European Commission

CINEA

European Climate, Infrastructure and Environment Executive Agency

Overview of Funding Programmes

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European Climate, Infrastructure and Environment Executive Agency

European Climate, Infrastructure and Environment Executive Agency (CINEA)

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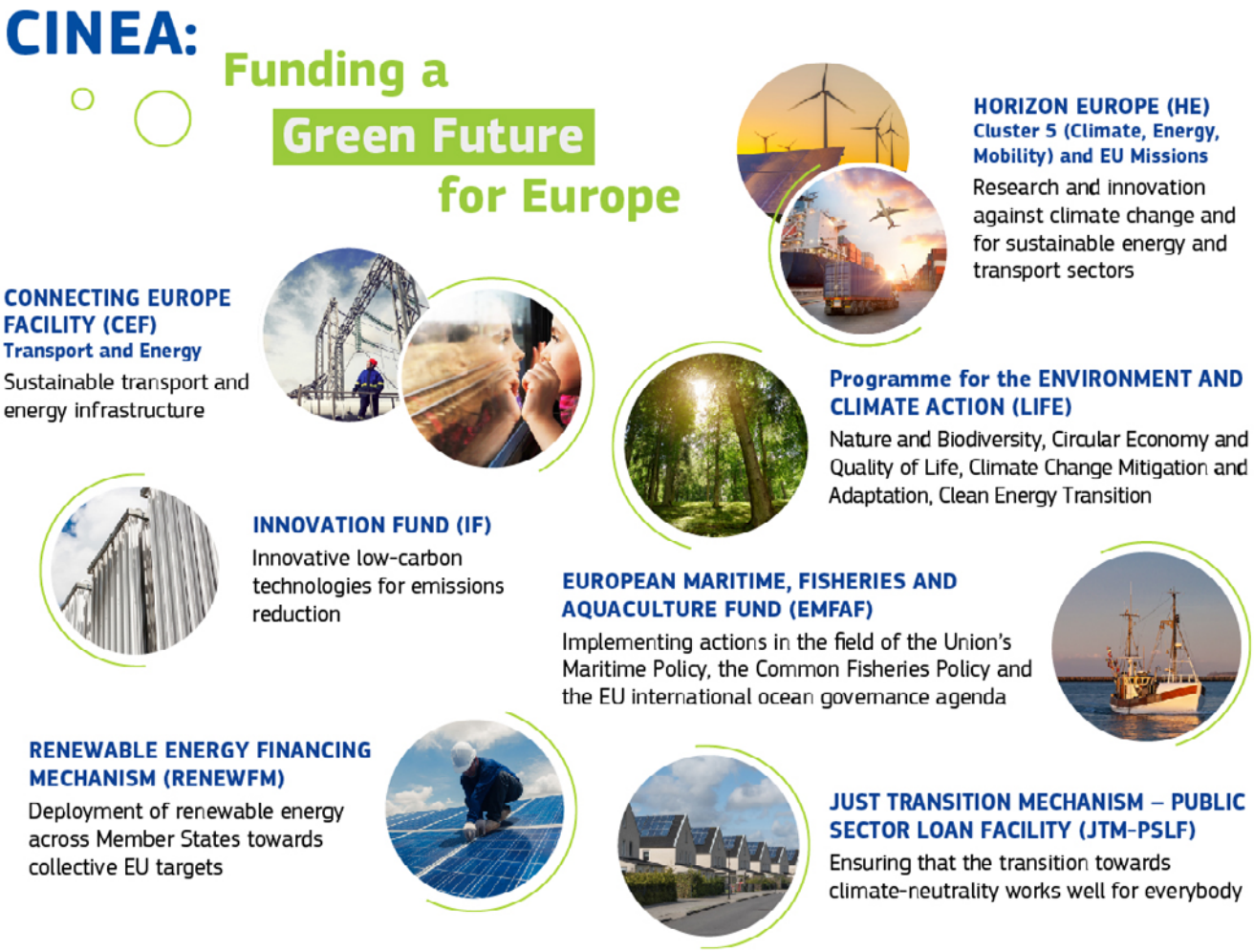
INTRODUCTION

This guide serves as a one-stop-shop (OSS) for stakeholders wishing to implement projects contributing to decarbonisation and sustainable growth in the areas of mobility, energy, climate, environment and maritime. It provides an overview of CINEA managed programmes[1], along with key information such as type of entities eligible for funding and activities that can be funded, range of EU contribution as well as links to relevant calls, tenders and project examples. A full statistical outlook of programmes and projects managed by CINEA can be found in its online public dashboard.



[1] Including their legacy programmes from the 2014-2020 Multiannual Financial Framework: CEF, Horizon 2020 (H2020), LIFE legacy, European Maritime and Fisheries Fund (EMFF).

OVERVIEW OF CINEA PROGRAMMES PER THEMATIC AREA

SUSTAINABLE TRANSPORT						
Examples of activities that can be funded	Smart Mobility	Rail	Sustainable, Safe and Inclusive Mobility	Road Transport	Aviation	Waterborne Transport
CONNECTING EUROPE FACILITY (TRANSPORT) • Works or studies within the meaning of Article 2(r) and 2(v) of the CEF Regulation or combination of both • Dual-use transport network (military/ civilian) • Alternative Fuels Infrastructure Facility (AFIF) (electric, LNG, hydrogen)	✓	✓	✓	✓	✓	✓
HORIZON EUROPE (TRANSPORT) • Research and Innovation (R&I) projects • Technology deployment • Close to market projects	✓		✓	✓	✓	✓
INNOVATION FUND • Highly innovative technologies, processes, business models or products/services that have a significant potential to reduce greenhouse gas emission	✓			✓	✓	✓
EUROPEAN MARITIME, FISHERIES AND AQUACULTURE FUND • Research and Innovation (R&I) projects • Technology deployment • Close to market projects						✓
JUST TRANSITION MECHANISM – PUBLIC SECTOR LOAN FACILITY • Urban and infrastructure development • Innovation projects • Projects upskilling and reskilling	✓	✓	✓			

CLEAN ENERGY						
Examples of activities that can be funded	Renewable Energy	Smart Energy Grids	Carbon Capture Utilisation and Storage	Energy Storage	Energy Efficiency	Energy Transmission and Distribution
CONNECTING EUROPE FACILITY (ENERGY) • Works or studies within the meaning of Article 2(r) and 2(v) of the CEF Regulation or a combination of both needed for implementation of cross-border energy infrastructure projects	✓	✓	✓	✓		✓
HORIZON EUROPE (ENERGY) • Research and Innovation (R&I) projects • Technology deployment • Close to market projects	✓	✓	✓	✓	✓	✓
INNOVATION FUND • Highly innovative technologies, processes, business models or products/services that have a significant potential to reduce greenhouse gas emission	✓	✓	✓	✓	✓	
LIFE (CLEAN ENERGY TRANSITION) • Market uptake and policy support actions (focus on non-technological aspects) • Empowering citizens and public authorities in the clean energy transition, including tackling energy poverty • Mobilising investments, providing technical assistance	✓				✓	
EUROPEAN MARITIME, FISHERIES AND AQUACULTURE FUND • Research and Innovation (R&I) projects • Technology deployment • Close to market projects	✓	✓			✓	
RENEWABLE ENERGY FINANCING MECHANISM • Renewable energy installation/ generation projects	✓					
JUST TRANSITION MECHANISM – PUBLIC SECTOR LOAN FACILITY • Urban and energy efficiency development • Innovation projects • Projects upskilling and reskilling	✓				✓	

CLIMATE, ENVIRONMENT AND MARITIME								
Examples of activities that can be funded	Climate Change Mitigation	Climate Change Adaptation	Oceans & Waters	Cities	Circular Economy & Quality of Life	Nature & Biodiversity	Sustainable Fisheries	Blue Economy
HORIZON EUROPE (CLIMATE) • Research and Innovation (R&I) projects • Technology deployment • Close to market projects	✓	✓		✓				
EU MISSIONS • Demonstration activities • Training and communication activities		✓	✓	✓				
INNOVATION FUND • Highly innovative technologies, processes, business models or products/services that have a significant potential to reduce greenhouse gas emission	✓	✓			✓			✓
LIFE (NATURE & BIODIVERSITY, CIRCULAR ECONOMY & QUALITY OF LIFE, CLIMATE CHANGE MITIGATION AND ADAPTATION) • Close to market/scale up projects • Deployment	✓	✓	✓		✓	✓		
EUROPEAN MARITIME, FISHERIES AND AQUACULTURE FUND • Research and Innovation (R&I) projects • Technology deployment • Close to market projects	✓	✓	✓	✓	✓	✓	✓	✓
JUST TRANSITION MECHANISM – PUBLIC SECTOR LOAN FACILITY • Infrastructure development • Innovation projects • Projects upskilling and reskilling					✓	✓		

INDIVIDUAL PROGRAMMES IN DETAIL

Connecting Europe Facility (Transport)

CEF Transport is a funding instrument to realise European transport infrastructure policy. It aims at supporting investments in building new transport infrastructure in Europe or rehabilitating and upgrading the existing one. Trans-European Networks for Transport (TEN-T) policy objectives foresee the completion by 2030 of the Core Network, structured around nine multimodal Core Network Corridors, and the completion by 2050 of the Comprehensive Network in order to facilitate accessibility to all European regions.

