

SET4BIO

RENEWABLE FUELS AND BIOENERGY FOR A LOW-CARBON EUROPE - ACCELERATING THE IMPLEMENTATION OF THE SET-PLAN ACTION 8

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EXECUTIVE SUMMARY

Deliverable 1.3 summarises information related to existing funding mechanisms that can be of interest to support the development of the projects defined in the Implementation Plan of IP8 dedicated to bioenergy and other renewable fuels. It aims at being a guide for project developers who are looking for public and private funds to finance their project. Originally, the focus of the document was on private financing. However, following discussions with IP8, its scope has been broadened to include relevant public funding mechanisms as well. In fact, if the document aims at being a guide for project developers, its scope should be as broad as possible to cover grants, loans and equity. Given the variety of national support programmes, a [call](#) was published as part of the SET4BIO project in order to receive this information. The replies were used to provide input to Deliverable 4.4 “Best practices and recommendations for project implementation support programmes”.

The listed funding instruments are classified according to their stage of development, as measured by their Technology Readiness Level (TRL), the needed amount of funds, and the preferred type of instrument (grant, loan and/or equity). Tables detailing each instrument are listed in the Annex.

This is the project’s final update. However, given that funding programmes are being updated and more are being made available that could further support the development of bioenergy and alternative fuels projects, it would be useful to keep regularly updating and making such a document available.

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Statement of Originality

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

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Introduction

Renewable energy can be financed using a variety of instruments, from grants to concessional debt and equity to purely commercial debt and equity. Typically, more mature markets and technologies are financed with private finance on commercial terms, whereas grants and concessional finance are often used to stimulate investments in previously untested technologies and/or countries.

Several instruments and/or facilities have been launched in the EU in the past years to support investments in the field of energy (mainly in the form of loans, equity, and guarantees). An analysis of the existing European financial instruments related to energy investments and their applicability for First-Of-A-Kind SET Plan demonstration projects was carried out by the JRC in their “Report on Innovative Financial Instruments for the Implementation of the SET Plan, First-Of-A-Kind projects”¹, and updated in the report on “Innovative Financial Instruments for First-of-a-Kind, commercial-scale demonstration projects in the field of Energy”².

Since then, other instruments have been created, or are in the process of being launched, which might be interesting to support private investments into renewable based fuels and other technologies covered by IWG8.

For instance, the **Green Deal Investment Plan** is the investment pillar of the Green Deal. The European Green Investment Plan will offer sustainable investments over the next decade with three main objectives:

- First, it will increase funding for the transition, and mobilise at least €1 trillion to support sustainable investments over the next decade through the EU budget and associated instruments, in particular InvestEU.
- Second, it will create an enabling framework for private investors and the public sector to facilitate sustainable investments.
- Third, it will provide support to public administrations and project promoters in identifying, structuring and executing sustainable projects.

On the other side, other financial instruments, which were linked to the current Multi-Annual Financial Framework 2014-2020 and HORIZON2020 (e.g. EFSI, InnovFin Energy Demo Projects) are in the last phases of their existence and are not presented in this report, given that they will soon be substituted for new and/or updated instruments which are covered in the Multi-Annual Financial Framework 2021-2027. These new instruments are presented in this report.

Several portals have also been launched in order to support companies that are looking for funds to invest in their growth. One of particular interest is the [European Investment Project Portal \(EIPP\)](#), which allows project promoters in the EU to give visibility to their projects to a large network of international investors.

One of the main issues for small players is how to promote their projects towards private equity investment funds. Advisory Hubs and Accelerators can provide this role. A couple of online tools are also available to look for suitable investors:

- A list of investors in the clean technologies, energy and environment sector is accessible on the website www.euroquity.com. On this web platform, a previous project co-financed by the European

¹ JRC, 2013. <https://setis.ec.europa.eu/sites/default/files/reports/Set-Plan-Financial-Instruments.pdf>

² European Commission, September 2016

http://ec.europa.eu/research/energy/pdf/innovative_financial_instruments_for_FOAK_in_the_field_of_Energy.pdf

Union which aims at bringing together companies and investors, is possible to select the type of investors we are looking for according to:

- Category of investors (e.g. individual, business angel, business angels network, crowdfunding platform, investment fund, corporate venture, and bank).
- Type of sector (e.g. in our case, the interesting sector is the one related to clean technologies, energy and environment.t).
- Country
- Label (e.g. Seal of Excellence; EUREKA Accelerated, InvestHorizon Accelerated...).
- A list of investors can also be retrieved from the website www.investeurope.eu, where relevant investors can be searched according to the country, the sector (e.g. energy and environment; transportation), and the stage of financing.

1. Types of financing

The present Deliverable aims at being a guide for project promoters who are developing projects in the area of renewable fuels and bioenergy, and presents the main financial instruments available for First-Of-A-Kind projects classified according to: grants, equity investments and loans.

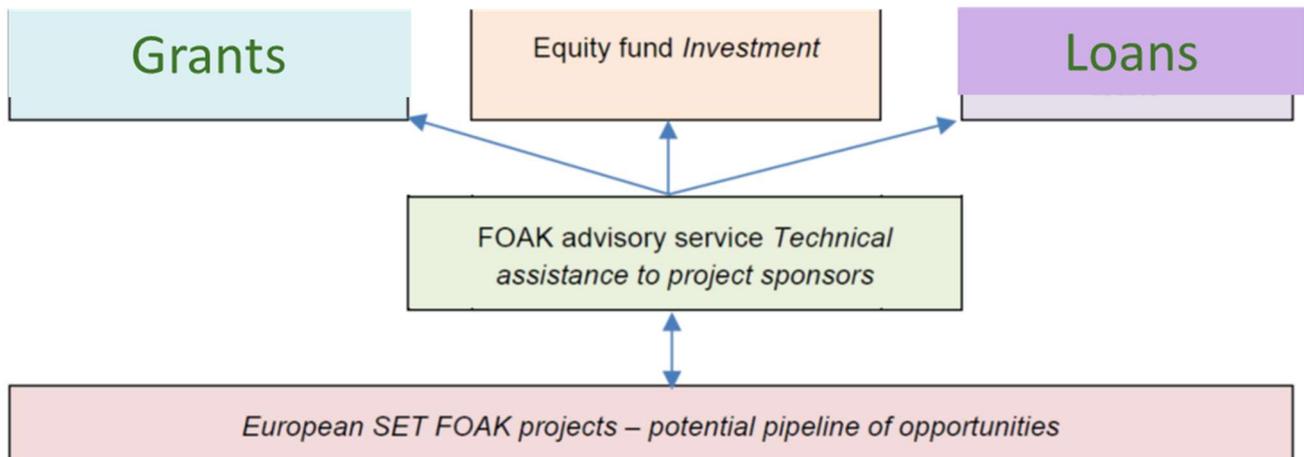


Figure 1- Innovative Financial Instruments for First-of-a-Kind, commercial-scale demonstration projects in the field of Energy, ICF (2016)

Renewable energy can be financed using a variety of instruments, from grants to concessional debt and equity to purely commercial debt and equity. Typically, more mature markets and technologies are financed with private finance on commercial terms, whereas grants and concessional finance are often used to stimulate investment in previously untested countries.

Depending on the project's characteristics and needs, different types of funding can be sought for and, eventually, combined:

- **Grants** are non-repayable funds or products disbursed or given by one party, often a government department (e.g. European Union), corporation, foundation or trust to a recipient such as a non-profit entity, educational institution, business or an individual. In order to receive a grant, some form of "Grant Writing" often referred to as either a proposal or an application is required. Most grants are made to fund a specific project and require some level of compliance and reporting.
- **Equity investment** is an operation where an individual or company invest money into a private or public company to become a shareholder. Private equity is a form of professional investment that involves taking an ownership interest (equity) in a company and holding it private hands – as opposed to on a public stock exchange. Private equity makes long-term investments into small, medium and large companies with the aim of making them bigger, stronger and more profitable. Private equity is typically a medium to long-term investment. The managers are actively involved in running the business they have invested in over many years. Venture capital is private equity investment that is focused on start-up companies. VCs back entrepreneurs who have bright ideas but need finance and expertise to get their companies off the ground and grow. In order to disburse the money, the equity investors would require a return on the investment.

