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CeS-UTCN - Excelența Științifică și Specializare Inteligentă prin crearea unui Centru Suport dedicat facilitării accesului entităților publice și private la proiecte/competiții CD

Proiect cofinanțat din Fondul European de Dezvoltare Regională prin Programul Operațional Competitivitate



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BULETIN INFORMATIV NR. 21

Programul Orizont Europa

Apeluri deschise în anul 2022 pentru Clusterul 5 – Climate, Energy and Mobility

CLUSTER 5 – CLIMATE, ENERGY AND MOBILITY

Destination – Climate sciences and responses for the transformation towards climate neutrality

- *Call - Climate sciences and responses - HORIZON-CL5-2022-D1-01-two-stage*

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded
		2022		
Opening: 12 Oct 2021				
Deadline(s): 10 Feb 2022 (First Stage), 27 Sep 2022 (Second Stage)				
Carbon Dioxide Removal (CDR) approaches: HORIZON-CL5-2022-D1-01-01-two-stage	RIA	21.00	Around 7.00	3
Socio-economic risks of climate change in Europe: HORIZON-CL5-2022-D1-01-02-two-stage	RIA	10.00	Around 5.00	2
Social science for land-use strategies in the context of climate change and biodiversity challenges: HORIZON-CL5-2022-D1-01-03-two-stage	RIA	20.00	6.00 to 7.00	3
Overall indicative budget		51.00		

- *Call - Climate sciences and responses - HORIZON-CL5-2022-D1-02*

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded
		2022		
Opening: 12 Oct 2021				
Deadline(s): 10 Feb 2022				
Verification and reconciliation of estimates of climate forcers: HORIZON-CL5-2022-D1-02-01	RIA	15.00	Around 5.00	3
Development of high-resolution Earth system models for global and regional climate change projections: HORIZON-CL5-2022-D1-02-02	RIA	20.00	Around 10.00	2
Improvement of Integrated Assessment Models in support of climate policies: HORIZON-CL5-2022-D1-02-03	RIA	15.00	Around 5.00	3

Supporting the formulation of adaptation strategies through improved climate predictions in Europe and beyond: HORIZON-CL5-2022-D1-02-04	RIA	20.00	Around 10.00	2
Let nature help do the job: Rewilding landscapes for carbon sequestration, climate adaptation and biodiversity support: HORIZON-CL5-2022-D1-02-05	RIA	17.00	8.00 to 9.00	2
Overall indicative budget		87.00		

Destination – Cross-sectoral solutions for the climate transition

- *Call - Cross-sectoral solutions for the climate transition - HORIZON-CL5-2022-D2-01*

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded
		2022		
Opening: 28 Apr 2022 Deadline(s): 06 Sep 2022				
Sustainable processing and refining of battery grade graphite (Batteries Partnership): HORIZON-CL5-2022-D2-01-01	IA	10.00	Around 5.00	2
Interface and electron monitoring for the engineering of new and emerging battery technologies (Batteries Partnership): HORIZON-CL5-2022-D2-01-02	RIA	10.00	Around 5.00	2
Furthering the development of a materials acceleration platform for sustainable batteries (combining AI, big data, autonomous synthesis robotics, high throughput testing) (Batteries Partnership): HORIZON-CL5-2022-D2-01-03	RIA	20.00	Around 20.00	1
Towards creating an integrated manufacturing value chain in Europe: from machinery development to plant and site integrated design (Batteries Partnership): HORIZON-CL5-2022-D2-01-04	IA	15.00	7.00 to 8.00	2
Next generation technologies for High-performance and safe-by-design battery systems for transport and mobile applications (Batteries Partnership): HORIZON-CL5-2022-D2-01-05	RIA	15.00	Around 5.00	2
Embedding smart functionalities into battery cells (embedding sensing and self-healing functionalities to monitor and self-repair	RIA	15.00	Around 5.00	3