Budget (2021-2027): €25.35 billion

Key Areas	• Multimodal networks (railways, inland waterways & inland ports, maritime ports, roads, rail-roads terminals & multi-modal logistic platforms) • Smart, interoperable mobility (European Rail Traffic Systems, Intelligence Transport Services for Roads, transport interoperability) • Sustainable & multimodal mobility (alternative fuels infrastructure facility (AFIF), Motorways of the Sea, multimodal passenger hubs, reduction of rail freight noise) • Inclusive, accessible, safe and secure mobility (parking infrastructure, road safety, transport infrastructure resilience, adaptation of the TEN-T to civilian-defence dual-use)			
WHO can apply?	• EU Member States, associated third countries (Article 5 of the CEF Regulation) • Legal entities: Public or private bodies • International organisations Proposals must be submitted by one or more EU Member States or with the agreement of at least one Member State.			
WHAT activities can be funded?	• Works or studies within the meaning of Article 2(r) and 2(v) of the CEF Regulation or combination of both • Dual-use transport network (military/civilian) • Pilot projects • Technical assistance • Alternative Fuels Infrastructure Facility (AFIF) (electric, LNG, hydrogen)			
Range of EU Contribution	• General envelope calls: up to 30% of eligible costs for works (or up to 50% actions relating to cross-border links), up to 50% for studies. • Cohesion envelope calls: up to 85% of eligible costs for studies and works. • Military Mobility envelope calls: up to 50% for studies and works. • AFIF: other % ranging from 10% to 30%.			
Links to relevant calls	CEF Transport Calls for Proposals			
Target Technology Readiness Level (TRL)	n/a			
Project examples CEF Transport featured projects	New Wendlingen-Ulm railway line (January 2014 - December 2021) The new Wendlingen–Ulm railway line is a sub-project of the upgraded and new Stuttgart–Ulm–Augsburg line and part of the Rhine-Danube core network. The project encompasses a route length of 59.57 km, of which 30.21 km go through tunnels. The line is designed for mixed traffic (long-distance passenger transport along with fast and light-weight freight trains).	Upgrade of the Gabčíkovo locks (February 2016 - December 2023) The Gabčíkovo locks are located at river km 1,820 of the Danube in Slovakia, in proximity to the border with Hungary. The project consisted of both studies and works. The construction works included the replacement of the upper and lower gates, the technological equipment of the lock chambers, the locks filling and emptying system and the expert control system.	Ultra Fast in Europe (June 2022 - June 2025) The project aims at implementing a network of publicly accessible recharging stations for light-duty electric vehicles to allow electric charging along the TEN-T road networks in Italy, France, Germany, Austria, Spain, Portugal, Slovenia and Greece. 504 charging stations (sites) equipped with 2,016 recharging points of a minimum power output of 150 kilowatt (kW) each and with 504 grid connections of 600 kilovolt-amperes (kVA) each, will become available for consumers around the clock.	Military/civilian loading facility in Palemonas (May 2022 - December 2026) The project aims to facilitate the loading of military material and vehicles in the Kaunas Palemonas railway station in Lithuania and create a loading and unloading point for general cargo for 1,435 mm gauge railway lines. Infrastructure built during the implementation of the project will create a connection between the 1,435 mm and the 1,520 mm gauge rail lines on the TEN-T North Sea-Baltic Corridor, facilitating cargo traffic across the territory of Lithuania, connection with western Europe and unhindered railway traffic across Baltic states.

SUSTAINABLE TRANSPORT

Horizon Europe (Transport)

Research and innovation for sustainable transport sectors. Developing solutions and services for clean, competitive, safe, smart and resilient transport and mobility.

Budget (2021-2027): €10.78 billion [2]

Key Areas	• Road transport to zero-emission mobility (operation of electric vehicles, battery management, frugal zero emission vehicles, circular economy approaches) • Aviation (hydrogen powered & electrified aviation, digital transformation) • Waterborne transport (including inland waterway transport and maritime transport, offshore supply, environmental impact of shipyards, vessels, monitoring networks, underwater noise) • Impact of transport on environment and human health, air pollutant emissions from low-carbon fuels • Safe, Resilient Transport and Smart Mobility services for passengers and goods (Connected, Cooperative and Automated Mobility (CCAM), multimodal transport, infrastructure and logistics, operational automation, climate resilient and safe maritime ports, road transport & aviation safety, digital tools and solutions to monitor and improve the management and operation of transport infrastructure)			
WHO can apply?	• EU Member States, associated countries, low to middle income countries (see Chapter 8 of the Horizon Europe Programme Guide) • Legal entities: Public or private bodies, natural persons • International organisations Beneficiaries must register in the participant register before submitting applications. For Research and Innovation Actions (RIAs) and Innovation Actions (IAs), consortia must include at least one independent entity established in a Member State and at least two other independent legal entities established in different Member States or associated countries. Legal entities from Member States and associated countries that are public bodies, research organisations or higher education establishments (including private research organisations and higher education establishments) must have a gender equality plan to be eligible.			
WHAT activities can be funded?	• R&I projects • Studies • Technology deployment • Close to market projects • Training/capacity building • Technical assistance			
Range of EU Contribution	• Research and Innovation Actions (RIAs): up to 100%. • Innovation Actions (IAs): up to 70% and in specific calls/topics up to 60% (except for non-profit legal entities, where a rate of up to 100% applies). • Coordination and Support Actions (CSAs): up to 100%.			
Links to relevant calls	HE Transport Calls for proposals			
Target Technology Readiness Level (TRL)	From 2 (Technology concept formulated) to 8 (System complete and qualified) As detailed in the TRL scale annexed to the Work Programmes of the Horizon Europe EU funding programme.			
Project examples HE Transport featured projects	CHEK (June 2021 – May 2024) The project pioneers the development of zero-emissions shipping with a future-proof vessel design platform, which is used to develop and demonstrate two bespoke vessel designs in practice: a wind energy optimised bulk carrier and a hydrogen-powered cruise ship. Both use an interdisciplinary combination of technologies that work together to reduce greenhouse gas emissions by 99%, while saving at least 50% energy.	OLGA (October 2021 – September 2026) The project is part of the bigger plan for aviation decarbonisation. The consortium, consisting of airports, airlines, ground handlers, industry, research bodies and SMEs, aims at integrating sustainable aviation fuels supply chains in conventional jet fuel infrastructure and demonstrate complementary types of low-emission mobilities, electric ground support equipment, hydrogen infrastructure and reduced carbon airside operations.	MODI (October 2022 – March 2026) The project's aim is to identify and address barriers in confined areas and on public roads for autonomous vehicles (no requirement for human interaction in their operations) on the corridor from Rotterdam to Oslo and demonstrate the solutions.	EBRT2030 (January 2023 – December 2026) The project will develop technology-focused key innovation solutions for European bus rapid transport (BRT). It will run seven demonstrations of BRT system innovative solutions in real operation. The project will also define a new European concept of BRT for the year 2030, benefitting from the evaluation, multiplication and replication of the real operation test of innovations.

[2] Budget for Cluster 5 all sectors – Climate, Energy and Transport (without UK contribution). With estimated amounts on 2021-27 EU Missions.

Innovation Fund

EU fund for climate policy, with a focus on energy and industry. It aims to bring to the market solutions to decarbonise the European industry and support its transition to climate neutrality while fostering its competitiveness.

