



MINISTÈRE
DE L'ENSEIGNEMENT
SUPÉRIEUR
ET DE LA RECHERCHE

*Liberté
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Le programme européen pour la recherche et l'innovation



Appels Cluster 5 : 2023-2024

Un approvisionnement énergétique durable, sûr et compétitif

Calendrier indicatif

Ouverture	Clôture	Code Appel	Titre Appel	Type	Budget par projet	Nbr attendu de projets	TRL (en fin de projet)
13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-01	Renewable Energy Valleys to increase energy security while accelerating the green transition in Europe	IA	20	2	7-8
13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-02	PV integration in buildings and in infrastructure	IA	8	2	7
13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-03	Floating PV Systems	IA	7	2	6-7
13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-04	Solar Systems for Industrial Process Heat and Power	IA	7	2	6-7
13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-05	Critical technologies for the offshore wind farm of the Future	RIA	6	3	5
13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-06	Demonstration of advanced biofuel technologies for aviation and/or shipping	IA	9	2	6-7
13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-07	Demonstration of synthetic renewable fuel for aviation and/or shipping	IA	9	2	6-7
13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-08	Demonstration of sustainable tidal energy farms	IA	20	2	8
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-01	Development of near zero-emission biomass heat and/or CHP including carbon capture	RIA	4	2	5
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-02	Novel thermal energy storage for CSP	RIA	2,5	2	4-5
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-03	Industrial manufacturing for lower-cost solar thermal components and systems	IA	3	2	7-8
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-04	Innovative components and configurations for heat pumps	RIA	2	3	4-5
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-05	Advanced exploration technologies for geothermal resources in a wide range of geological settings	RIA	4	2	5
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-06	Smart use of geothermal electricity and heating and cooling in the energy system	IA	5	3	7
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-07	Development of next generation advanced biofuel technologies	RIA	4	3	4-5
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-08	Development of microalgae and/or direct solar fuel production and purification technologies for advanced aviation and /or shipping fuels	RIA	4	2	4-5
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-09	Demonstration of sustainable hydropower refurbishment	IA	8	1	7-8
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-10	Development of innovative power take-off and control systems for wave energy devices	RIA	4	2	5
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-11	Advanced concepts for crystalline Silicon technology	RIA	3	3	4-5
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-12	Large Area Perovskite solar cells and modules	IA	7	2	6-7
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-13	Operation, Performance and Maintenance of PV Systems	IA	5	2	6-7
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-14	Digital twin for forecasting of power production to wind energy demand	RIA	6	2	5
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-15	Critical technologies to improve the lifetime, efficient decommissioning and increase the circularity of offshore and onshore wind energy systems	RIA	4	3	5
04/05/2023	05/09/2023	HORIZON-CL5-2023-D3-02-16	Accelerating the green transition and energy access in Africa	IA	5	4	7

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12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-01	Alternative equipment and processes for advanced manufacturing of PV technologies	IA	12	2	7
12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-02	Low-power PV	IA	3	2	5-7
12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-03	Demonstration of improved intermediate renewable energy carrier technologies for transport fuels	IA	10	2	6-7
12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-04	Improvement of light harvesting and carbon fixation with synthetic biology and/or bio-inspired//biomimetic pathways for renewable direct solar fuels production	RIA	4	2	3-4
12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-05	Development of carbon fixation technologies for biogenic flue gases	RIA	4	2	5
12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-06	Innovative applications/integration of geothermal heating and cooling in industry	RIA	3	3	5
12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-07	Development of hydropower equipment for improving techno-economic efficiency and equipment resilience in refurbishment situations	RIA	4	2	4-5
12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-08	Demonstration of sustainable wave energy farms	IA	18-20	2	8
12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-09	Africa-EU CO-FUND action	COFUND	10	1	
12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-10	Next generation of renewable energy technologies	RIA	3	9	3-4
07/05/2024	05/09/2024	HORIZON-CL5-2024-D3-02-01	Digital tools for CSP and solar thermal plants	IA	3	2	7-8
07/05/2024	05/09/2024	HORIZON-CL5-2024-D3-02-02	Development of next generation synthetic renewable fuel technologies	RIA	4	3	3-4
07/05/2024	05/09/2024	HORIZON-CL5-2024-D3-02-03	Development of smart concepts of integrated energy driven bio-refineries for co-production of advanced biofuels, bio-chemicals and biomaterials	RIA	3.5	2	5
07/05/2024	05/09/2024	HORIZON-CL5-2024-D3-02-04	Critical technologies for the future ocean energy farms	RIA	4	2	5
07/05/2024	05/09/2024	HORIZON-CL5-2024-D3-02-05	PV-integrated electric mobility applications	IA	7	2	6-7
07/05/2024	05/09/2024	HORIZON-CL5-2024-D3-02-06	Innovative, Community-Integrated PV systems	IA	5	2	6-7
07/05/2024	05/09/2024	HORIZON-CL5-2024-D3-02-07	Resource Efficiency of PV in Production, Use and Disposal	CSA	3	1	
07/05/2024	05/09/2024	HORIZON-CL5-2024-D3-02-08	Minimisation of environmental, and optimisation of socio-economic impacts in the deployment, operation and decommissioning of offshore wind farms	RIA	5	2	5
07/05/2024	05/09/2024	HORIZON-CL5-2024-D3-02-09	Demonstrations of innovative floating wind concepts	IA	15	2	7-8
07/05/2024	05/09/2024	HORIZON-CL5-2024-D3-02-10	Market Uptake Measures of renewable energy systems	CSA	2	4	