- **Loan** is the lending of money by one or more individuals, organizations, or other entities to other individuals, organizations etc. The recipient (i.e., the borrower) incurs a debt and is usually liable to pay interest on that debt until it is repaid as well as to repay the principal amount borrowed. In this document, we focus on commercial loans which are loans to businesses.

These three types of financing instruments can be combined and used for the same project, according to its needs. However, the project's financial structure should be kept as simple as possible; for example, several different sources of debt should not be used if sufficient finance can be raised from one source, as it is far quicker and easier to deal with one group of lenders.

The decision on the type of funding depends on the project's characteristics, such as:

- Stage of development of a project.
- Amount of financing.
- General obligations, including cost and timing of disbursement of the financing.

In the following paragraphs, we will present in more details the main factors that have an impact on the choice of the funding instrument.

An additional chapter details the risks related to the investment and how to prepare an appropriate risk-mitigation strategy:

- Market-related (commercial risk).
- Technology-related (construction or operational risk).
- Policy-related.

In the Annex, we will present detailed Tables per funding instrument.

2. Stage of development of a project

The stage of development of a project normally influences its risk, especially the ones related to market and technology, and has an effect on the better suited financing instruments.

The classification based on the **Technology Readiness Level** (TRL) is usually employed to define the maturity of technologies during the acquisition phase of a programme.

The Table below presents the TRLs, as defined at European level, and the related funding instruments, as described in the Annex.

Given that this Deliverable focuses on financing instruments for First-of-a-Kind innovative projects, the funds which are presented in the Annex mainly cover the higher TRLs, meaning deployment-related projects.

	TRL	Stage of project development	Funding instrument		
DEPLOYMENT	9	<i>Actual system proven in operational environment</i>	<ul style="list-style-type: none"> Private capital (early stage) BEV EIB 	<ul style="list-style-type: none"> Private capital (later stage) InvestEU 	<ul style="list-style-type: none"> European Circular Economy Fund RRF JTF CETP EUREKA InnoEnergy BEV Catalyst Horizon Europe/Pillar II
	8	<i>System complete and qualified</i>	<ul style="list-style-type: none"> Modernisation Fund EIC Fund EBRD Marguerite II Fund New RE financing mechanism Interreg Europe LIFE I3 Instrument 	EIC Accelerator	
	7	<i>System prototype demonstration in operational environment</i>	<ul style="list-style-type: none"> EU Innovation Fund BEV Fellows Programme Interreg 	<ul style="list-style-type: none"> Seed VC and business angels EIC Accelerator LIFE I3 Instrument 	
DEVELOPMENT	6	<i>Technology demonstrated in relevant environment</i>	<ul style="list-style-type: none"> EU Innovation Fund BEV Fellows Programme Interreg I3 Instrument 	EIC Transition	<ul style="list-style-type: none"> JTF CETP KIC InnoEnergy BEV Catalyst Horizon Europe/Pillar II
	5	<i>Technology validated in relevant environment</i>	<ul style="list-style-type: none"> EU Innovation Fund BEV Fellows Programme Interreg 		
	4	<i>Technology validated in Lab</i>			

RESEARCH	3	<i>Experimental proof of concept</i>	EIC Pathfinder		
	2	<i>Technology concept formulated</i>			
	1	<i>Basic principles observed</i>			

Grants and non-repayable loans are normally used in the first phases of research and development of a project, while private equity and commercial loans are made available once there is a clear market identified for the developed product and/or service.

3. Funding range

The overall project cost is composed of all costs that are billed to a specific project. These can be both costs directly charged to the project, and indirect expenses that comprise the cost of everything that is not directly linked to primary project operations but is required to support them.

The project costs can include: personnel costs, supply costs (e.g. in case raw materials need to be purchased), production equipment and construction costs, costs related to address and mitigate project-related risks (e.g. insurance).

According to the overall investment that is needed by the project proposers, different funding instruments can be used.

The Table below summarises the type of financing instruments that can be used, according to the project cost.

Project cost	Funding instruments			
<3.000.000€	<ul style="list-style-type: none"> • Venture capital • Interreg Europe • BEV Fellows Programme • LIFE 	<ul style="list-style-type: none"> • Innovation Fund small-scale (less than 7.500.000€) • CETP • EUREKA • KIC IE (until 5.000.000€) 	EIC	
3.000.000-10.000.000€	<ul style="list-style-type: none"> • Growth capital • ECBF (for TRL 6-8) • Horizon Europe/Pillar 2 • I3 Instrument 	<ul style="list-style-type: none"> • KIC IE (until 5.000.000€) 		<ul style="list-style-type: none"> • EBRD • RRF • JTF • New RE financing mechanism
10.000.000-15.000.000€	<ul style="list-style-type: none"> • ECBF (for TRL 9) • BEV Catalyst 	Innovation Fund large-scale (more than 7.500.000€)		
>15.000.000€	<ul style="list-style-type: none"> • Buyout capital • Marguerite Fund • EIB 			

4. General obligations

According to the type of funding that is solicited to start a project, there will be a cost linked to it:

- If a grant is requested, normally, the project proposer will need to prepare several documents and Deliverables that justify how the received grant is being spent according to the Grant Agreement, initially signed with the disbursing authority, and that the agreed results are being achieved.
- If a loan is borrowed, it will need to be paid (repayment obligation) together with a return (normally, an agreed interest rate) which rewards the lender from anticipating the money needed to develop the project. The interest rate is set according to the risk that the lender perceives in the project (presented in the next chapter).
- Equity usually gives ownership of the investment, and it is the risk-taking part of the funding. In a company, equity is often issued as share capital. Unlike debt, you do not have a repayment obligation to the equity investor. Instead, as a (co-) owner of the investment, the equity investor will be entitled to the full returns that the project generates, minus the interest paid to the lenders and minus the repayment obligation to the lenders.

The proposer, therefore, when looking for the best type of financing for its project should also take into account the cost related to the borrowed amount, as well as other conditions that the lender will attach to the disbursed amount.

For instance, it should be considered that a loan is less risky for the lender, than equity is for the investor. This is because of the repayment obligation in a loan, the priority to funds and the agreed interest rate. For this reason, a lender is usually satisfied with a lower interest rate than an equity investor. Therefore, equity is more expensive than debt for the project proposer. As a result, having more equity increases the project's overall funding cost.

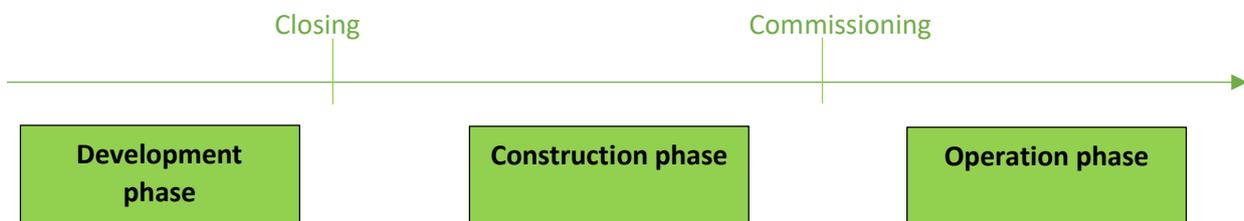
Equity	Grants	Loans
Private equity investments		
Breakthrough Energy Ventures		
	EIC	
		Invest EU (guarantee)
	EIB BEV Catalyst	
	Modernisation Fund Resilience and Recovery Facility New RE Financing Mechanism	
EBRD		EBRD
	EU Innovation Fund	
	Just Transition Fund	
	CETP	
	EUREKA	
	KIC InnoEnergy	
	LIFE	
	Interreg	
	I3 Instrument	
	Horizon Europe/Pillar 2	

The timing of disbursement of a fund, either public or private, is also to be taken into account by the developer, since it can have an impact on the project development and success as well. In fact, in case a developer needs to receive funds on a relatively short notice, it should rather focus on equity and loans which can be disbursed in a relatively shorter time than grants whose availability is dependent on scheduled calls.

5. Risk management

It is important to prepare a thorough risk management and mitigation plan that should be revised several times during the project, according to the new information and unexpected events that arise. This has to be done by the project proposer, since lenders (e.g. banks) are often risk averse, and would not invest in a project unless a clear risk mitigation plan is presented.

The risk management plan needs to include all phases of a project development, and the risk analysis should start as soon as possible:



By the time of the closing of the development phase, all relevant contracts would have been signed, and the rights and responsibilities of the project's participants would have been closed. Therefore, it is important, in order to attract investors and keep the financing cost as low as possible, that a thorough risk management plan has been performed. The risk management plan should try to answer all questions that potential investors might have, and should aim at avoiding "sunk costs", which are those costs that would not be avoided in case the project is not financed.