Budget (2021-2027): €16 billion [3]

Key Areas	• Aviation and road transport • Waterborne transport • Smart mobility			
WHO can apply?	• Legal entities: Private or public bodies, established in any country in the world • International organisations Projects must be located in EU Member States or EEA countries (i.e. Norway, Iceland or Lichtenstein). Projects may also be located in Northern Ireland on the condition that they concern the generation, transmission, distribution or supply of electricity.			
WHAT activities can be funded?	Highly innovative technologies, processes, business models or products/services that are sufficiently mature and have a significant potential to reduce greenhouse gas emissions.			
Range of EU Contribution	Up to 60% (in case of regular grants) and up to 100% (in case of competitive bidding) of the relevant costs calculated according to the methodology indicated in each call for proposals (usually covering capital and operational costs minus revenues over the first ten years of operation).			
Links to relevant calls	IF calls for proposals			
Target Technology Readiness Level (TRL)	From 7 (System prototype demonstration in an operational environment) to 9 (Actual system proven in an operational environment - competitive manufacturing in the case of key enabling technologies, or in space) As detailed in the TRL scale annexed to the Work Programmes of the Horizon Europe EU funding programme.			
Project examples Innovation Fund projects Innovation Fund Project Portfolio Dashboard	Waga 4 World (W4W (January 2022 – August 2026) The project aims at producing cost competitive and grid compliant biomethane from landfill gas using the WAGABOX® technology, developed by Waga Energy. The objective is to implement an upgraded version of the WAGABOX® unit at the Can Mata landfill, one of the largest ones in Spain. The biomethane production will be injected into the grid of the Spanish operator Nedgia with an expected biomethane production of 70 gigawatt hours per year (GWh/y), equivalent to the annual gas consumption of 14,000 Spanish households.	GreenH2CY (June 2023 – August 2028) The project's objective is to produce hydrogen for the transport sector from renewable energy, refuel trucks and replace diesel vehicles. It plans to include a refuelling station and hydrogen storage facilities, which will allow for flexible usage of the electrolyser that produces the hydrogen and for the station to run during off-peak electricity times.	EVVE (April 2021 – December 2027) The project aims to demonstrate a first-of-a-kind, large-scale vehicle-to-grid technology in Europe, based on the implementation of a virtual power plant, which draws upon the energy storage capacities of hundreds of Electric Vehicles (EV) across the EU. The project has an innovative business model based on the smart management of EV batteries.	SustainSea (July 2023 – December 2027) The project will deploy a rigid wind sail system in maritime transport. The system will use wind energy to reduce fuel use and greenhouse gas emissions in the sector. Within the project, the wind propulsion system developed by Bound4Blue will be integrated into five large cargo vessels operating mainly in EU waters.

[3] The Innovation Fund is financed by the EU Emissions Trading System (ETS) revenues. Budget (2020-2030): €40 billion, calculated by using a carbon price of €75/tCO2.

European Maritime Fisheries and Aquaculture Fund

EMFAF supports a sustainable blue economy by implementing actions in the field of the European Union's Maritime Policy, the Common Fisheries Policy and the EU international ocean governance agenda.

Budget (2021-2027): €291.6 million

Key Areas	• Sustainable maritime transport • Offshore renewable energy • Aquaculture • Blue economy • Blue careers & skills and ocean literacy • Sustainable blue finance and innovation • Maritime Spatial Planning • Maritime security • Scientific advice for fisheries • International Ocean Governance			
WHO can apply?	• EU Member States, third countries listed in the yearly work programme (see Article 61 of EMFAF Regulation) • Legal entities: Public or private bodies • International organisations			
WHAT activities can be funded?	• Studies • Technology deployment • Close to market projects • Training/capacity building • Technical assistance • R&I projects • Awareness raising • Regional cooperation • Scientific advice			
Range of EU Contribution	For grants, the exact co-funding rate may vary depending on each call for proposals but generally it is in the range of 70-80% of total eligible costs. For contracts, the budget is indicated in the call for tenders or request for service.			
Links to relevant calls	• EMFAF Calls for Proposals • EMFAF Calls for Tenders			
Target Technology Readiness Level (TRL)	From 3 (Experimental proof of concept) to 7 (System prototype demonstration in an operational environment) As detailed in the TRL scale annexed to the Work Programmes of the Horizon Europe EU funding programme.			
Project examples EMFF and EMFAF featured projects	CO2NTROL (August 2021 – October 2023) The project developed a route optimisation platform for shipping container operations for more efficient and environmentally friendly routes, with the lowest CO_2 emissions, from pick-up to delivery.	GREEN MARINE MED (October 2023 – September 2025) The project will establish a network of the Mediterranean Green Shipping stakeholder community, including ports and marinas, fuel and energy, as well as finance, investment, innovation and other stakeholders. The Network will create a Monitoring and Technology Foresight on Mediterranean Green Shipping. It will launch an International Call for Green Shipping Innovation, to support start-ups, SMEs and entrepreneurs to revolutionise green shipping innovation in the Mediterranean.	WINNEW (September 2021 – November 2023) The project carried out activities to develop, install, test and demonstrate the Oceanwings wing sail technology for wind propulsion. The technology is suitable for numerous kinds of vessels (new build and existing ships) and will help to reduce CO_2 emissions and pollution from shipping.	POWERFLEX (September 2020 – August 2023) The project advanced the technological and market readiness of a competitive onshore power solution -named OPS-Charger - to provide electricity to containerships when at berth to supply their consumers and charge onboard batteries. The main outcome of the project is a market ready solution that contributes to lowering greenhouse gas emissions, pollution and noise at port.

Just Transition Mechanism - Public Sector Loan Facility

CINEA manages the third pillar of the Just Transition Mechanism, the Public Sector Loan Facility, which supports projects addressing social, environmental and economic challenges deriving from the transition to the Union's climate target objectives.

Budget (2021-2027): €1.3 billion

Key Areas	• Green mobility • Energy and transport infrastructure • Sustainable mobility
WHO can apply?	• EU Member States • Legal entities: Public bodies or private bodies entrusted with a public service mission • International organisations Projects must benefit a territory covered by a Territorial Just Transition Plan (TJTP) of one of the EU Member States and not generate sufficient revenues to cover the investment costs.
WHAT activities can be funded?	• Urban and infrastructure development • Innovation projects • Projects upskilling and reskilling • Training/capacity building
Range of EU Contribution	• The expected range of the EC contribution is approximately €15-30 million/project. • The Public Sector Loan Facility is a blending facility that combines grants from the EC and loans of the European Investment Bank (EIB) • The EC contribution is a share of the EIB loan: - 15% of the loan for EU regions in transition - 25% of the loan in EU less developed regions
Links to relevant calls	JTM-PSLF calls for proposals
Target Technology Readiness Level (TRL)	n/a
Project example	Smiles (May 2024 – April 2029) Sustainable Mobility Infrastructures for Low Emissions and qualitative Service – Metropolitan city of Nantes in France The project aims at: - Renovating three tramway lines' sections and replacing 46 tramway units - Constructing a technical centre - Constructing an exchange hub of park & ride facility and building 38 km of safe bicycle lanes

Connecting Europe Facility (Energy)

Funding instrument to realise European energy infrastructure policy. It identifies priority corridors and thematic areas and establishes a biennial list of Projects of Common/Mutual Interest (PCIs/PMIs) that help the EU meet its short and long-term energy and climate objectives. Among other, the Connecting Europe Facility provides an enabling framework to support cross border cooperation in the field of renewable energy and defines the concept of cross border renewable energy (CB RES) projects. A list of such projects is updated on an annual basis.

Budget (2021-2027): €5.87 billion

Key Areas	• Cross-border renewable energy generation, transmission and distribution • Electricity transmission and distribution, including electricity interconnections • Smart energy grids (electricity and gas) • Hydrogen interconnections and electrolysers • Offshore electricity grids • Carbon dioxide networks • Energy storage			
WHO can apply?	• EU Member States, associated third countries (Article 5 of the CEF Regulation) • Legal entities: Public or private bodies To be eligible for funding, projects must first obtain PCIs/PMIs or CB RES status and be included on the in force list that is adopted either on annual of biannual basis. Proposal should be submitted by PCIs/PMIs/CB RES projects developers with the support of one or more EU Member States. For CB RES projects, cooperation agreement between Member States or between Member State(s) and third country(ies) as set out in the Renewable Energy Directive is required.			
WHAT activities can be funded?	• Works or Studies (CEF Regulation) or a combination of both needed for the implementation of cross-border energy infrastructure projects • Only activities contributing to the implementation of projects of common/mutual interest as identified in the in-force PCIs/PMIs list and in-force CB RES projects identified in the CB RES status list are eligible for support			
Range of EU Contribution	• Up to 50% co-funding for studies and works The co-financing rate may be increased to a maximum of 75% of the total eligible cost for works actions contributing to the development of PCIs/PMIs, which provide a high degree of regional or Union-wide security of supply, strengthen the solidarity of the Union or offer highly innovative solutions.			
Links to relevant calls	CEF Energy Calls for Proposals			
Target Technology Readiness Level (TRL)	n/a			
Project examples CEF Energy featured projects	Porthos (July 2020 – December 2024) The project is part of the 'CO_2 TransPorts' PCI that consists of the development of an open access cross-border transport network to bring CO_2 from the ports of Rotterdam, Antwerp and Ghent to offshore storage locations in depleted gas fields in the North Sea. The CEF supported Action concerns the development of the Port of Rotterdam CO_2 Transport Hub and the Offshore Storage (Porthos). It includes the construction and commissioning of a 33 km onshore pipeline connecting industrial emitters in the port of Rotterdam, a 20 megawatt (MW) compressor station and a 20 km offshore pipeline.	Biscay Gulf electricity France-Spain interconnection (July 2018 – December 2028) The new electricity link through the Bay of Biscay aims to nearly double the interconnection capacity between Spain and France – increasing it from 2,800 to 5,000 MW. It will improve the security of supply in both countries and facilitate further integration of renewables into the grid, encouraging investment in renewable energy sources. The co-funded studies Action focused on assessment of feasibility, impact of the new interconnector, it analysed final route and detailed technical means to secure it. The co-funded works Action is meant to fully implement the construction of the interconnector.	North Sea Wind Power Hub Feasibility and preparatory studies (June 2020 – September 2024) As part of the project, a large-scale European electricity system for offshore wind will be developed in the North Sea, including the construction of one or more hubs with interconnectors to bordering countries. This project is a first building block in the hub-and-spoke concept connecting up to 14 gigawatt (GW) future offshore wind parks to the systems of Denmark, the Netherlands and Germany after 2035. The co-funded Action covered feasibility and preparatory studies.	CICERONE (March 2023 – August 2024) The CICERONE project aims to build an integrated industrial scale cross-border European green hydrogen and ammonia value chain under the broader "CEO-Alliance" initiative. As such, the CICERONE value chain will consist of independent but highly interconnected infrastructure located in different EU Member States. The funded activities cover environmental assessment, market study and engineering design for the realisation of the renewable energy sources plus electrolyser and green ammonia infrastructure to be installed and managed in Spain.