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13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-09	Waste heat reutilisation from data centres	IA	6	2	7-8
13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-10	Supporting the development of a digital twin to improve management, operations and resilience of the EU Electricity System in support to REPowerEU	IA	20	1	6-7
13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-11	Demonstration of DC powered data centres, buildings, industries and ports	IA	9	2	6-8
13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-12	Development of MVDC, HVDC and High-Power Transmission systems and components for a resilient grid	IA	11	2	8
13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-13	Development of novel long-term electricity storage technologies	RIA	4-5	3	4-5
13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-14	Demonstration of innovative, large-scale, seasonal heat and/or cooling storage technologies for decarbonisation and security of supply	IA	10	3	7-8
13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-15	Supporting the green and digital transformation of the energy ecosystem and enhancing its resilience through the development and piloting of AI-IoT Edge-cloud and platform solutions	IA	18	1	7-8
13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-16	Support action to the SET-Plan IWG on HVDC & DC Technologies	CSA	0,6	1	
04/05/2023	10/10/2023	HORIZON-CL5-2023-D3-03-01	Increasing the efficiency of innovative static energy conversion devices for electricity and heat/cold generation	RIA	3	3	5-6
04/05/2023	10/10/2023	HORIZON-CL5-2023-D3-03-02	Integration of renewable gases, other than hydrogen or methane, and which have not access to gas grids and interfacing with electricity and heat sectors	IA	6	2	6-7
04/05/2023	10/10/2023	HORIZON-CL5-2023-D3-03-03	System approach for grid planning and upgrade in support of a dominant electric mobility (vehicles and vessels) using AI tools	IA	11	1	6-8
04/05/2023	10/10/2023	HORIZON-CL5-2023-D3-03-04	Digital tools for enhancing the uptake of digital services in the energy market	IA	3-4	3	6-7
04/05/2023	10/10/2023	HORIZON-CL5-2023-D3-03-05	Creation of a standardised and open-source peer-to-peer energy sharing platform architecture for the energy sector	IA	5	1	6-8
04/05/2023	10/10/2023	HORIZON-CL5-2023-D3-03-06	Components and interfacing for AC & DC side protection system – AC & DC grid: components and systems for grid optimisation	IA	5	2	6-8

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12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-11	AI Testing and Experimentation Facility (TEF) for the energy sector – bringing technology to the market	IA	5	3	6-8
12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-12	Energy Management Systems for flexibility services	IA	5	2	7-8
12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-13	DC and AC/DC hybrid transmission and distribution systems	RIA	6	2	4-5
12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-14	Condition & Health Monitoring in Power Electronics (PE) - Wide Band Gap PE for the energy sector	RIA	4	3	5-6
12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-15	HVAC, HVDC and High-Power cable systems	RIA	5-5,5	3	4-5
12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-16	Demonstration of innovative pumped storage equipment and tools in combination with innovative storage management systems	IA	8	1	7-8
12/09/2023	16/01/2024	HORIZON-CL5-2024-D3-01-17	Development and integration of advanced software tools in SCADA systems for High, Medium and Low voltage AC/DC hybrid systems	IA	6	2	6-8



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13/12/2022	30/03/2023	HORIZON-CL5-2023-D3-01-17	Development of CO2 transport and storage demo projects	IA	20	2	7-8
07/05/2024	05/09/2024	HORIZON-CL5-2024-D3-02-11	CCU for the production of fuels	IA	7	2	6-7
07/05/2024	05/09/2024	HORIZON-CL5-2024-D3-02-12	DACCS and BECCS for CO2 removal/negative emissions	IA	5-7	3	6-7

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