All the risks that are retained by the project company will increase its funding cost.

There are several risks to be managed in a project:

- **Commercial risk** related to the non-materialisation of the expected revenues. In order to mitigate this risk, the project proposer needs, first of all, to determine potential revenues, by taking into account:
 - Realistic production.
 - Realistic demand.
 - Realistic price per unit.

A way to minimise this risk is to sign an offtake agreement where the buyer commits to purchase a certain quantity of the product at a certain price over a certain number of years. This duration should be as long as the duration of the loan. The offtake agreement should also specify what happens in case the buyer does not purchase the product. Normally, a penalty would be foreseen.

- **Construction and operational risk**, in case the project foresees, for instance, the construction of a manufacturing plant. In this case, it will be necessary to make sure that such a plant is built on time, in order to start the operation phase, when revenues are going to be generated, on time. All delays

and problems related to the construction of the plant will, in fact, generate important sunk costs for the project promoter. Moreover, after the construction is completed, a phase of Operation and Maintenance (O&M) should also be foreseen, in order to make sure that eventual problems arising, would be dealt with timely. This risk is particularly important for those innovative projects whose technologies have not been fully demonstrated yet.

- **Policy and regulatory risk** related to the possibility that a new regulatory framework, which has a negative impact on the project operation, will be adopted during the project lifetime. This is of special importance for projects in the area of bioenergy, given the changing support that European governments are currently giving to this technology. In recent years, several limits to the use of biomass have been introduced (e.g. more and more stringent sustainability criteria) that could have important repercussions on the possibility for a biomass project to attract financing. The EU Taxonomy regulation³ aims at limiting this risk by clearly defining technical criteria that potential investors can easily refer to when deciding whether to support a certain project.

³ https://ec.europa.eu/info/law/sustainable-finance-taxonomy-regulation-eu-2020-852_en

6. Conclusions and Outlook

Conclusions are reported in the form of a Summary Table of the main instruments that will be presented in the Tables in Annex, and their applicability to IWG8 projects. This Table will be regularly updated to take into account new and updated information with special reference to the instruments included in the Multi-Annual Financial Framework 2021-2027, as well as to include feedback from interested stakeholders such as the IWG8, and the selected projects for the Innovation Challenge.

<i>Instrument name (organisation)</i>	<i>Type of instrument</i>	<i>Project Funding Level</i>	<i>TRL</i>	<i>Suitability to bioenergy and alternative fuels projects</i>
Private equity investments	Equity	Venture capital: 2.000.000-2.500.000€ (average investment per company). Buyout: 15.000.000- 150.000.000€ Growth: 8.000.000-10.000.000€	>7	In general, there is a lack of interest from private financial market participants, mainly related to the specificities and associated lack of understanding of the bio-based industries. Several Funds have been recently launched. An interesting one for the purpose of IWG8 projects seems to be the <i>European Circular Bioeconomy Fund (ECBF)</i> .
Marguerite	Equity	30- 75 million €	>8	<ul style="list-style-type: none"> • Energy and renewables: Generation from renewable sources; Low-carbon hydrogen initiatives; Transmission, distribution and storage of low carbon gases and electricity; Carbon Capture and Storage; Energy and resource efficiency; Emerging technologies. • Transport: Sustainable urban transport, e-mobility; Alternative fuels for mobile maritime and inland navigation infrastructure.

Instrument name (organisation)	Type of instrument	Project Funding Level	TRL	Suitability to bioenergy and alternative fuels projects
BEV	Equity	Average in the same range as venture capital.	>7	Covered technologies: Low-GHG Liquid-Fuels Production–Non-Biomass; Low-GHG Gaseous Fuels Production–H ₂ , CH ₄ ; Low-GHG Liquid Fuels Production–Biomass.
BEV Fellows Programme	Equity (patient capital)	Approximately \$1-3 million per year in research and development funding for lab space, office space, equipment, supplies, technical consultants, and staff.	5-7	Electrofuels, hydrogen, fertilisers: technologies that have the potential to reduce carbon emissions by at least 500 million tons per year by 2050
EU Catalyst	Blended finance: Grants Equity Loans	Between 10 and 20 million € on average.	>5	<ul style="list-style-type: none"> • Green hydrogen • Sustainable aviation fuel (SAF)
EIC	Grants	3- 15 million €	>4	Open calls (bottom- up approach), and selected specific challenges.
EIC Fund	Grants Equity	Equity from €0.5m to €15m.	>7	Bottom-up approach.
InvestEU	Guarantee	Depending on conditions of financial partners.	>9	The InvestEU Fund will target economically viable projects in areas where there are market failures or investment gaps. It will also target higher risk projects in specific areas.
European Investment Bank	Loans Equity Guarantee Blending	It varies depending on the type of instrument.	>7	Several possibilities are available. The line <i>Innovation and new types of energy infrastructure</i> specifically covers SET-Plan related projects.
Modernisation Fund	Member States are free to decide on the form of support: grants, premium, guarantee instruments, loans	The EIB will consider financing up to 75% of the eligible cost of all energy projects eligible under this energy lending policy situated within those Member States benefitting under the Modernisation Fund.	>7	Priority investments have to fall into a priority area as defined by the ETS Directive, with the EIB confirming this. Only projects located in these Member States are eligible: Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia.

<i>Instrument name (organisation)</i>	<i>Type of instrument</i>	<i>Project Funding Level</i>	<i>TRL</i>	<i>Suitability to bioenergy and alternative fuels projects</i>
European Bank for Reconstruction and Development	Loans Equity	EBRD financing for private sector projects generally ranges from \$5 million to \$250 million. The average EBRD investment is \$25 million.	>8	Projects may be considered for EBRD assistance if they: <ul style="list-style-type: none"> • Are located in an economy where the EBRD works. • Have good prospects of being profitable. • Have significant equity contributions in cash or in kind from the project sponsor. • Would benefit the local economy. • Satisfy the EBRD's environmental standards as well as those of the host country.
Horizon Europe/Pillar 2	Grants	2- 10 million €	>4	Several topics related to renewable energy, sustainable biomass, sustainable mobility, sustainable aviation fuels, bioeconomy.
EU Innovation Fund	Grants	It may finance up to 60% of the relevant cost (additional costs borne (considering both CAPEX and OPEX) by the applicant as a result of the application of the innovative technology related to the reduction or avoidance of the GHG emissions, compared to a reference scenario).	>5	<ul style="list-style-type: none"> • Innovative low-carbon technologies and processes in energy-intensive industries, including products substituting carbon intensive ones. • Carbon capture and utilisation (CCU). • Construction and operation of carbon capture and storage (CCS). • Innovative renewable energy generation. • Energy storage. • Aviation and maritime applications.

Instrument name (organisation)	Type of instrument	Project Funding Level	TRL	Suitability to bioenergy and alternative fuels projects
Resilience and Recovery Facility	Loans Grants	Depending on the proposals by each Member State.	>4	Several flagship areas can cover projects in the field of bioenergy and alternative fuels: POWER UP; RENOVATE; RECHARGE and REFUEL.
Just Transition Fund	Grants (co-financing by the Member State of 50%)	Depending on the proposals by each Member State.	>4	This Fund targets support to regions that need to move away from fossil fuels. Bioenergy and alternative fuels represent an important sustainable alternative to be targeted.
CETP	Grants (EU co-financing at 30%)	Each Member State will finance the partner organisations. The Commission will co-fund the Partnership for up to 30%.	>4	It is included within the scope.
EUREKA	Grants (co-financing by the industrial partners)	Co-finance by each participating Member State.	>4	Bottom-up approach.
EIT InnoEnergy	Grants	Average investment between 100k € to 4-5m €. However, the total budget of the project depends on the initiative itself. KIC will consider funding between 20 % to 80 % of the proposed project budget.	>5	Included in the scope.
New RE financing mechanism	Grants Loans	The size of the grant is determined by the outcome of the tender procedure, where only the most competitive projects will be selected and to receive support.	>7	Included in the scope, but it needs to be in line with EU Taxonomy.
Interreg Europe	Grants (between 75 and 85%)	Total fund: 474 million €. 278 projects: 1.7 million for each project.	>5	<ul style="list-style-type: none"> • Research and innovation. • SME competitiveness. • Low-carbon economy: renewable energies for agriculture.