Horizon Europe (Energy use and supply)

Research and innovation for sustainable energy sectors supporting the transition to a reliable, efficient, inclusive and competitive energy system.

Budget (2021-2027): €10.78 billion [4]

Key Areas	• Renewable energy (solar, wind, ocean, hydro, geothermal, hydro, bioenergy) • Smart grids and storage • Batteries • Carbon Capture, Utilisation and Storage (CCUS) • Alternative fuels • Buildings (including New European Bauhaus) • Buildings • Cities and districts • Industry • Social dimension of energy
WHO can apply?	• EU Member States, associated countries, low- to middle-income countries (see Chapter 8 of the Horizon Europe Programme Guide) • Legal entities: Public or private bodies, natural persons • International organisations Applicants must register in the participant register before submitting applications. For Research and Innovation Actions (RIAs) and Innovation Actions (IAs), consortia must include at least one independent entity established in a Member State and at least two other independent legal entities established in different Member States or associated countries. Legal entities from Member States and associated countries that are public bodies, research organisations or higher education establishments (including private research organisations and higher education establishments) must have a gender equality plan to be eligible.
WHAT activities can be funded?	• R&I projects • Studies • Technology deployment • Close to market projects • Training/capacity building • Technical assistance
Range of EU Contribution	• Research and Innovation Actions (RIAs): up to 100% • Innovation Actions (IAs): up to 70% and in specific calls/topics up to 60% (except for non-profit legal entities, where a rate of up to 100% applies) • Coordination and Support Actions (CSAs): up to 100%
Links to relevant calls	HE Energy calls for proposals
Target Technology Readiness Level (TRL)	From 3 (Experimental proof of concept) to 8 (System complete and qualified) As detailed in the TRL scale annexed to the Work Programmes of the Horizon Europe EU funding programme.

Project examples HE Energy featured projects	EU-SCORES (September 2021 – August 2025) The project aims at demonstrating the large-scale roll-out of complementary offshore renewable energy sources (wave, wind & solar) in so-called multi-source energy parks across different European sea basins. Two technologies, offshore solar and wave energy converters, are foreseen to be demonstrated on a megawatt (MW) scale in support of business cases for the upscaling of those technologies inside offshore wind parks.	LEILAC2 (April 2020 – March 2025) The project aims at demonstrating at an industrial scale the technology developed under the previous LEILAC project for capturing CO_2 from the production of cement using direct separation, providing a viable and cost effective decarbonisation solution while leveraging significant private sector funding. LEILAC2 is developing, building and validating a module capturing 20% of a typical cement plant's CO_2 emissions (up to 100 kilo-tonnes per year of CO_2).	domOS (September 2020 – February 2024) domOS boosted the rollout of smart energy services in existing buildings. The project defined guidelines for an open, secure, multi-service Internet of Things (IoT) ecosystem for smart buildings and developed smart services to increase the energy efficiency of space heating.	PV SITES (January 2016 – June 2020) The project brought building-integrated photovoltaics to large market deployment by demonstrating an ambitious portfolio of building-integrated solar technologies and systems (BIPV). Commercialisation of technologies developed in the project took place already during its lifetime and a showcase of 7 commercial BIPV installations using the technologies developed is available on the project website.

[4] Budget for Cluster 5 all sectors – Climate, Energy and Transport (without UK contribution). With estimated amounts on 2021-27 EU Missions.

Innovation Fund

EU fund for climate policy, with a focus on energy and industry. It aims to bring to the market solutions to decarbonise the European industry and support its transition to climate neutrality while fostering its competitiveness.

Budget (2021-2027): €16 billion [5]

Key Areas	Innovative renewable energy generation and energy storage including manufacturing of components for production of renewable energy or energy storage, smart energy grids, energy efficiency.			
WHO can apply?	• Legal entities: Private or public bodies, established in any country in the world • International organisations Projects must be located in EU Member States or EEA countries (i.e, Norway, Iceland or Lichtenstein) Projects may also be located in Northern Ireland on the condition that they concern the generation, transmission, distribution or supply of electricity.			
WHAT activities can be funded?	Highly innovative technologies, processes, business models or products/services that are sufficiently mature and have a significant potential to reduce greenhouse gas emission.			
Range of EU Contribution	Up to 60% (in case of regular grants) and up to 100% (in case of competitive bidding) of the relevant costs calculated according to the methodology indicated in each call for proposals (usually covering capital and operational costs minus revenues over the first ten years of operation).			
Links to relevant calls	IF calls for proposals			
Target Technology Readiness Level (TRL)	From 7 (System prototype demonstration in an operational environment) to 9 (Actual system proven in an operational environment - competitive manufacturing in the case of key enabling technologies, or in space) As detailed in the TRL scale annexed to the Work Programmes of the Horizon Europe EU funding programme.			
Project examples Innovation Fund projects Innovation Fund Project Portfolio Dashboard	TANGO (January 2021 – August 2033) The project aims to develop an industrial-scale pilot line in the south of Italy to manufacture innovative, high performance photovoltaic (PV) modules, increasing production capacity by 15 times, from 200 megawatt (MW) to 3 gigawatt (GW) per year. Production will include bifacial heterojunction (B-HJT) PV cells, which offer a very important effective efficiency improvement of up to 20%, relative to current state of-the-art cells, and an innovative module design called "Tandem". The modules produced in one year (3 GW) will have the potential to generate 5,445 GWh of renewable electricity per year.	Green the Flex (GtF) (January 2022 – September 2028) The project aims to open the electricity market to decentralised units and use these units' flexibility to provide load-shifting management service. To do so, the project will connect and integrate more than 2,500 small devices into one entity (a virtual power plant – VPP) that can then participate in the energy market and provide flexibility to harmonise electricity demand with generation. The project will have the capacity to shift demand of 4.4 gigawatt hours (GWh) annually from peak to off-peak, thereby supporting the integration of renewables and diminishing the need for fossil fuel for peak load times. It foresees also to provide ancillary grid services and avoid all greenhouse gas emissions produced by conventional technologies to generate the equivalent amount of electricity.	GREENMOTRIL (January 2022 – December 2029) The project's objective is to transform the seaport of Motril into the first European port able to operate off-grid while maintaining its basics services, based on a self-managed energy community which uses renewable energy and storage technologies and can intelligently manage power demand using advanced technologies. The initiative will bring together citizens, social entrepreneurs, public authorities and other organisations to take part in the energy transition of the port.	NorthSTOR + (April 2022 – December 2034) The project aims to both validate the technology development of an innovative, stationary energy storage system (ESS) and to industrialise the production of the solution at a mass-scale. The final product, the Voltainer, will feature Lithium-ion ESS based on a battery cell which was originally developed for the automotive sector. This will result in a larger and more energy dense cell than what is currently available on the market, including superior characteristics in terms of performance, safety, costs, flexibility, connectivity, traceability and life-cycle environmental impact.

[5] The Innovation Fund is financed by the EU Emissions Trading System (ETS) revenues. Budget (2020-2030): €40 billion, calculated by using a carbon price of €75/tCO2.