battery cells) (Batteries Partnership): HORIZON-CL5-2022-D2-01-06				
Digitalization of battery testing, from cell to system level, including lifetime assessment (Batteries Partnership): HORIZON-CL5-2022-D2-01-07	RIA	15.00	Around 5.00	3
Coordination of large-scale initiative on future battery technologies (Batteries Partnership): HORIZON-CL5-2022-D2-01-08	CSA	3.00	Around 3.00	1
Physics and data-based battery management for optimized battery utilization (Batteries Partnership): HORIZON-CL5-2022-D2-01-09	RIA	15.00	Around 5.00	3
Streamlined collection and reversed logistics, fully automated, safe and cost-efficient sorting, dismantling and second use before recycling (Batteries Partnership): HORIZON-CL5-2022-D2-01-10	RIA	15.00	Around 5.00	3
CIVITAS 2030 – Coordination and support for EU funded urban mobility innovation: HORIZON-CL5-2022-D2-01-11	CSA	5.00	4.00 to 5.00	1
Overall indicative budget		138.00		

Destination – Sustainable, secure and competitive energy supply

- *Call - Sustainable, secure and competitive energy supply - HORIZON-CL5-2022-D3-01*

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded
		2022		
Opening: 14 Oct 2021 Deadline(s): 26 Apr 2022				
Demonstration of cost-effective advanced biofuel technologies utilizing existing industrial plants: HORIZON-CL5-2022-D3-01-01	IA	20.00	Around 10.00	1
Demonstration of innovative materials, supply cycles, recycling technologies to increase the overall circularity of wind energy technology and to reduce the primary use of critical raw materials: HORIZON-CL5-2022-D3-01-02	IA	40.00	Around 13.00	3
Advanced manufacturing of Integrated PV: HORIZON-CL5-2022-D3-01-03	IA	32.00	Around 16.00	4
Demonstrate the use of high temperature geothermal reservoirs to provide energy storage	IA	20.00	Around 20.00	4

for the energy system: HORIZON-CL5-2022-D3-01-04				
Demonstration of innovative plug-and play solutions for system management and renewables storage in off-grid applications: HORIZON-CL5-2022-D3-01-05	IA	10.00	Around 10.00	1
Novel Agro-Photovoltaic systems: HORIZON-CL5-2022-D3-01-06	IA	10.00	Around 5.00	4
Demonstration of innovative rotor, blades and control systems for tidal energy devices: HORIZON-CL5-2022-D3-01-07	IA	10.00	Around 10.00	2
Supporting the action of consumers in the energy market and guide them to act as prosumers, communities and other active forms of active participation in the energy activities: HORIZON-CL5-2022-D3-01-08	IA	18.00	5.00 to 6.00	1
Real Time Demonstrator of Multi-Vendor Multiterminal VSC-HVDC with Grid Forming Capability (in support of the offshore strategy): HORIZON-CL5-2022-D3-01-09	IA	55.00	Around 55.00	3
Interoperable solutions for flexibility services using distributed energy storage: HORIZON-CL5-2022-D3-01-10	IA	7.00	2.00 to 3.00	4
Demonstration of innovative forms of storage and their successful operation and integration into innovative energy systems and grid architectures: HORIZON-CL5-2022-D3-01-11	IA	30.00	7.00 to 8.00	4
Replicable solutions for a cross sector compliant energy ecosystem: HORIZON-CL5-2022-D3-01-12	IA	35.00	8.00 to 9.00	1
Energy system modelling, optimization and planning tools: HORIZON-CL5-2022-D3-01-13	RIA	6.00	Around 6.00	4
Thermal energy storage solutions: HORIZON-CL5-2022-D3-01-14	IA	30.00	7.00 to 8.00	2
Decarbonizing industry with CCUS: HORIZON-CL5-2022-D3-01-15	IA	58.00	Around 29.00	
Overall indicative budget		381.00		

- *Call - Sustainable, secure and competitive energy supply - HORIZON-CL5-2022-D3-02*