<i>Instrument name (organisation)</i>	<i>Type of instrument</i>	<i>Project Funding Level</i>	<i>TRL</i>	<ul style="list-style-type: none"> • Environmental resource efficiency. <i>Suitability to bioenergy and alternative fuels projects</i>
I3 Instrument	Grants (70% of EU contribution for all cost categories)	2- 10 million €	>6	Accelerating innovation, bringing innovative solutions and new products in: <ul style="list-style-type: none"> • Digital transition • Green transition • Smart manufacturing
LIFE/Clean Energy Transition	Grants (Maximum EU co-financing rates for projects are 60%, 75% and 95%, depending on the project type and topic)	Depending on the type of calls.	>7	Sustainable bioenergy

This is the fourth draft of the SET4BIO Deliverable 1.3. Regular updates are foreseen until the end of the project. This draft includes the feedback received from two workshops organized with representatives of the SET-Plan IWG8 on 28th September 2020, and on 16th March 2021, as well as from the presentation during the Innovation Challenge workshop on 15th April 2021.

ANNEXES

1. Private equity investments

Short description	Private equity makes long-term investments into small, medium and large companies with the aim of making them bigger, stronger and more profitable ⁴ . Private equity is a form of professional investment that involves taking an ownership interest (equity) in a company and holding it private hands – as opposed to a public stock exchange. Private equity investments are primarily made by: private equity firms, venture capital firms, angel investors each with its own set of goals, preferences, and investment strategies. For instance, venture capital is private equity investment that is focused on start-up companies. VCs back entrepreneurs who have bright ideas but need finance and expertise to get their companies off the ground and grow.
Covered topics (focus)	Private equity investments in the energy and environment sector amounted to 3,3% of the overall private equity investments in 2019, according to InvestEurope ⁵ .
Typology of funded projects	Different types of private capital investments exist according to the project's stage of development: <ul style="list-style-type: none"> • Venture capital: <ul style="list-style-type: none"> ○ Seed venture capital and business angels (TRL 7-8): ○ Early stage (TRL 8-9): Funds focused on investing in companies in the early stages of their life (e.g. start-ups). ○ Later stage (TRL>9)– Funds providing capital for an operating company which may/may not be profitable. • Buyout. Funds acquiring companies by purchasing majority or controlling stakes, financing the transaction through a mix of equity and debt. • Growth (TRL >9). Funds that make private equity investments in relatively mature companies that are looking for primary capital to expand and improve operations or enter new markets to accelerate the growth of the business.
Funding range	Venture capital: 2.000.000-2.500.000€ (average investment per company) Buyout: 15.000.000- 150.000.000€ Growth: 8.000.000-10.000.000€
Timing/availability	Around one year
Duration of the investment	Around 10 years
Conditions/requirements	Ownership interest (equity) in a company.
Contacts	www.euroquity.com

⁴ Invest Europe is the world's largest association of private capital providers, representing Europe's private equity, venture capital and infrastructure investment firms, as well as their investors, including some of Europe's largest pension funds and insurers. <https://www.investeurope.eu/>

⁵ All data refer to the study by Investing in Europe "Private equity activity 2019".

<https://www.investeurope.eu/research/data-and-insight/?keyword=Investing%20in%20Europe:%20Private%20Equity%20activity%202019#search-filter-container>

	www.investeurope.eu
Example (s)	<p><i>CYREM BIOCITY-Biomass treatment plant in Cyprus</i>⁶</p> <p>The project involves the development of CYREM BIOCITY, a biomass treatment plant in Cyprus producing liquid and solid 2nd generation biofuels, by M.E.K.P. Energy Ltd.</p> <p>CYREM BIOCITY will be a biomass treatment plant with warehouses, a laboratory, a conference room, multiple office spaces, changing rooms and a restaurant/cafe. It will be located on a 13,379 sqm plot in the Potami area, near Astromeritis in Cyprus. Using mainly biomass (i.e. municipal solid waste, agricultural and forestry crops and residues) as feedstock, the plant will produce three biofuel products: Biogas (Syngas); Solid biofuel (Biochar / activated carbon) and Liquid Biofuel (Bio-oil). Project financing secured: EUR 3.24 million (20 %)</p> <p>Financing source: Private</p> <p>The total project cost is 16.2M Euros. 20% of financing has already been secured (3.2M Euro) and the company is seeking to finance the remaining 80% (13M) via a 50:50 debt to equity ratio.</p> <hr/> <p><i>Fonroche</i> was established in France in 2008 to make solar panels and develop and set up photovoltaic plants to produce energy. Today, thanks to investment from Eurazeo, the company is present in 15 countries outside its home market, and has operations across Europe, India and the Americas. Its expertise now extends from solar power to biogas and deep geothermal energy, an area in which Fonroche has been awarded several exclusive research permits.</p> <p>Eurazeo has brought its strong expertise in project financing to help strengthen Fonroche’s structure and processes.</p>

This type of private funding seems to be more interesting for cases when a company (new or already established) wants to enter a (new) market, to expand or to develop a new line of products, as well as to develop on the global market. It is suitable when a medium to long-term strategy is in place and the possibility for commercial exploitation is clearly indicated.

In general, there is a lack of interest from private financial market participants, mainly related to the specificities and associated lack of understanding of the bio-based industries⁷.

⁶ <https://ec.europa.eu/eipp/desktop/en/projects/project-12090.html>

⁷ Access-to-finance conditions for Investments in Bio-Based Industries and the Blue Economy. June 2017. https://www.eib.org/attachments/pj/access_to_finance_study_on_bioeconomy_en.pdf

a. Marguerite

Short description	Marguerite is a pan-European investor in long-life infrastructure focused on greenfield and brownfield expansion initiatives. It is focused on investments resilience and benefits for future generations. Sustainability considerations are deeply integrated into the investment process, with continuous and proactive asset management of sustainability issues throughout our ownership cycle.
Covered topics (focus)	Target sectors: <ul style="list-style-type: none"> • Energy and renewables: Generation from renewable sources; Low-carbon hydrogen initiatives; Transmission, distribution and storage of low carbon gases and electricity; Carbon Capture and Storage; Energy and resource efficiency; Emerging technologies. • Transport: Sustainable urban transport, e-mobility; Alternative fuels for mobile maritime and inland navigation infrastructure.
Typology of funded projects	<ul style="list-style-type: none"> • Greenfield: new projects and facilities, with typical development risks largely mitigated (minimum of 65% of the Fund) • Brownfield: replacement, modernisation and capacity enhancement of existing assets (maximum of 35% of the Fund)
Funding range	For Marguerite III: € 30M to € 75M –can go beyond on ad-hoc basis
Timing/ availability	Depending on duration of due diligence process.
Duration of the investment	Marguerite II has a capacity to invest in projects across the EU and in the pre-accession countries, and has a 10-year fund life (with up to 2 one year extensions).
Conditions/ requirements	Usually the fund invests only in "bankable" project companies that generate robust revenue streams, usually secured by long-term contracts. Furthermore, it is managed on a commercial basis and is required to deliver a certain level of return to its investors. Therefore it cannot invest in projects that are exposed to technology risk (unproven technology).
Contacts	Valérie Verdet (Executive Assistant and Senior Office Manager. Office in Luxembourg) vverdet@marguerite.com Sandrine Sallandre (Executive Assistant and Office Manager. Office in Paris) ssallandre@marguerite.com
Example (s)	<p>Curtis-Teixeiro biomass plant (Spain). The Curtis-Teixeiro biomass plant will have a capacity of approximately 50MW, to be built on a plot of 103,000 sqm, and will generate 324GWh per year from forest waste collected within a radius of one hundred kilometres around the new installation. To produce this energy, the plant will use about 500,000 tonnes of forest biomass a year. The project will therefore contribute both to forest maintenance in the area and fire prevention, by encouraging the collection, for industrial use, of small-sized wood waste that is normally discarded.</p> <p>Centrais de Biomassa do Norte (Portugal). It consists of two biomass plants of 15 MWe, which will incinerate waste wood (pine and eucalyptus chips) each in a biomass boiler to produce superheated steam, which drives a steam turbine to produce electricity that is sold to the grid. The plants are located in rural areas of the municipalities of Viseu and Fundão, in northern Portugal and will be approximately 100 km apart. The construction phase will last 24 months, with COD expected in June 2019.</p>

b. European Circular Bioeconomy Fund (ECBF)