LIFE (Clean Energy Transition)

The LIFE Clean Energy Transition sub-programme aims at facilitating the transition towards an energy-efficient, renewable energy-based, climate-neutral and resilient economy by funding coordination and support actions (Other Action Grants) across Europe.

Budget (2021-2027): €4.47 billion [6]

Key Areas	• Supporting market uptake of energy efficiency and renewable energy solutions (focus on non-technological aspects) • Building a national, regional and local policy framework supporting the clean energy transition • Accelerating technology roll-out, digitalisation, new services and business models and enhancement of the related professional skills on the market • Attracting private finance for sustainable energy • Supporting the development of local and regional investment projects • Involving and empowering citizens in the clean energy transition			
WHO can apply?	• EU Member States, listed EEA countries and countries associated to the LIFE Programme or countries which are in ongoing negotiations for an association agreement and where the agreement enters into force before grant signature (list of eligible countries provided in the LIFE specific calls) • Legal entities: Public or private bodies • International organisations			
WHAT activities can be funded?	• Market uptake and policy support actions • Training/capacity building/knowledge sharing • Empowering citizens and public authorities in the clean energy transition, including tackling energy poverty • Developing and rolling-out of innovative approaches, services and best practices • Mobilising investments, providing technical assistance			
Range of EU Contribution	• For Other Actions Grants (OAG) up to 95% of total costs • Co-financing ≤60% of total eligible costs for Standard Action Projects • For projects addressing ad hoc Legislative and Policy Priorities (PLP) up to 90% of total costs			
Links to relevant calls	LIFE CET calls			
Target Technology Readiness Level (TRL)	9 (Actual system proven in an operational environment - competitive manufacturing in the case of key enabling technologies, or in space) As detailed in the TRL scale annexed to the Work Programmes of the Horizon Europe EU funding programme.			
Project examples LIFE Public Database	LOCAL-IN-PLAN (October 2022 – March 2026) The project aims to develop, test and roll out the IN-PLAN support structure for local and regional authorities seeking to implement sustainable energy and climate plans. The project's approach allows these plans to be integrated with other planning and included in local budgets. The team will carry out a two-step programme for enhancing the capacities of the 15 local and regional governments engaged in the project, including the training of key personnel.	JALON (November 2022 – April 2026 The project aims to bring together 87 rural villages in the Calatayud region in Spain in a large regional energy community, engaging 5,000 citizens, 40 local authorities and 75 businesses, mobilising €13 million investment in photovoltaic-energy (PV) facilities with a total generation of 23GWh/year. Solar panels will be installed on 500 homes, businesses, and municipalities, and 40 ground-mounted solar systems erected to supply green clean energy to each village and 10 medium PV plants will provide clean and cheap electricity to businesses. JALON will be a demonstrator that will be followed by 6 other EU regions. The total EU contribution for the project is around €1.8 million.	One-Stop-Shop (October 2022 – September 2025) This project seeks to stimulate demand for building renovations and energy performance improvements via a new comprehensive service – a one-stop-shop – covering the whole 'customer journey', from the pre-consultancy phase to monitoring. Launching an interactive online building renovation calculator expected to empower homeowners in building renovation design. Plus, local construction companies, architects, engineers, financiers and others will be galvanised to demonstrate the one-stop-shop's positive impact on homeowners' behaviour and increase demand for building renovations.	ENGAGE (November 2022 – October 2025) The project aims to provide a solution for green mortgage financing through the identification of key data for assessing the energy efficiency information of green mortgages and creating a green investments portal to simplify access to and compare green data. This portal will offer consumers mortgage loans that reward improvements in the energy class of their properties and support them in converting them. It will be piloted in the Netherlands and Spain, while one-stop digital shops in Spain will assist consumers with the retrofitting process.

[6] For the four sub-programmes: Nature and biodiversity – Circular economy and quality of life – Climate change mitigation and adaptation – Clean energy transition.

European Maritime Fisheries and Aquaculture Fund

EMFAF supports a sustainable blue economy by implementing actions in the field of the European Union's Maritime Policy, the Common Fisheries Policy and the EU international ocean governance agenda.

Budget (2021-2027): €291.6 million

Key Areas	• Sustainable maritime transport • Offshore renewable energy • Aquaculture • Blue economy • Blue careers & skills and ocean literacy • Sustainable blue finance and innovation • Maritime Spatial Planning • Maritime security • Scientific advice for fisheries • International Ocean Governance			
WHO can apply?	• EU Member States, third countries listed in the yearly work programme (see Article 61 of EMFAF Regulation) • Legal entities: Public or private bodies • International organisations			
WHAT activities can be funded?	• Studies • Technology deployment • Close to market projects • Training/capacity building • Technical assistance • R&I projects • Awareness raising • Regional cooperation • Scientific advice			
Range of EU Contribution	For grants, the exact co-funding rate may vary depending on each call for proposals but generally it is in the range of 70-80% of total eligible costs. For contracts, the budget is indicated in the call for tenders or request for service.			
Links to relevant calls	• EMFAF Calls for Proposals • EMFAF Calls for Tenders			
Target Technology Readiness Level (TRL)	From 3 (Experimental proof of concept) to 7 (System prototype demonstration in an operational environment) As detailed in the TRL scale annexed to the Work Programmes of the Horizon Europe EU funding programme.			
Project examples EMFF and EMFAF featured projects	AQUAWIND (September 2022 – August 2025) The aim is to perform a demonstration test of a multi-use, integrated and co-located solution, joining an existing marine renewable energy production Wind to Power (W2Power) prototype with an innovative finfish aquaculture solution. The project will also provide a route map for regulatory and legal issues that need to be addressed for multi-use projects and aims to demonstrate the economic, environmental, and social sustainability of the multi-use proposition.	AERONES (October 2020 – June 2025) The project is developing an offshore robotic wind turbine blade care system that reduces the time, resource and CO_2 impact of offshore wind turbine maintenance. In addition, the system increases the level of security for maintenance workers and offers the potential for increased efficiency and longer lifetimes of turbines.	WaveFarm (November 2020 – October 2023) The project developed a scalable technical and commercial strategy to deploy large-scale WaveFarms as a highly valuable source of renewable power. Two pilot developments in a deployment process that can serve as a blueprint for WaveFarm installations.	SATHScale (November 2020 – October 2023) The project targeted the engineering and upscaling of a new floating renewable wind energy foundation technology. It advanced towards market readiness an innovative solution feasible for shallow and deep waters, offering significant advantages including lower cost materials, reduced maintenance costs and extended lifetime of platforms.

Renewable Energy Financing Mechanism

Facilitating investments in renewable energy projects, deployment of renewable energy across Member States towards collective EU targets. The renewable energy resources financed via this mechanism will count towards the climate targets for renewable energy for all member states participating in the particular project – whether as host or contributing country. The allocation of these renewables statistics will be defined on the basis of a standard formula.

Budget (2021-2027): defined for each call based on agreed contribution from participating Member States

Key Areas	• Renewable energy production
WHO can apply?	• Legal entities: Public or private bodies, established in any country in the world Projects must be located in EU Member States.
WHAT activities can be funded?	Renewable energy installation/generation projects
Range of EU Contribution	• A system of EU-wide tenders identifies suitable renewable energy installation projects to receive support, Member States can either host a project, without needing to provide finance or contribute financially to a project located in a different Member States, private investors can invest • A typical call of the EU Renewable Energy Financing Mechanism is price-based, targeted at capacity and follows the pay-as-bid principle, where the awarding criteria is focused on the lowest submitted bids • The size of the contribution is determined by the outcome of the tender procedure, where only the most competitive projects will be selected and receive support, corresponding to their bid in the tender
Links to relevant calls	Call for proposals for the EU Renewable Energy Financing Mechanism
Target Technology Readiness Level (TRL)	n/a
Project example	Niittyneva Solar Park (March 2024 – November 2040) Skarta Energy Solarparks Oy is developing a 8 megawatt peak (MWp) solar power plant in the municipality of Nivala, located in central Finland. The amount of energy produced per year is estimated to be approximately 7,240 megawatt-hour (MWh). Skarta's objective is to expand its activities in the value chain of wind power, solar energy and hydrogen to boost its participation in green energy projects.

Just Transition Mechanism - Public Sector Loan Facility

CINEA manages the third pillar of the Just Transition Mechanism, the Public Sector Loan Facility, which supports projects addressing social, environmental and economic challenges deriving from the transition to the Union's climate target objectives.