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded
		2022		
Opening: 26 May 2022 Deadline(s): 27 Oct 2022				
Digital solutions for defining synergies in international renewable energy value chains: HORIZON-CL5-2022-D3-02-01	RIA	9.00	Around 3.00	3
AU-EU Energy System Modelling: HORIZON-CL5-2022-D3-02-02	RIA	5.00	Around 2.50	2
Innovative renewable energy carrier production for heating from renewable energies: HORIZON-CL5-2022-D3-02-03	IA	10.00	Around 10.00	1
Technological interfaces between solar fuel technologies and other renewables: HORIZON-CL5-2022-D3-02-04	RIA	10.00	3.00 to 5.00	2
Renewable energy carriers from variable renewable electricity surplus and carbon emissions from energy consuming sectors: HORIZON-CL5-2022-D3-02-05	IA	20.00	Around 10.00	2
Direct renewable energy integration into process energy demands of the chemical industry: HORIZON-CL5-2022-D3-02-06	RIA	10.00	3.00 to 5.00	2
Renewable energy incorporation in agriculture and forestry: HORIZON-CL5-2022-D3-02-07	IA	15.00	Around 7.50	2
Demonstration of complete value chains for advanced biofuel and non-biological renewable fuel production: HORIZON-CL5-2022-D3-02-08	IA	20.00	Around 10.00	2
Overall indicative budget		99.00		

- *pCall - Sustainable, secure and competitive energy supply - HORIZON-CL5-2022-D3-03*

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded
		2022		
Opening: 06 Sep 2022 Deadline(s): 10 Jan 2023				
Innovative components and/or sub-systems for CSP plants and/or concentrating solar thermal installations: HORIZON-CL5-2022-D3-03-01	IA	16.50	Around 5.50	3
Best international practice for scaling up sustainable biofuels: HORIZON-CL5-2022-D3-03-02	RIA	9.00	Around 3.00	3
Efficient and circular artificial photosynthesis: HORIZON-CL5-2022-D3-03-03	RIA	10.00	3.00 to 5.00	2
Integrated wind farm control: HORIZON-CL5-2022-D3-03-04	RIA	18.00	Around 6.00	3
Novel Thin Film (TF) technologies targeting high efficiencies: HORIZON-CL5-2022-D3-03-05	RIA	20.00	Around 5.00	4
Efficient and low-emission technologies for industrial use of combustion and gasification systems from low-value biogenic residues and wastes: HORIZON-CL5-2022-D3-03-06	RIA	10.00	3.00 to 5.00	2
Development of algal and renewable fuels of nonbiological origin: HORIZON-CL5-2022-D3-03-07	RIA	15.00	Around 5.00	3
Development of digital solutions for existing hydropower operation and maintenance: HORIZON-CL5-2022-D3-03-08	RIA	9.00	3.00 to 4.50	3
Recycling end of life PV modules: HORIZON-CL5-2022-D3-03-09	IA	20.00	6.00 to 7.00	3
Overall indicative budget		127.50		

Destination – Efficient, sustainable and inclusive energy use

- *Call - Efficient, sustainable and inclusive energy use - HORIZON-CL5-2022-D4-01*

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded
		2022		
Opening: 28 Apr 2022 Deadline(s): 06 Sep 2022				
Demand response in energy-efficient residential buildings: HORIZON-CL5-2022-D4-01-01	IA	12.00	4.00 to 6.00	2
Renewable-intensive, energy positive homes: HORIZON-CL5-2022-D4-01-02	IA	12.00	4.00 to 6.00	2
Smarter buildings for better energy performance: HORIZON-CL5-2022-D4-01-03	IA	12.00	4.00 to 6.00	2
Development and pilot demonstration of heat upgrade technologies with supply temperature in the range 150-250°C: HORIZON-CL5-2022-D4-01-04	RIA	10.00	3.00 to 5.00	2
Development of high temperature thermal storage for industrial applications: HORIZON-CL5-2022-D4-01-05	RIA	8.00	3.00 to 4.00	2
Overall indicative budget		54.00		