Short description	<p>The ECBF funds and partners with ambitious and visionary entrepreneurs and investors to accelerate late-stage companies with first recurring revenues and strong market traction in the European circular bioeconomy. Being an initiative of the European Investment Bank (EIB) and the European Commission (EC), ECBF relies on considerable expertise and robust networks to catalyse sustainable innovations and fuel business growth. It aims to fill a funding gap in the European Bioeconomy landscape, bringing Europe’s circular technologies to market, identifying the most promising investment targets, and syndicating with private and public investors to join the financial rounds. With a target fund volume of €250 million, where EIB is committed to contributing up to €100 million, ECBF aims to foster meaningful investment in the Sustainable Development Goals, demonstrating that impact generation and favourable Internal Rates Return are not contradictory.</p>
Covered topics (focus)	<p>The topics of interest include:</p> <ul style="list-style-type: none"> • Biomass/feedstock production, i.e. increase of output and/or decrease footprint of agriculture, farming, forestry and blue economy • Technologies to enable biomass/feedstock processing, e.g. biorefineries and conversion technologies.
Typology of funded projects	<p>Only late stage companies are eligible for investment: the underlying technology has at least been demonstrated in a relevant environment (Technology Readiness Level from 6 to 9).</p>
Funding range	<p>Average 5.000.000€ at first growth stage (scaling up from pilot to demonstration stage) Average 12.500.000€ at second growth stage (transition from demonstration to industrialization) Around 10.000.000€ for projects focusing on growth for global expansion.</p>
Duration of the investment	<p>5 years investment period 5 years disinvestment period</p>
Conditions/ requirements	<p>Investments realized by the Fund will be in line with the EIB Environmental and Social Handbook and the Guide to Procurement of the EIB. Investment targets need to meet a set of pre-defined Environmental, Social and Governance (ESG) criteria including</p> <ul style="list-style-type: none"> • Global sustainability contribution • Environmental impact • Resource efficiency & circular economy • Economic & social impact and governance
Contacts	<p>ECBF Management GmbH Godesberger Hof 2 53173 Bonn info@ecbf.vc Tel. +49 170 220 9067 https://www.ecbf.vc/contact</p>

Example (s)	Peel Pioneers B.V. PeelPioneers' proprietary pioneering technology provides a one hundred percent circular solution for fruit peels that in most countries end up getting destroyed in an incinerator. The company extracts orange oil and other much-wanted raw materials that food manufacturers use in products such as beer, lemonade, muffins and chocolate. The raw materials that PeelPioneers derives from orange peels are also sold to manufacturers of non-food products such as detergents and cosmetics.
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c. Breakthrough Energy Ventures Europe

<p>Short description</p>	<p>Breakthrough Energy Ventures-Europe (BEV-E) is a first-of-a-kind €100 million pilot fund that invests in groundbreaking technologies to decarbonize every part of the economy. It was created in May 2019 as a partnership between Breakthrough Energy Ventures (BEV) and the European Commission (EC), a worldwide leader in establishing climate targets and supporting clean energy research and development. Half of the equity comes from BEV and the other half from InnovFin, the EC’s financing tool for pioneering research and innovation.</p> <p>The goal is to generate a financial return on investments, each of which will have the potential of significantly reducing greenhouse gas emissions.</p> <p>The first investing principle is to leverage innovation as broadly as possible. We don’t limit ourselves to early- or late-stage companies; to small, medium, or large enterprises; or to particular geographies or technologies. One of the biggest challenges to investing in solutions to climate change is scale: things like agriculture, housing, and transportation that emit greenhouse gases operate at scales vastly larger than other human activities. As a result, fully deploying new technologies will take decades, not years. Given this timeline, it is critical not just to respond to today’s circumstances but also to anticipate tomorrow’s urgent needs.</p>
<p>How to apply</p>	<p>Prepare a professional business plan that will convince investors that you understand the business environment. It should contain detailed market analysis, an overview of the competitive dynamics of the market, including the strengths and weaknesses of the main competitors, realistic financial projections and basic human-resource planning. The business plan should also highlight risks so that an investor has the complete picture.</p> <p>Know the private equity fund’s investment criteria. The most important criterion is usually the management team’s background and experience. A professional business plan is not worth much unless the people behind it have a track record. Try to convince prestigious, influential and knowledgeable people (e.g., successful businessmen, academics) to join your board of directors or sign on as consultants.</p> <p>Convince potential investors that you have the competence and perseverance to succeed. You must build confidence that you are up to the challenge of managing and growing a new business venture. Investors also look for sound internal business processes, including financial reporting and management control. Prepare an appendix to your business plan or a separate presentation summarizing these internal processes.</p>
<p>Covered topics (focus)</p>	<p>Covered technologies: Low-GHG Liquid-Fuels Production—Non-Biomass; Low-GHG Gaseous Fuels Production—H₂, CH₄; Low-GHG Liquid Fuels Production—Biomass.</p>
<p>Typology of funded projects</p>	<p>BEV invests in companies that turn game-changing technologies into scalable and transformative solutions</p>
<p>Funding range</p>	<p>Not known</p>

Timing/availability	After due diligence
Duration of the investment	Long-term (10- 15 years)
Conditions/ requirements	<ul style="list-style-type: none"> • <u>Climate Impact</u>. Due to the massive scale of human energy consumption, progress in small increments isn't enough. We will only invest in technologies with the potential to reduce at least half a gigaton of greenhouse gases every year, about 1 percent of projected 2050 global emissions. • <u>Other Investors</u>. We do not have the resources to solve the entire global energy challenge on our own. We will only invest in companies that we believe can ultimately attract additional investment from investors. • <u>Scientific Possibility</u>. Due to the time to market in clean tech is so long, it is important to vet projects carefully at an early stage. We will only invest in projects that our technologists deem scientifically feasible at scale. • <u>Filling the gaps</u>. Clean tech is a somewhat neglected space, but certain aspects of it have attracted significant interest already. We will focus on areas and on enterprises to which we can add value through our patience, flexibility, and global network.
Contacts	https://www.b-t.energy/team/
Example (s)	ZEROAVIA (https://www.zeroavia.com) enables zero emission air travel at scale, starting with 500 mile short-haul trips, at half of today's cost. The Novel approach removes many limitations of the current zero emission programs.

d. Breakthrough Energy Fellows Programme

Short description	<p>The Breakthrough Energy Fellows (BE Fellows) program identifies and supports the best and brightest individuals and teams across the globe working to develop, scale, and commercialize technologies that have the potential to reduce carbon emissions by at least 500 million tons per year by 2050. In some cases, this means nurturing ideas until they are ready for venture capital investment. In others, it means enabling technology acquisition, non-traditional financing, government partnerships, joint ventures, or other pathways.</p> <p>BE Fellows fall into two categories:</p> <ul style="list-style-type: none"> • Innovator Fellows are world-leading scientists and engineers ready to commercialize their critical climate technology. • Business Fellows are experienced professionals who want to build a commercial venture in the climate space.
How to apply	<p>Continuous possibility to fill in this form: Submission of Interest - Breakthrough Energy Fellows (befellows.org) to be included in future outreach measures.</p>
Covered topics (focus)	<p>Technologies that will be critical to move the world to net-zero emissions by 2050, including electrofuels, cement, steel, hydrogen, and fertilizer.</p>
Typology of funded projects	<p>Technology Development (TRL 5-7).</p>
Funding range	<p>Not known.</p>
Timing/availability	<p>After due diligence.</p>
Duration of the investment	<p>Depending on the type of fellows supported.</p>
Conditions/ requirements	<p>The Fellows program provides patient capital to support innovators on their path to commercialization, including a stipend for living expenses, funding for technology and product development, access to scientific and business expertise, investors, policy experts, and our world-class network of partners. All Fellows also benefit from a unique curriculum designed by Breakthrough Energy covering a wide range of topics.</p>
Contacts	
Example (s)	<p>Liquium is revolutionizing the ammonia production process, making it cleaner, cheaper, and scalable enough to decarbonize heavy industries, including shipping, aviation, heat and power generation, and chemical production: https://www.breakthroughenergy.org/scaling-innovation/fellows-projects/liquium.</p>