Budget (2021-2027): €1.3 billion

Key Areas	• Clean energy and energy efficiency measures • Renewable energy and green and sustainable mobility • Efficient district heating networks • Environmental management infrastructure • Sustainable energy measures • Renovations and conversions of buildings • Urban renewal and regeneration
WHO can apply?	• EU Member States • Legal entities: Public bodies or private bodies entrusted with a public service mission • International organisations Projects must benefit a territory covered by a Territorial Just Transition Plan (TJTP) of an EU member State and not generate sufficient revenues to cover the investment costs.
WHAT activities can be funded?	• Urban and energy efficiency development • Innovation projects • Projects upskilling and reskilling • Training/capacity building
Range of EU Contribution	• The expected range of the EC contribution is approximately €15-30 million/project • The Public Sector Loan Facility is a blending facility that combines grants from the EC and loans of the European Investment Bank • The EC contribution is a share of the EIB loan: - 15% of the loan for EU regions in transition - 25% of the loan in EU less developed regions
Links to relevant calls	JTM-PSLF calls for proposals
Target Technology Readiness Level (TRL)	n/a
Project example	Socio-Economic Transition of Western Macedonia (EL) (November 2023 – October 2026) The project aims at improving the energy efficiency of public infrastructure and upgrading cultural/tourism/healthcare facilities as well as the intra-regional road network of the region of Western Macedonia.

Horizon Europe (Climate)

Research and innovation actions aimed at developing mitigation and adaptation strategies and policies to tackle the global climate crisis.

Budget (2021-2027): €10.78 billion [7]

Key Areas	Climate sciences and responses, earth observation & earth system model data, climate-related tipping points, impacts of hydrogen economy, cloud aerosol interaction, pathways to climate neutrality, local adaptation plans, solar radiation modification, behavioural change & governance towards climate resilience, climate change education, climate change in Africa, international cooperation, methane emissions, inland ice, paleoclimatic science, climate & environmental impact of trade policies, next generation pathways, climate change foresight, climate ecosystem interactions, cross-sectoral solutions for climate, energy and mobility applications including European battery value chain, breakthrough technologies.			
WHO can apply?	• EU Member States, associated countries, low- to middle-income countries (see Chapter 8 of the Horizon Europe Programme Guide) • Legal entities: Public or private bodies, natural persons • International organisations Beneficiaries must register in the participant register before submitting applications. For Research and Innovation Actions (RIAs) and Innovation Actions (IAs), consortia must include at least one independent entity established in a Member State and at least two other independent legal entities established in different Member States or associated countries. Legal entities from Member States and associated countries that are public bodies, research organisations or higher education establishments (including private research organisations and higher education establishments) must have a gender equality plan to be eligible.			
WHAT activities can be funded?	• R&I projects • Studies • Technology deployment • Close to market projects • Training/capacity building/awareness • Technical assistance			
Range of EU Contribution	• Research and Innovation Actions (RIAs): up to 100% • Innovation Actions (IAs): up to 70% and in specific calls/topics up to 60% (except for non-profit legal entities, where a rate of up to 100% applies) • Coordination and Support Actions (CSAs): up to 100%			
Links to relevant calls	HE Climate and EU Missions calls for proposals			
Target Technology Readiness Level (TRL)	From 2 (Technology concept formulated) to 8 (System complete and qualified) As detailed in the TRL scale annexed to the Work Programmes of the Horizon Europe EU funding programme.			
Project examples HE Climate & environment featured projects	NAVIGATE (September 2019 – December 2023) The project aimed to advance modelling capability in two directions. Firstly, it improved the representation of transformative structural and technological change in the economy. Secondly, it depicted the distributional implications of climate policies, the impact of climate change and the benefits of mitigation and adaptation strategies in terms of avoided damages and reduced inequality.	MAIA (September 2022 – August 2025) The project seeks to amplify the impact of European climate research by creating synergies between existing projects. It aims to maximise the joint impact of such research by enhancing connections between knowledge and networks. The project will make information more accessible and easier to use. It seeks to expand the reach of knowledge about climate resilience and to make resilient outcomes more economically sustainable.	COMFORT (September 2019 – August 2023) The project offered an integrated approach, examining factors contributing to tipping points in the key areas of marine carbon, oxygen and nutrient cycles as well as marine ecosystems. It combined data analysis and predictive models to create projections of the impact of human actions, including on ocean systems. This allowed policymakers and stakeholders to intervene more effectively with mitigating measures.	EXHAUSTION (June 2019 – January 2024) The project drew on a time-series database in a multi-country observational study with a rich cohort database to investigate the relationship between heat, air pollution and Cardiopulmonary disease (CPD). The project identified how a range of vulnerability factors may affect the probabilities for CPD arising from extreme heat and wildfires and developed advanced adaptation strategies. The consequences of the CPD burden for European economies and the benefits of adaptation were estimated.

[7] Budget for Cluster 5 all sectors – Climate, Energy and Transport (without UK contribution). With estimated amounts on 2021-27 EU Missions.

EU Missions

CINEA is managing and implementing three of the five missions under the Horizon Europe framework programme: Adaptation to Climate Change, Restore our Ocean and Waters by 2030 and 100 Climate-Neutral and Smart cities by 2030.

Budget (2021-2027): €10.5 billion [9]

Key Areas	• **Adaptation to Climate Change Mission**: testing and demonstrating transformative solutions increasing climate resilience of the agriculture and forestry sectors, protecting infrastructure from climate change and building resilience towards health risks cause by climate change • **Restore our Oceans and Waters Mission**: protect and restore marine and freshwater ecosystems and biodiversity, prevent and eliminate pollution, make the sustainable blue economy carbon-neutral and circular • **Cities Mission**: accelerating the transition of European cities to climate neutrality by exploiting the potential of electric, automated and connected as well as shared people mobility and freight transport, engage cities in climate mitigation and adaptation efforts to reduce emissions, based on innovative use of urban greening and nature-based solutions, develop and test a digital twin of a Positive clean Energy District (PED)			
WHO can apply?	• EU Member States, associated countries, low- to middle-income countries (see Chapter 8 of the Horizon Europe Programme Guide) • Legal entities: Public or private bodies, natural persons • International organisations Beneficiaries must register in the participant register before submitting applications. For Research and Innovation Actions (RIAs) and Innovation Actions (IAs), consortia must include at least one independent entity established in a Member State and at least two other independent legal entities established in different Member States or associated countries. Legal entities from Member States and associated countries that are public bodies, research organisations or higher education establishments (including private research organisations and higher education establishments) must have a gender equality plan to be eligible.			
WHAT activities can be funded?	• Demonstration activities • Training and communication activities			
Range of EU Contribution	• Research and Innovation Actions (RIAs): up to 100% • Innovation Actions (IAs): up to 70% and in specific calls/topics up to 60% (except for non-profit legal entities, where a rate of up to 100% applies) • Coordination and Support Actions (CSAs): up to 100%			
Links to relevant calls	HE Climate and EU Missions Calls for Proposals			
Target Technology Readiness Level (TRL)	From 5 (Technology validated in a relevant environment - industrially relevant environment in the case of key enabling technologies) to 8 (System complete and qualified) As detailed in the TRL scale annexed to the Work Programmes of the Horizon Europe EU funding programme.			
Project examples	PlasticPiratesEU (June 2022 – November 2024) The 'Plastic Pirates – Go Europe!' citizen science initiative aims to raise awareness throughout Europe of the importance of rivers, the protection of natural resources and the significance of international research collaboration. The PlasticPiratesEU project aims at upscaling 'Plastic Pirates – Go Europe!' in countries across Europe by raising awareness among citizens and youth on the impact and benefits of research and innovation and increasing the capacity to collect, organise and verify data on plastic waste pollution stemming from and in European rivers, coastlines, and seas.	CLIMATEFIT (September .2023 – December 2026) The project aims to contribute to bridging the resilience financing gap by providing critical insight and building the capacities of public authorities to attract and orchestrate various public and private funding & financing sources. It aims to boost resilience financing in Europe by consolidating the dynamics in Local Resilience Taskforces (LRTs), and to promote and scale its research findings through the European Network of LRTs and its user-oriented One-Stop Shop.	UPPER (January 2023 – December 2026) The project aims to implement a combination of 84 push-and-pull measures, supported by the UPPER Toolkit and seven IT tools, acting on the five innovation axes that condition user choices: mindset and culture, urban mobility planning, mobility services ecosystem, road network management and democratic governance. The UPPER approach will involve communication, operations, infrastructure and urban fabric. The aim is to achieve an efficient, safe, inclusive and affordable public transport system in line with the concept of Mobility as a Right (MaaR).	REALLOCATE (May 2023 – April 2027) By integrating cutting edge sustainable mobility strategies and reallocating street space, the project aims to empower Mission Cities like Gothenburg-Tampere and Heidelberg-Utrecht. Through pilot programmes in unsafe areas, the project foresees to showcase urban space management and reallocation tactics, ultimately fostering knowledge exchange and collaborative learning among staff of different cities.

[9] Budget for Cluster 5 all sectors – Climate, Energy and Transport (without UK contribution). With estimated amounts on Missions 2021-27.