- *Call - Efficient, sustainable and inclusive energy use - HORIZON-CL5-2022-D4-02*

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded
		2022		
Opening: 06 Sep 2022 Deadline(s): 24 Jan 2023				
Designs, materials and solutions to improve resilience, preparedness & responsiveness of the built environment for climate adaptation (Built4People): HORIZON-CL5-2022-D4-02-01	IA	15.00	5.00 to 7.50	2
Solutions for the sustainable, resilient, inclusive and accessible regeneration of neighborhoods enabling low carbon footprint lifestyles and businesses (Built4People): HORIZON-CL5-2022-D4-02-02	IA	15.00	5.00 to 7.50	2

Sustainable and resource-efficient solutions for an open, accessible, inclusive, resilient and low-emission cultural heritage: prevention, monitoring, management, maintenance, and renovation (Built4People): HORIZON-CL5-2022-D4-02-03	RIA	20.00	4.00 to 5.00	4
Smart-grid ready and smart-network ready buildings, acting as active utility nodes (Built4People): HORIZON-CL5-2022-D4-02-04	IA	18.00	6.00 to 9.00	2
More sustainable buildings with reduced embodied energy / carbon, high life-cycle performance and reduced life-cycle costs (Built4People): HORIZON-CL5-2022-D4-02-05	IA	18.00 1	6.00 to 9.50	2
Overall indicative budget		86.00		

Destination – Clean and competitive solutions for all transport modes

- *Call - Clean and competitive solutions for all transport modes - HORIZON-CL5-2022-D5-01*

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded
		2022		
Opening: 02 Dec 2021 Deadline(s): 26 Apr 2022				
Exploiting electrical energy storage systems and better optimizing large battery electric power within fully battery electric and hybrid ships (ZEWT Partnership): HORIZON-CL5-2022-D5-01-01	IA	16.00	Around 8.00	2
Innovative energy storage systems on-board vessels (ZEWT Partnership): HORIZON-CL5-2022-D5-01-02	RIA	15.00	Around 5.00	3
Exploiting renewable energy for shipping, in particular focusing on the potential of wind energy (ZEWT Partnership): HORIZON-CL5-2022-D5-01-03	RIA	18.00	Around 9.00	2
Transformation of the existing fleet towards greener operations through retrofitting (ZEWT Partnership): HORIZON-CL5-2022-D5-01-04	IA	25.00	Around 5.00	5
Seamless safe logistics through an autonomous waterborne freight feeder loop service: HORIZON-CL5-2022-D5-01-05	RIA	15.00	Around 15.00	1

Computational tools for shipbuilding: HORIZON-CL5-2022-D5-01-06	IA	7.00	Around 7.00	1
Prevent smog episodes in Europe: Air quality impact of engine-emitted volatile, semi volatile and secondary particles: HORIZON-CL5-2022-D5-01-07	RIA	7.00	2.50 to 3.00	3
Modular multi-powertrain zero-emission systems for HDV (BEV and FCEV) for efficient and economic operation (2ZERO): HORIZON-CL5-2022-D5-01-08	IA	58.00	15.00 to 20.00	3
Nextgen EV components: High efficiency and low-cost electric motors for circularity and low use of rare resources (2ZERO): HORIZON-CL5-2022-D5-01-09	RIA	20.00	3.00 to 6.00	4
New generation of full electric urban and peri-urban Bus Rapid Transit systems to strengthen climate-friendly mass transport (2ZERO): HORIZON-CL5-2022-D5-01-10	IA	25.00	20.00 to 25.00	1
Stimulating Road Transport research and innovation dissemination and implementation in Europe and around the World: HORIZON-CL5-2022-D5-01-11	CSA	2.00	Around 2.00	1
Towards a silent and ultra-low local air pollution aircraft: HORIZON-CL5-2022-D5-01-12	RIA	20.00	2.00 to 5.00	5
Digital aviation technologies for new aviation business models, services, emerging global threats and industrial competitiveness: HORIZON-CL5-2022-D5-01-13	RIA	20.00	2.00 to 5.00	5
European Aviation Research Policy in support to EU policies and initiatives: HORIZON-CL5-2022-D5-01-14	RIA	5.00	0.50 to 2.50	3
Overall indicative budget		253.00		