e. EU Catalyst Partnership

Short description	The EU-Catalyst partnership offers different forms of finance to close the financing gap of a project. This includes grants and other types of investments, such as quasi-equity, equity and contract subsidies, for example companies committing to purchase the resulting green products.
How to apply	Applications for funding consideration (ongoing. No deadline)
Covered topics (focus)	Catalyst will start by focusing on four critical technologies for decarbonization: <ul style="list-style-type: none"> • Direct air capture (DAC) • Clean hydrogen • Long-duration energy storage (LDES) • Sustainable aviation fuel (SAF)
Typology of funded projects	Projects that are ready-to-build within 9-12 months will be prioritized. <ul style="list-style-type: none"> • Demonstration Projects – Small projects that de-risk earlier-stage emerging climate technologies (TRL 5-7; Project Size between ~€30M-100M) • Large FOAK Projects – First-of-a-Kind projects focused on emerging climate technology scale-up & market creation (TRL 6+; Project Size between ~€100M-1B)
Funding range	
Timing/availability	Breakthrough Energy Catalyst will select and propose potential projects to the EIB. The EIB will assess those based on agreed processes and rules, in relation to the Horizon Europe and the Innovation Fund funding contributions.
Duration of the investment	10-15 years
Conditions/ requirements	The EU-Catalyst partnership will provide up to 50% of the required financing. The projects need to raise at least 50% themselves.
Contacts	More information is available here: https://www.breakthroughenergy.org/catalyst-eu-rfp
Example (s)	N.A.

2. EIC funding opportunities: EIC Pathfinder, EIC Transition and EIC Accelerator

<p>Short description</p>	<p>EIC Pathfinder: Support to research teams to research or develop an emerging breakthrough technology. It welcomes high-risk / high gain and interdisciplinary cutting-edge science collaborations Applicants are usually visionary scientists, entrepreneurial researchers and research organisations, start-ups, high-tech SMEs and industrial stakeholders (TRL 1-4).</p> <p>EIC Transition: Support in the maturation and validation of a novel technology and develop a business case to bring it to market (TRL 4-6).</p> <p>EIC Accelerator: support individual Small and Medium Enterprises (SMEs), in particular start-ups and spinout companies to develop and scaleup game-changing innovations (TRL 6-9).</p>
<p>How to apply</p>	<p>2023 EIC Pathfinder Challenges: Call closing on 18th October 2023. Amongst the challenges, one is dedicated to Clean and efficient cooling.</p> <p>EIC Transition Open (no relevant challenges in 2023): next cut-off date: 27th September 2023.</p> <p>EIC Accelerator: You can apply for EIC Accelerator funding at any time through the EIC platform. You will need a video pitch, a slide deck and respond to a short set of questions about your innovation and your team. Next deadline: 19th October 2023.</p>
<p>Covered topics (focus) Typology of funded projects</p>	<p>Identifying and supporting breakthrough technologies and gamechanging innovations with the potential to scale up internationally and become market leaders.</p> <p>Different funding for technologies at different levels of development Blended finance(combination of grant with equity, debt investments or insurance-like products):</p> <ul style="list-style-type: none"> • More suitable for commercially oriented projects • Built-in risk-sharing mechanism • Introduction of a repayment for public funding. <p>EIC Pathfinder: funding for projects in any field of science or technology, based on high-risk/high-gain science-towards-technology breakthrough interdisciplinary research.</p> <p>EIC Transition: support for any technologies and innovations that cut across different scientific, technological, sectoral and application fields or represent novel combinations.</p> <p>EIC accelerator: applications from innovators in all EU Member States and countries associated to the Horizon Europe available programme. It particularly welcomes applications from start-ups and SMEs with female CEOs</p>
<p>Funding range</p>	<p>EIC Pathfinder: Grants of up to 3 to 4 million euro support early stage development of future technologies (TRL 1-4), up to proof of concept.</p> <p>EIC Transition: Grants of up to 2.5 million euro to validate and demonstrate technology in applicationrelevant environment (TRL 4 to 5/6).</p>

	<p>EIC Accelerator:</p> <ul style="list-style-type: none"> • Grant funding of up to €2.5 million for innovation development costs. • Investments (direct equity investments) of up to €15 million managed by the EIC Fund for scale up and other relevant costs (TRL 5/6 to 8). <p>Grant and investment: TRL 5/6-8, and TRL 9. Grant only: if you can prove sufficient financial means for deployment and scale-up (TRL 9). Grant first: if your innovation still requires significant work to validate and demonstrate to assess its commercial potential. Investment only: if you are looking to fill the funding gap for rapid scale-up of your high-risk innovation and you don't need a grant.</p> <p>Investment component:</p> <ul style="list-style-type: none"> • Minimum 0.5 million euros and maximum 15 million euros. • Normally in the form of direct equity or quasi-equity. • Maximum 25% of the voting shares of the company. • Patient capital principle (7-10 years perspective on average). <p>Grant component:</p> <ul style="list-style-type: none"> • Maximum 2.5 million euros. • Eligible costs are reimbursed up to a maximum of 70%. • Innovation activities supported should be completed within 24 months. • Small mid-caps are not eligible for grant (only for investment).
Timing/availability	<p>Investment process:</p> <ol style="list-style-type: none"> 1. Standard letter after selection 2. The fund will contact the company 3. Due diligence + compliance checks 4. Preparation of the investment recommendation 5. Investment Committee discussion 6. Board of Director's decision
Duration of the investment	<p>Project duration 2-3 years.</p>
Conditions/requirements	<p>EIC Pathfinder (collaborative research, including 3 legal of different MS⁸ or AC⁹)</p> <ul style="list-style-type: none"> • Convincing long-term vision of a radically new technology that has the potential to have a transformative positive effect. • Concrete, novel and ambitious science-towards-technology breakthrough, providing advancement towards the envisioned technology. • High-risk/high-gain research approach and methodology, with concrete and plausible objectives. <p>EIC Transition:</p>

⁸ Member State.

⁹ Associated Country.

	<ul style="list-style-type: none"> • A technology that is demonstrated to be effective for its intended application • A business model and business plan for its development to market (market research, prospects for growth, intellectual property protection, competitor analysis). <p>EIC Accelerator: companies (SMEs and start-ups), with a technological breakthrough, where the risk and time period tend to be high. The technology must have been tested and validated (at least TRL 5-6 or higher).</p>
Contacts	https://eic.ec.europa.eu/do-you-need-help_en
Example (s)	<p>Infarm: The company makes vertical urban farms where plants are grown efficiently and sustainably, directly at the point of sale. The vertical farms are modifiable and contain a whole ecosystem for specific plants (water, temperature and lighting). Thanks to sensors, the performance of the farms are remotely controlled for optimal quality. Infarm received close to €2 million from the European Innovation Council Accelerator pilot and raised €20 million in a series A round from Balderton.</p>

3. EIC Fund

Short description	<p>The EIC Fund provides equity from €0.5m to €15m to breakthrough innovation companies selected for EIC Accelerator blended finance support (grant and equity).</p> <p>The EIC Fund is a venture capital fund.</p> <p>The European Commission is the shareholder.</p> <p>It is a flexible instrument (Reserved Alternative Investment Fund, RAIF): multiple compartments (umbrella), different assets.</p> <p>It was established in June 2020.</p> <p>EIC Fund is an open-ended fund.</p>
How to apply	<p>https://ec.europa.eu/eusurvey/runner/EIC_Fund_Investments</p>
Covered topics (focus)	<p>The Fund invests in start-ups with potentially market-creating innovations, whether based on breakthrough disruptive technologies originating from research (deep-tech) or on social innovation.</p> <p>Provides patient capital in the form of equity or quasi-equity (which may also be blended with a grant component) to SMEs and start-ups selected through the highly competitive and rigorous EIC Accelerator.</p> <p>Bridges the funding gap for start-ups with seed capital to series B financing, where market entry is at most in a pilot phase to prepare the scaling up of breakthrough European innovations.</p> <p>Aims to crowd in other investors, further sharing risks by building a large network of capital providers and strategic partners suitable for co-investments and follow on funding</p> <p>Has an investment strategy that covers all areas of technology including in particular health, green and digital. It aims at achieving “impact” and crowding in other investors.</p>
Typology of funded projects	<p>Whilst open to innovation in all areas presenting high technological or market financial risks, it will focus part of its support, on capital-intensive strategic technologies in policy priority areas, including Health, Green Deal (e.g. clean energy, climate action, future mobility) and Digital Transformation, advanced engineering, life sciences and space</p>
Funding range	<p>Equity from €0.5m to €15</p> <p>The EIC Fund is building a portfolio of 159 early-stage technology companies (€680 million investment, €4.3 million average)</p>
Timing/availability	
Duration of the investment	<p>The EIC Fund will invest patient capital, with a long average perspective on return on the investment (7-10 years) with a maximum of 15 years in general. The levels of returns sought will be assessed on a case-by-case basis. The EIC Fund’s main objective is “impact investment” rather than maximizing return on the investment, while of course a positive return is always planned at the time of investment</p>
Conditions/requirements	<p>A competitive process where highest potential companies are selected Profit SMEs, including start-ups and early-stage companies, and small mid-caps, from any sector, and typically with a strong intellectual property component</p> <p>Eligible companies must be established and operating in the EU Member States or Associated countries to Horizon Europe.</p>

	Companies are subject to due diligence (ongoing or finalised) TRL 5-6 to 9
Contacts	investments@eicfund.eu
Example	Carbofex Oy has developed proprietary technology for biochar production and carbon capture.

