship-pilot: large-scale demonstrations of CCAM	IA	100.00	Around 100.00	1
HORIZON-CL5-2026-10-D6-03: Generative AI for smarter CCAM: enhancing perception, decision-making, and validation	RIA	14.00	Around 7.00	2
Overall indicative budget		258.00		

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2027		
Opening: 01 Oct 2026				
Deadline(s): 04 Mar 2027				
Climate sciences and responses for the transformation towards climate neutrality				
HORIZON-CL5-2027-01-D1-07: Next generation climate monitoring and related capabilities	RIA	15.00	Around 5.00	3
HORIZON-CL5-2027-01-D1-08: Paleoclimate science for a better understanding of Earth system dynamics	RIA	14.00	Around 7.00	2
HORIZON-CL5-2027-01-D1-09: Assessing the performance of policy instruments to inform climate change mitigation action	RIA	9.00	Around 3.00	3
HORIZON-CL5-2027-01-D1-10: Understanding and avoiding maladaptation to climate change	RIA	18.00	5.00 to 6.00	3
HORIZON-CL5-2027-01-D1-11: Africa-EU CO-FUND action on climate	COFUND	15.00	Around 15.00	1
Overall indicative budget		71.00		

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2027		
Opening: 01 Oct 2026 Deadline(s): 04 Mar 2027 (First Stage), 14 Oct 2027 (Second Stage)				
Climate sciences and responses for the transformation towards climate neutrality				
HORIZON-CL5-2027-02-Two-Stage-D1-12: Better understanding and attribution of land and ocean carbon sources and sinks	RIA	25.00	Around 5.00	5
HORIZON-CL5-2027-02-Two-Stage-D1-13: Next generation scenarios for informing climate and sustainability transitions	RIA	30.00	4.00 to 5.00	6
Overall indicative budget		55.00		

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2027		
Opening: 03 Dec 2026				
Deadline(s): 31 Mar 2027				
Cross-sectoral solutions for the climate transition				
HORIZON-CL5-2027-03-D2-05: Improvement of Adaptability, Flexibility and Efficiency of Existing Recycling Processes (BATT4EU Partnership)	IA	20.00	Around 10.00	2
HORIZON-CL5-2027-03-D2-06: Sustainable and Competitive Cell Production Techniques for Lithium-ion And Sodium-ion Batteries (BATT4EU Partnership)	IA	40.00	Around 20.00	2
Sustainable, secure and competitive energy supply				
HORIZON-CL5-2027-03-D3-09: Co-funding Strategic Energy Technology (SET) Plan renewable fuel value chains at EU, national, regional, and local level	COFUND	30.00	Around 30.00	1
HORIZON-CL5-2027-03-D3-10: Innovative technologies and solutions to improve wave and tidal energy systems	IA	45.00	Around 45.00	1
HORIZON-CL5-2027-03-D3-11: Renewable Energy Valleys in Africa to increase energy security and energy access in Africa	IA	10.00	Around 5.00	2
HORIZON-CL5-2027-03-D3-16: Production technologies for solar photovoltaics beyond the state-of-the-art (EUPI-PV Partnership)	IA	39.00	Around 13.00	3
HORIZON-CL5-2027-03-D3-25: Large scale operational validation and upscaling of state-of-the-art (Generative) AI tools and models powering a next generation digital energy system	IA	26.00	Around 13.00	2
HORIZON-CL5-2027-03-D3-31: Advancements in Direct Air Capture	IA	18.00	Around 9.00	2
HORIZON-CL5-2027-03-D3-32: Support to the implementation of an EU policy framework for CO2 transport and storage infrastructure	CSA	5.00	Around 5.00	1
Overall indicative budget		233.00		

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2027		
Opening: 15 Dec 2026				
Deadline(s): 14 Apr 2027				
Clean and competitive solutions for all transport modes				
HORIZON-CL5-2027-05-D5-03: Data-driven circular economy for e-mobility ecosystem	IA	31.00	5.00 to 7.00	5
HORIZON-CL5-2027-05-D5-04: Demonstration of zero emission coaches and buses in long distance operations	IA	15.00	Around 15.00	1
HORIZON-CL5-2027-05-D5-05: Higher Voltage, Megawatt Charging System compatible, modular powertrain for Heavy Duty Vehicles (HDV)	IA	16.00	Around 8.00	2
HORIZON-CL5-2027-05-D5-06: Fire prevention and mitigation for EVs in confined areas	IA	8.00	Around 8.00	1
HORIZON-CL5-2027-05-D5-08: Sustainable aircraft circular design and additive manufacturing, towards a climate neutral aviation	RIA	5.00	Around 2.50	2
HORIZON-CL5-2027-05-D5-21: Assessing the effect of airport operations on air quality and noise in nearby communities	RIA	7.00	Around 3.50	2
Safe, Resilient Transport and Smart Mobility services for passengers and goods				
HORIZON-CL5-2027-05-D6-04: Holistic solutions for CCAM integration in critical scenarios	RIA	8.00	Around 4.00	2
HORIZON-CL5-2027-05-D6-05: European CCAM knowledge hub and tools for safe and scalable deployment	CSA	4.00	Around 4.00	1
HORIZON-CL5-2027-05-D6-08: Enhancing Mobility for All: affordable, reliable, and accessible multimodal transport for inclusive rural and urban connectivity – Societal Readiness pilot	IA	21.00	Around 7.00	3
HORIZON-CL5-2027-05-D6-11: Enhancing Resilience and Accuracy in Positioning, Navigation, and Timing (PNT) Systems and e-conspicuity solutions	IA	5.00	Around 5.00	1
HORIZON-CL5-2027-05-D6-12: Support for dissemination events in the field of Transport Research	CSA	2.00	Around 2.00	1
Overall indicative budget		122.00		