Innovation Fund

EU fund for climate policy, with a focus on energy and industry. It aims to bring to the market solutions to decarbonise the European industry and support its transition to climate neutrality while fostering its competitiveness.

Budget (2021-2027): €16 billion [10]

Key Areas	• Innovative low-carbon technologies and processes in Energy-Intensive Industries (EII), including products that can substitute carbon-intensive ones Carbon Capture, Utilisation and Storage (CCUS) • Maritime transport • Circular economy			
WHO can apply?	• Private or public bodies, established in any country in the world • International organisations Projects must be located in EU Member States or EEA countries (i.e. Norway, Iceland or Lichtenstein). Projects may also be located in Northern Ireland on the condition that they concern the generation, transmission, distribution or supply of electricity.			
WHAT activities can be funded?	Highly innovative technologies, processes, business models or products/services, that are sufficiently mature and have a significant potential to reduce greenhouse gas emissions.			
Range of EU Contribution	Up to 60% (in case of regular grants) and up to 100% (in case of competitive bidding) of the relevant costs calculated according to the methodology indicated in each call for proposals (usually covering capital and operational costs minus revenues over the first ten years of operation).			
Links to relevant calls	IF calls for proposals			
Target Technology Readiness Level (TRL)	From 7 (System prototype demonstration in an operational environment) to 9 (Actual system proven in an operational environment - competitive manufacturing in the case of key enabling technologies, or in space) As detailed in the TRL scale annexed to the Work Programmes of the Horizon Europe EU funding programme.			
Project examples Innovation Fund projects Portfolio Dashboard	Silverstone (December 2021 – December 2030) The project plans to deploy commercial scale CO_2 capture and mineral storage of the emissions of the Hellisheidi geothermal power plant in Iceland, one of the largest geothermal power plants in the world. The project will bring an innovative technology to full commercial scale, demonstrating its competitiveness and enabling the power plant to reach a near-zero carbon footprint.	ECOPLANTA (November 2021 – March 2038) The project will revolutionise municipal solid waste management by using non-recyclable materials rejected by sorting centers to produce circular chemicals and advanced biofuels. The project will deliver first-of-a-kind commercial plant for the European market, using waste that would otherwise end up in landfill. The plant will produce 237 kt/y of methanol, and thereby recover 70% of the carbon present in the non-recyclable materials. The methanol produced will displace fossil-based chemicals and fuels.	eMETHANOLxWSolution (October 2023–December 2029) The project aims to demonstrate an innovative combination of foldable suction sails and a dual-fuel engine designed to fit the new hybrid tanker, thus enabling the use of e-methanol as fuel and wind for increased energy efficiency. The technology used will be able to replace the conventional technology that uses fossil fuels, contributing to the decarbonisation of the shipping industry and customer's zero emission supply chains of renewable fuels in the Baltic Sea and the North Sea.	FUREC (January 2023 – April 2038) The project aims to transform non-recyclable solid waste into hydrogen and provides circular feedstock to the chemical industry. First, the waste is converted into pellets in a waste treatment plant. The dry pellets are then sent to Chemelot, a major chemical cluster, for conversion into hydrogen that is supplied to OCI N.V.'s ammonia production plants. The process uniquely combines torrefaction, milling and entrained flow gasification, followed by the transformation of CO (Carbon monoxide) and water, through synthetic gas, to CO_2 and hydrogen. During the first ten years of its operation the FUREC plant foresees to produce 54,000 tonnes of hydrogen per year.

[10] The Innovation Fund is financed by the EU Emissions Trading System (ETS) revenues. Budget (2020-2030): €40 billion, calculated by using a carbon price of €75/tCO2.

LIFE
(Nature and Biodiversity, Circular Economy and Quality of Life, Climate Change Mitigation and Adaptation)

The Nature and Biodiversity sub-programme aims at the protection and restoration of Europe's nature and halting and reversing biodiversity loss. The Circular Economy and Quality of Life sub-programme aims at facilitating the transition toward a sustainable, circular, toxic-free, energy-efficient and climate-resilient economy and at protecting, restoring and improving the quality of the environment. The Climate Change Mitigation and Adaptation sub-programme will contribute to the shift towards a sustainable, energy-efficient, renewable energy-based, climate-neutral and resilient economy.

Budget (2021-2027): €4.47 billion [8]

Key Areas	• Circular economy & quality of life (circular systems & business models, waste generation & management, quality of air, water & marine resources, air & noise, soil, chemical management, environmental compliance assurance) • Nature & biodiversity protection (conservation & restoration, status of species, habitats & ecosystems) • Climate change mitigation & adaptation (reduction of GHG emissions, reduction & removal of CO_2, adaptation modelling, monitoring, reporting & evaluation, clean energy transition, energy efficiency, renewable, energy, ecodesign, energy labelling, renovation wave, building & construction sector)
WHO can apply?	• EU Member States, listed EEA countries and countries associated to the LIFE Programme or countries which are in ongoing negotiations for an association agreement and where the agreement enters into force before grant signature (please refer to the list of eligible countries provided in the LIFE specific calls) • Legal entities: Public or private bodies • International organisations
WHAT activities can be funded?	• Technology deployment • Close to market projects • Training/capacity building • Incentivising behavioural change • Preparatory projects for legislative & policy priorities • Coordination & support actions • Implementation of best practice actions • Advisory services (Green Assist)
Range of EU Contribution	• Co-financing ≤60% of total eligible costs for Strategic Nature Projects (SNAP), Strategic Integrated Projects (SIP) and Standard Action Projects • Up to ≤75% of total eligible costs for standard action under nature & biodiversity
Links to relevant calls	• LIFE Calls for Proposals • LIFE Calls for Tenders
Target Technology Readiness Level (TRL)	From 4 (Technology validated in a lab) to 5 (Technology validated in a relevant environment - industrially relevant environment in the case of key enabling technologies). When applicable: from 4 to 9 (Actual system proven in an operational environment - competitive manufacturing in the case of key enabling technologies, or in space)* As detailed in the TRL scale annexed to the Work Programmes of the Horizon Europe EU funding programme. *Not applicable for the LIFE Nature and Biodiversity sub-programme.

Project examples LIFE featured projects	LIFE UrbanStorm (September 2018 – February 2023) The LIFE UrbanStorm project dealt with finding solutions to floods caused by heavy rains in urban areas and identifying sustainable urban drainage solutions suitable for Estonian conditions. The project produced a useful guide on Sustainable Urban Drainage Systems, legal recommendations and was among the finalists for Baltic Sustainability Award at the Baltic Sustainability Forum in 2021.	LIFE Multi Peat (October 2021 – September 2026) The project aims at carrying out large-scale restoration of degraded peatlands in Germany, Poland, the Netherlands, Belgium and Ireland leading to a stop of greenhouse gas emissions and re-establishing the natural function of carbon sinks. The project also foresees the development of effective policy tools that will bring together all the relevant information on peatland management for policy makers, climate change activists, experts and the public.	LIFE TECMINE (November 2017 – May 2022) The project focused its intervention on the environmental rehabilitation of the Fortuna de Ademuz mine in the Valencian Community in Spain. The project aimed to apply revegetation techniques, water management and recreation of natural reliefs with the application of the GeoFluv method to reduce erosion and the formation of fertile soil. During project implementation, the same restoration methods were replicated in 4 further sites in Spain and Sweden. The project won the 2023 LIFE Award in the Citizens Award category.	LIFE Luchs Pfälzerwald (January 2015 – September 2021) The project successfully re-established a lynx (*Lynx lynx carpathicus*) population in the Palatinate Forest in southwestern Germany. This was achieved through a reintroduction programme involving the release of 20 lynx. By the end of the project, at least 18 cubs were born. Migration to the Central Vosges was documented and the birth of offspring was proven in the Northern Vosges in 2021. This newly-established population is expected to serve as a 'stepping stone', interlinking other lynx populations. The project won the 2023 LIFE Award in the Nature Award category.

[8] For the four sub-programmes: Nature and biodiversity – Circular economy and quality of life – Climate change mitigation and adaptation – Clean energy transition.

European Maritime Fisheries and Aquaculture Fund

EMFAF supports a sustainable blue economy by implementing actions in the field of the European Union's Maritime Policy, the Common Fisheries Policy and the EU international ocean governance agenda.