4. InvestEU Fund

Short description	The InvestEU Fund aims to mobilise more than €372 billion of public and private investment through an EU budget guarantee of €26.2 billion that backs the investment of implementing partners such as the European Investment Bank (EIB) Group and other financial institutions.
How to apply	Project promoters should apply directly to implementing partners who will offer tailor-made financing solutions based on the financial products supported by the EU guarantee. SMEs should continue to apply to their local commercial or public banks whose financial products are covered by the EU guarantee in their country or region. Some information is available on this website: https://europa.eu/youreurope/business/finance-funding/getting-funding/access-finance/index_en.htm
Covered topics (focus)	Investments will come under four policy areas, which represent important policy priorities for the Union and bring high EU added value: <ul style="list-style-type: none"> • Sustainable infrastructure (9.9 billion€). • Research, innovation and digitisation (6.6 billion€). • Small and medium-sized enterprises (SMEs) and small mid-caps(6.9 billion€). • Social investment and skills (2.8 billion€). At least 30% of the mobilised investments will be dedicated to climate- and environment-related projects.
Typology of funded projects	The InvestEU Fund will target economically viable projects in areas where there are market failures or investment gaps. The InvestEU Fund instruments will only support projects where financing could not be obtained at all or not at the required terms without InvestEU Fund support. It will also target higher risk projects in specific areas.
Funding range	Depending on the conditions of the financial partners.
Timing/availability	The projects need to undergo the standard EIB due diligence process, or other types of due diligence processes in place in the other financial partners implementing the Programme.
Duration of the investment	Depending on the conditions of the financial partners (2021-2027).
Conditions/requirements	<ul style="list-style-type: none"> • Address market failures or investment gaps and be economically-viable. • Need EU backing in order to get off the ground. • Achieve a multiplier effect and where possible crowd-in private investment. • Help meet EU policy objectives.
Contacts	InvestEU portal: https://ec.europa.eu/investeuportal/desktop/en/index.html

<p>Example (s)</p>	<p>Clean Energy Transition provides debt financing to sub-projects related to the installation of new renewable energy generation capacity (primarily wind, solar, hydro, geothermal and biomass), to the development of the energy transmission and storage infrastructure necessary to facilitate the integration of the renewables into the energy system, production and use of low-carbon fuel (e.g. green hydrogen or biogas) for the decarbonisation of industrial processes (e.g. steel, non-ferrous metals, cement and other non-metallic minerals, chemicals (including fertilisers) and mobility or as integral part of the energy system. Available in: DK, EE, FI, LV, LT, PL, SE.</p>
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5. European Investment Bank (EIB)

The European Investment Bank is the lending arm of the European Union, and the biggest multilateral financial institution in the world and one of the largest providers of climate finance. The EIB provides several types of support to investors in the area of clean energy:

- *Loans*. Loans to private sector entities to finance projects or investment programmes aligned with one or more priorities of the EIB. These products include debt and hybrid debt financing to project finance.
- *Equity*. Primarily investing or co-investing along with funds focused on infrastructure, the environment, or small- and medium-sized enterprises and mid-size corporations. In some cases, the Bank also provides direct quasi-equity financing to support innovative companies in seek of financing to grow.
- *Guarantees*. The EIB offers a variety of guarantee instruments, covering risks of a single or several projects. These guarantees unlock additional financing for small- and medium-sized enterprises or mid-caps by covering a portion of possible losses from a portfolio of loans. In some cases, the Bank also guarantees possible losses from a project to unlock additional investments.
- *Advisory services*. The EIB offers a large range of advisory services that embrace all stages of the project cycle and beyond, to make investment projects happen inside and outside the European Union.
- *Blending*. EIB loans and instruments can be blended with grants so that critical projects get the financing they need. Grants typically come from public bodies and philanthropic organisations through blending facilities. These facilities target specific sectors, regions and initiatives. Their goal is to reduce the overall riskiness of projects and mobilise additional capital.

The EIB energy lending policy¹⁰ focuses on four themes:

- Unlocking energy efficiency
- **Decarbonising energy supply**
- **Supporting innovative technologies and new types of energy infrastructure**
- Securing the enabling infrastructure

The Bank requires projects to be compliant with sustainability of biomass sourcing and greenhouse gas emissions saving criteria laid down in Renewable Energy Directive II (EU) 2018/2001. For a cogeneration facility from bioenergy with a total rated thermal input of 50 MW or above, all electricity shall be produced from high-efficiency cogeneration, as defined in Directive 2012/27/EU (or as subsequently amended). Additional criteria may be required by the Bank on sustainability and security of biomass supply. All projects must also comply with the best available techniques (BAT) requirements, as per the European Commission's Implementing Decision (EU) 2017/144.

a. Decarbonising energy supply

¹⁰EIB Energy Lending Policy. May 2023 (text of the Energy Lending Policy adopted in 2019, with an updated version of the technical annexes) <https://www.eib.org/en/publications/20230164-eib-energy-lending-policy>

Short description	<p>The EIB can in principle support a variety of energy investment projects, ranging from energy efficiency investments, power plants and energy grids to new business models and innovation. As a public bank, the EIB is invited to consider areas of investment in which markets may fail to invest (either at all, quickly enough or to the same extent) in infrastructure needed to meet the requirements of society.</p> <p>Firstly, the Bank can contribute to the closing of persistent investment gaps. There are areas in which, despite policy support and the availability of finance, there is substantial evidence that investment remains too low. Secondly, as a long-term investor, the Bank supports investment decisions taken to meet long-term goals. The Bank can help focus its support on innovations that will be used for decades to come, when energy systems will need to be low-carbon. Finally, the Bank can support new market-based investment in the energy sector.</p>
How to apply	<p>It depends on the type of requested support. More information is available here: https://www.eib.org/en/projects/cycle/applying_loan/index.htm</p>
Covered topics (focus) Typology of funded projects	<ul style="list-style-type: none"> • Power and CHP resulting in GHG below an emission standard set out below; • Heat production from renewable sources; • Efficient gas-fired small boilers applicable for buildings or SMEs; • Production and storage of gaseous, liquid and solid energy carriers from low-carbon energy sources; • Supply of Critical Raw Material (CRM) needed for low-carbon technologies in the EU.
Funding range	<p>The EIB typically covers up to 50% of a project's total cost. Normally, this covers investment costs (typically over a period of up to three years, but can be longer), such as for research and development expenditures on facilities or activities. These loans typically start at €25 million and in certain cases the EIB will consider lower amounts. For renewable projects with a high policy value and where the EIB involvement accelerates the implementation of projects, the Bank will extend its support to up to 75% of the project cost.</p>
Timing/availability	<p>A project financed by EIB typically goes through seven major stages: proposal, appraisal, approval, signature, disbursement, monitoring and repayment.</p>
Duration of the investment	<p>Normally, up to three years. For long financing terms that match the economic life of each project – typically up to 10 years for bullet loans, or the equivalent for amortising loans. For project finance, EIB can also manage maturities in excess of 30 years.</p>
Conditions/requirements	<ul style="list-style-type: none"> • <u>Renewable power generation and combined cooling/heat and power (CCHP, CHP)</u> which meet the Emission Performance Standard, EPS (250 gCO₂/kWhe). For biogas/biomass, sources are sustainable. • <u>Energy-intensive industries:</u> <ul style="list-style-type: none"> ○ Low-carbon technologies i.e. electrification, shift to hydrogen or biomass/biogas/bioliquid as a fuel or feedstock, CCS/CCU, other low-carbon technologies (e.g.