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2027		
Opening: 15 Dec 2026				
Deadline(s): 14 Apr 2027, 07 Oct 2027				
Cross-sectoral solutions for the climate transition				
HORIZON-CL5-2027-06-Two-Stage-D2-07: Novel approaches towards next-generation battery concepts, leveraging the enabling role of innovative advanced materials (BATT4EU and IAM4EU Partnerships)	RIA	50.00	Around 5.00	10
Clean and competitive solutions for all transport modes				
HORIZON-CL5-2027-06-Two-Stage-D5-09: Noise reduction breakthroughs for new ultraefficient aircraft	RIA	5.00	Around 2.50	2
Overall indicative budget		55.00		

Topics	Type of Action	Budgets (EUR million)		Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
			2027		
Opening: 07 May 2026					
Deadline(s): 09 Sep 2027					
Cross-sectoral solutions for the climate transition					
HORIZON-CL5-2027-07-D2-08: Demonstration for Long-duration Battery Energy Storage Systems (BATT4EU Partnership)	IA		20.00	Around 10.00	2
CID-2-2027: R&I in Support of the Clean Industrial Deal: Clean Technologies for Climate Action	IA			15.00 to 25.00	8
Sustainable, secure and competitive energy supply					
HORIZON-CL5-2027-07-D3-12: Demonstration of hydropower technologies for efficient and forward-looking refurbishment of existing hydropower plants	IA		18.00	Around 9.00	2
HORIZON-CL5-2027-07-D3-17: Industrial scale up and circularity pathway for IPV technologies (EUPI-PV Partnership)	IA		36.00	Around 12.00	3
HORIZON-CL5-2027-07-D3-18: PV based electrification of the economy: Designing & optimising PV systems supporting industrial electrification and promoting participation in electricity markets (EUPI-PV Partnership)	IA		18.00	Around 6.00	3
HORIZON-CL5-2027-07-D3-27: Advanced Distribution Management Systems (ADSM) for more efficient and flexible distribution grids	IA		30.00	Around 10.00	3
HORIZON-CL5-2027-07-D3-29: Community of practice - Data-Driven Decision-Making in Energy	CSA		6.00	Around 6.00	1
HORIZON-CL5-2027-07-D3-33: Delivery of industrial CCUS clusters – Societal Readiness pilot	IA		30.00	Around 10.00	3
Efficient, sustainable and inclusive energy use					
HORIZON-CL5-2027-07-D4-05: On-site robotic and automated techniques for building renovation and new construction	IA		26.00	Around 6.50	4
HORIZON-CL5-2027-07-D4-06: Thermal energy optimisation and waste heat recovery of high energy demand IT rooms in buildings or small edge data centres	IA		16.50	Around 5.50	3
HORIZON-CL5-2027-07-D4-07: Integrating circularity in LCA-based modelling frameworks for renovation of buildings (Built4People Partnership)	IA		26.00	Around 6.50	4
HORIZON-CL5-2027-07-D4-09: Demonstration of industrial excess/waste heat conversion to mechanical or electrical power	IA		14.00	Around 7.00	2
Overall indicative budget			294.50		

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Indicative number of projects expected to be funded
		2027		
Opening: 03 Jun 2027 Deadline(s): 07 Oct 2027				
Clean and competitive solutions for all transport modes				
HORIZON-CL5-2027-08-D5-15: Prospective evaluation of nuclear power potential for shipping (ZEWT Partnership)	CSA	2.00	Around 2.00	1
HORIZON-CL5-2027-08-D5-16: Autonomous vessels in short sea shipping and inland waterways	IA	15.00	Around 7.50	2
HORIZON-CL5-2027-08-D5-17: Innovative Solutions for mitigating the environmental impact of waterborne transport in marine and aquatic Ecosystems (ZEWT Partnership)	RIA	14.00	Around 7.00	2
HORIZON-CL5-2027-08-D5-18: Enhanced electric operation and battery durability (ZEWT Partnership)	IA	20.00	Around 10.00	2
HORIZON-CL5-2027-08-D5-19: Onboard renewable energy solutions and energy saving measures to reduce the fuel consumption of ships by at least 55% (ZEWT Partnership)	RIA	15.00	Around 7.50	2
Overall indicative budget		66.00		

Some advice to potential applicants...

- Relatively large number of partners
- Diverse consortium of partners
- Partners should compliment each other
- HORIZON projects are demanding. Form consortiums that are capable of taking on such projects
- Get into contact with national contact points. We can advise you or put you into contact with someone who can