Budget (2021-2027): €291.6 million

Key Areas	• Sustainable maritime transport • Offshore renewable energy • Aquaculture • Blue economy • Blue careers & skills and ocean literacy • Sustainable blue finance and innovation • Maritime Spatial Planning • Maritime security • Scientific advice for fisheries • International Ocean Governance			
WHO can apply?	• EU Member States, third countries listed in the yearly work programme (see Article 61 of EMFAF Regulation) • Legal entities: Public or private bodies • International organisations			
WHAT activities can be funded?	• Studies • Technology deployment • Close to market projects • Training/capacity building • Technical assistance • R&I projects • Awareness raising • Regional cooperation • Scientific advice			
Range of EU Contribution	For grants, the exact co-funding rate may vary depending on each call for proposals but generally it is in the range of 70-80% of total eligible costs. For contracts, the budget is indicated in the call for tenders or request for service.			
Links to relevant calls	EMFAF Calls for Proposals EMFAF Calls for Tenders			
Target Technology Readiness Level (TRL)	From 3 (Experimental proof of concept) to 7 (System prototype demonstration in an operational environment) As detailed in the TRL scale annexed to the Work Programmes of the Horizon Europe EU funding programme.			
Project examples EMFF and EMFAF featured projects	EU WeMED_NaTOUR (July 2022 – October 2024) The project is developing eco-smart tourism packages for school trips in natural marine and coastal sites in several countries in the western Mediterranean. It will contribute to more sustainable and responsible touristic exploitation of natural marine heritage, educating younger generations on eco-sustainability and helping boost the market for ecotourism and the competitiveness of tourism SMEs.	AQUAWIND (September 2022 – August 2025) The aim of the project is to demonstrate at pilot scale the feasibility of a multi-use (MU) offshore renewable energy and aquaculture prototype that will be more sustainable and improve the use of marine space. The project will provide a roadmap for regulatory and legal issues that need to be addressed for real implementation of MU projects, taking advantages, and facilitating interaction with previous and ongoing EU funded projects.	REMAP (November 2022 – October 2025) The aim of the project is to set-up strategies and approaches to review maritime spatial plans (MSP), allowing interoperability and enabling EU Member States to share maritime spatial planning data and assessment information. The main objective is to provide EU Member States with a ReMAP innovative technical framework for the support of the European MSP process. The ReMAP technical framework is mainly aimed at the review, assessment performance and improvement of the adopted plans.	GREEN MARINE MED (October 2023 – September 2025) The project aims to support the shift towards green shipping in the Mediterranean. It will establish the Mediterranean Green Shipping Network that will bring together a comprehensive range of stakeholders including vessel owners, ports, marinas, fuel and energy sectors, finance, investment, innovators and entrepreneurs. The Network will develop a joint vision, including a roadmap on green shipping innovation and a financing guide.

Just Transition Mechanism - Public Sector Loan Facility

CINEA manages the third pillar of the Just Transition Mechanism, the Public Sector Loan Facility, which supports projects addressing social, environmental and economic challenges deriving from the transition to the Union's climate target objectives.

Budget (2021-2027): €1.3 billion

Key Areas	• Smart waste management • Smart water management infrastructure • Circular economy • Land and ecosystem restoration and decontamination • Biodiversity • Sustainable urban development	
WHO can apply?	• EU Member States • Legal entities: Public bodies or private bodies entrusted with a public service mission • International organisations Projects must benefit a territory covered by a Territorial Just Transition Plan (TJTP) of an EU Member State and not generate sufficient revenues to cover the investment costs.	
WHAT activities can be funded?	• Infrastructure development • Innovation projects • Projects upskilling and reskilling • Training/capacity building	
Range of EU Contribution	• The expected range of the EC contribution is approx. €15-30 million/project. • The Public Sector Loan Facility is a blending facility that combines grants from the EC and loans of the European Investment Bank. • The EC contribution is a share of the EIB loan: - 15% of the loan for EU regions in transition - 25% of the loan in EU less developed regions	
Links to relevant calls	JTM-PSLF calls for proposals	
Target Technology Readiness Level (TRL)	n/a	
Project examples	Ostrava Concert Hall (September 2023 – January 2028) The project aims to build a new music venue with world-class acoustics as an extension of the existing House of Culture. The project will support the development of cultural infrastructure and contribute to the revitalisation of Ostrava, a former mining city which still maintains the traditional production of steel. The establishment of a new cultural venue will strengthen the city's attractiveness to both its inhabitants and visitors and facilitate the socio-economic transformation of the Moravian-Silesian region, one of the three Czech coal regions currently shifting towards a low-carbon economy.	SHERIS (January 2023 – December 2027) The project supports the construction of 7 sustainable and affordable housing complexes in Northern Sweden (municipality of Skellefteå). The project helps the SE municipality of Skellefteå address the increasing demand of a rapidly growing population for sustainable and affordable housing, helping the city respond to its transformation needs. The project proves that the challenges deriving from the green transition can be addressed, and that EU investments are available to ensure so that no one and no region is left behind.

SYNERGIES AMONG **CINEA'S PROGRAMMES**

All CINEA managed programmes contribute in a complementary manner to fund a green future for Europe, while each programme has its own specific scope and features. Consequently, projects can develop synergies either as a progression from one programme to another (for example from research to deployment and market roll-out), or they can complement each other whilst working in the same thematic area by tackling issues from different perspectives[11].

EXAMPLES OF SYNERGIES

PROGRESSION - **FROM RESEARCH TO DEVELOPMENT**

Several Horizon 2020 (H2020) funded projects contributed to the development and testing of an innovative technology which captures carbon dioxide from the air, dissolves it in water and finally turns it into stone. The industrial/academic research programme CarbFix project laid the foundations for this technology, which was subsequently scaled up and tested by the award-winning CarbFix2 project at the Hellisheidi geothermal plant in Iceland. The Carbfix technology will be brought to full commercial scale by the Silverstone project, financed by the Innovation Fund, which will deploy commercial scale CO_2 capture and mineral storage of the emissions in the same geothermal power plant in Iceland, enabling Hellisheidi to reach a near-zero carbon footprint.

Intelligent Transport Systems (ITS) solutions which are today deployed in the CEF Transport Arc Atlantique Corridor Phase 32 Project on roads in Belgium, France, Ireland, the Netherlands, Spain and the UK have matured in three different H2020 Transport projects: the HIGHTS project, which developed a high-precision technology allowing to position vehicles with the accuracy of 25 centimetres, the ARTIC project that resulted in an intelligent car-to-car communication system and the CarNet project that brought to the market a high-speed data transmission antenna to enable better communication between vehicles and infrastructure.

In the challenge to take steelmaking to near zero emissions, the LIFE SMART project in Ghent (Belgium) aims to replace part of the fossil coal fuel by a mix of industrial residuals and non-recyclable plastics with a high carbon content, in the form of pellets. These pellets are then transformed into intermediate coke or powder coal in the coking plant or torrefaction installation tested under the H2020 TORERO

[11] In compliance with the principle of no double funding laid down in Article 191 of the Financial Regulation.

project. These are then fed into a blast furnace to turn iron ore into steel. During this process, exhaust gases can be converted to ethanol (a useful molecule for the chemical industry) in the installation created under the H2020 STEELANOL project.

COMPLEMENTARITY – **WORKING SIDE BY SIDE IN THE SAME THEMATIC/GEOGRAPHICAL AREA**

INDUSTRIAL CARBON MANAGEMENT

Three programmes (Horizon Europe, the Innovation Fund and the Connecting Europe Facility) work together to support decarbonisation in the North of France. An innovative process of carbon capture from industrial activities is demonstrated by the 3D Project co-funded by Horizon 2020. It combines partners from research and industry and explores validation of replicable technical solutions at a steel industry in the port of Dunkirk.

The K6 Project, funded by the Innovation Fund, will transform one of the oldest cement plants in Europe, situated in Hauts de France. The project will deploy a first-of-a-kind industrial-scale combination of an airtight kiln and cryogenic carbon capture technology. The captured CO_2, otherwise emitted in the atmosphere, will be stored in a permanent storage site in the North Sea (this part of the technology chain falls outside the Innovation Fund project).

Finally, these two projects will be key in supporting the development of a strategically important CO_2 export hub in the port of Dunkirk, which is supported by the CEF programme under the D'Artagnan Project. The Project develops a CO_2 export Multimodal open access Hub in Dunkirk, and is a Project of Common Interest (PCI) under the Trans-European Networks for Energy (TEN-E Regulation), potentially expanding this value chain and logistic solution to emitting industries in Belgium.

WATERBORNE

Projects funded by Horizon Europe and CEF Transport address the need for reducing CO_2 emissions and air pollution from waterborne transport by testing and deploying new technological solutions for 100% electrically powered vessels.

E-Ferry is an H2020 innovation project developing and testing an electric ferry with the world's largest battery, allowing it to travel further than existing electric ferries before needing to be recharged. Zero Emissions Ferries is a CEF Transport project that converted two existing complex roll-on/roll-off passenger ships – originally fuelled by heavy oil – to electric powered operation exclusively using batteries. The required power provision and charging installations in the ports/ferry terminals were also realised as part of the project.

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