Destination – Safe, Resilient Transport and Smart Mobility services for passengers and goods

- *Call - Safe, Resilient Transport and Smart Mobility services for passengers and goods - HORIZON-CL5-2022-D6-01*

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded
		2022		
Opening: 14 Oct 2021 Deadline(s): 12 Jan 2022				
European demonstrators for integrated shared automated mobility solutions for people and goods (CCAM Partnership): HORIZON-CL5-2022-D6-01-01	IA	50.00	20.00 to 25.00	2
Reliable occupant protection technologies and HMI solutions to ensure the safety of highly automated vehicles (CCAM Partnership): HORIZON-CL5-2022-D6-01-02	RIA	8.00	6.00 to 8.00	1
Human behavioral model to assess the performance of CCAM solutions compared to human driven vehicles (CCAM Partnership): HORIZON-CL5-2022-D6-01-03	RIA	8.00	7.00 to 8.00	1
Integrate CCAM services in fleet and traffic management systems (CCAM Partnership): HORIZON-CL5-2022-D6-01-04	IA	10.00	4.00 to 5.00	2
Artificial Intelligence (AI): Explainable and trustworthy concepts, techniques and models for CCAM (CCAM Partnership): HORIZON-CL5-2022-D6-01-05	RIA	12.00	5.00 to 6.00	2
Predictive safety assessment framework and safer urban environment for vulnerable road users: HORIZON-CL5-2022-D6-01-06	RIA	13.00	4.00 to 4.33	3
More resilient aircraft and increased survivability: HORIZON-CL5-2022-D6-01-07	IA	9.00	4.00 to 8.00	1
Safer navigation and tackling containership fires: HORIZON-CL5-2022-D6-01-08	IA	12.00	3.50 to 6.00	2
Overall indicative budget		122.00		

- *Call - Safe, Resilient Transport and Smart Mobility services for passengers and goods - HORIZON-CL5-2022-D6-02*

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR million)	Number of projects expected to be funded
		2022		
Opening: 28 Apr 2022 Deadline(s): 06 Sep 2022				
Logistics networks integration and harmonization through operational connectivity to optimize freight flows and drive logistics to climate neutrality: HORIZON-CL5-2022-D6-02-01	IA	15.00	7.00 to 8.00	2
Urban logistics and planning: anticipating urban freight generation and demand including digitalization of urban freight: HORIZON-CL5-2022-D6-02-02	IA	15.00	7.00 to 8.00	2
Smart enforcement for resilient, sustainable and more efficient transport operations: HORIZON-CL5-2022-D6-02-03	RIA	8.00	Around 4.00	2
Accelerating the deployment of new and shared mobility services for the next decade: HORIZON-CL5-2022-D6-02-04	IA	20.00	8.00 to 10.00	2
Advanced multimodal network and traffic management for seamless door-to-door mobility of passengers and freight transport: HORIZON-CL5-2022-D6-02-05	RIA	15.00	4.00 to 5.00	3
Smart and efficient ways to construct, maintain and decommission with zero emissions from transport infrastructure: HORIZON-CL5-2022-D6-02-06	IA	10.00	Around 5.00	2
New concepts and approaches for resilient and green freight transport and logistics networks against disruptive events (including pandemics): HORIZON-CL5-2022-D6-02-07	RIA	8.00	Around 4.00	2
Overall indicative budget		91.00		

Link pentru Programul de Lucru 2021-2022 al Clusterului 5:

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2021-2022/wp-8-climate-energy-and-mobility_horizon-2021-2022_en.pdf

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