	<p>electrochemical production, replacement of carbon-intense virgin raw materials with low-carbon intense recycled raw materials, thermal energy storage)</p> <ul style="list-style-type: none"> ○ Transitional technologies: implementation of technology that will enable an easy shift to the use of hydrogen or biomass/biogas/bioliquid as a fuel or feedstock when available. For the avoidance of doubt, investment in traditional high-carbon processes is not supported. • Mobile assets for transport services: Any mobile asset powered solely by advanced biofuels (biofuels as per Renewable Energy Directive (RED) II with low ILUC (indirect land-use change) risk) 76, or sustainable synthetic fuels. • Development and production of bio-materials and bioenergy.
Contacts	https://www.eib.org/en/infocentre/contact-form.htm
Example (s)	<p>OULUN ENERGIA CHP PLANT</p> <p>The project consists of the financing of a Combined Heat and Power (CHP) biomass-fired plant in Finland of a capacity of 70 MWe (electric) and 175 MWth (heat and steam) to replace an existing solid fuel (peat and biomass) plant. EIB finance amounts to around 100.000.000€ (out of a total cost of around 200.000.000€).</p>

b. Innovation and new types of energy infrastructure

Short description	<p>The EIB can in principle support a variety of energy investment projects, ranging from energy efficiency investments, power plants and energy grids to new business models and innovation. As a public bank, the EIB is invited to consider areas of investment in which markets may fail to invest (either at all, quickly enough or to the same extent) in infrastructure needed to meet the requirements of society.</p> <p>Firstly, the Bank can contribute to the closing of persistent investment gaps. There are areas in which, despite policy support and the availability of finance, there is substantial evidence that investment remains too low. Secondly, as a long-term investor, the Bank supports investment decisions taken to meet long-term goals. The Bank can help focus its support on innovations that will be used for decades to come, when energy systems will need to be low-carbon. Finally, the Bank can support new market-based investment in the energy sector.</p>
How to apply	<p>It depends on the type of requested support. More information is available here: https://www.eib.org/en/projects/cycle/applying_loan/index.htm</p>
Covered topics (focus)	<ul style="list-style-type: none"> • Corporate or national RDI programmes; • Commercial demonstration of innovative technologies, including both demonstration projects and innovative manufacturing processes; • All technologies are eligible for innovation financing including renewables, carbon capture and storage, nuclear fission and fusion; • New types of energy infrastructure including batteries, demand response, market participants engaged in aggregation, electrification of transport, heating, digitalisation projects in the

	energy sector. More generally, all projects that contribute towards sector coupling and increased flexibility of energy systems can be considered.
Typology of funded projects	<p>When appraising projects, the Bank will deem the following types of projects to have a high alignment with EIB lending policy:</p> <ul style="list-style-type: none"> • Innovation and industrialisation of key energy transformation technologies in Europe: pilot and demonstration plants, or initial full-scale commercial production lines related to breakthrough technologies supported under the SET Plan / Horizon Europe, such as promising innovative renewable energy and storage technologies; • Deployment of innovative technologies or technologies at an early stage of deployment or business models that can be scaled-up; • New business models associated with decentralised and small-scale technologies for the decarbonisation of energy by end-users; • Projects consisting in aggregating small renewable and flexibility sources; • Outside the EU, projects increasing access to energy with mini-grids and off-grid solutions.
Funding range	The EIB typically covers up to 50% of a project's total cost. Normally, this covers investment costs (typically over a period of up to three years, but can be longer), such as for research and development expenditures on facilities or activities. These loans typically start at €25 million and in certain cases the EIB will consider lower amounts. For renewable projects with a high policy value and where the EIB involvement accelerates the implementation of projects, the Bank will extend its support to up to 75% of the project cost.
Timing/availability	A project financed by EIB typically goes through seven major stages: proposal, appraisal, approval, signature, disbursement, monitoring and repayment.
Duration of investment	Normally, up to three years. For long financing terms that match the economic life of each project – typically up to 10 years for bullet loans, or the equivalent for amortising loans. For project finance, EIB can also manage maturities in excess of 30 years
Conditions/requirements	<ul style="list-style-type: none"> • <u>For innovation-related projects:</u> The Bank will seek to support technologies which demonstrate significant innovation compared to the state of the art. The promoter should demonstrate the ability to <ol style="list-style-type: none"> i. Reach financial close with the required equity contribution (as applicable), ii. Deliver a sound project on budget and on time. iii. Commercialise and replicate the technology further in order to achieve meaningful GHG emission reduction. • <u>Commercial demonstration of innovative technologies and manufacturing processes.</u> Technologies should have been demonstrated at scale and be about to enter into

	<p>commercialisation (TRL 7-8). In the case of initial full-scale commercial production lines, projects should be related to breakthrough technologies supported under the SET Plan and Horizon Europe, such as promising innovative energy efficiency or renewable energy and storage technologies (e.g. Power-toX).</p>
Contacts	<p>https://www.eib.org/en/infocentre/contact-form.htm</p>
Example (s)	<p>SENER RENEWABLE ENERGY AND ICT RDI</p> <p>The project concerns the promoter's research, development and innovation (RDI) investments in Spain for the development of innovative engineering solutions in the renewable energy, space and railway sectors, as well as an information technology (IT) platform for the design and construction of ships.</p> <p>More information is available on: https://www.eib.org/en/projects/pipelines/all/20160803</p>

6. Modernisation Fund

<p>Short description</p>	<p>The Modernisation Fund is a dedicated funding programme to support 10 lower-income EU Member States in their transition to climate neutrality by helping to modernise their energy systems and improve energy efficiency. The beneficiary Member States are Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia.</p> <p>It is funded from revenues from the auctioning of 2% of the total allowances for 2021-30 under the EU Emissions Trading System (EU ETS), as well as from additional allowances transferred to the Modernisation Fund by beneficiary Member States – 5 opted to do so (Croatia, Czechia, Lithuania, Romania and Slovakia).</p>
<p>How to apply</p>	<p>Key steps in the financing process:</p> <ul style="list-style-type: none"> • Member States select the investments they wish to submit for Modernisation Fund support. No direct applications by project proponents can be sent to the EIB or the Commission. • Member States submit the proposed investments to the EIB, the Investment Committee and the Commission. Submissions can be made on a rolling basis, but the Investment Committee will meet twice a year, as of 2021. • The EIB confirms if the investment is a priority investment as defined by the ETS Directive. For non-priority investments, the EIB conducts a technical and financial due diligence assessment and the Investment Committee assesses the proposal and makes its recommendation on its financing. • The Commission takes a disbursement decision once an investment is confirmed as priority by the EIB, or recommended for financing by the Investment Committee as non-priority. There will be two disbursement decisions per year, covering investments in all beneficiary Member States. • The EIB transfers the resources to the beneficiary Member States in accordance with the disbursement decision within 30 days.
<p>Covered topics (focus) Typology of funded projects</p>	<p>The Modernisation Fund will support investments in:</p> <ul style="list-style-type: none"> • Generation and use of energy from renewable sources. • Energy efficiency. • Energy storage. • Modernisation of energy networks, including district heating, pipelines and grids. • Just transition in carbon-dependent regions: redeployment, re-skilling and upskilling of workers, education, job-seeking initiatives and start-ups.
<p>Funding range</p>	<p>Under the Energy Transition Package, and as an exception to its</p>

	<p>general rule, the EIB will consider financing up to 75% of the eligible cost of all energy projects eligible under this energy lending policy situated within those Member States benefitting under the Modernisation Fund.</p> <p>The Modernisation Fund leaves the beneficiary Member States the freedom to decide on the form of support: they can use grants, premium, guarantee instruments, loans or capital injections.</p> <p>The support granted by Member States using Modernisation Fund resources needs to be compliant with the State aid rules.</p> <p>Co-financing from private and public entities is possible, as long as State aid rules are respected and the same costs are not already funded by another Union or national instrument (no double funding).</p> <p>Member States could draw on existing national funds and/or European instruments, such as:</p> <ul style="list-style-type: none"> • InvestEU programme. • Connecting Europe Facility, including its energy projects (Projects of Common Interest). • European Structural and Investment Funds, including the Cohesion Fund and the European Regional Development Fund. • Just Transition Fund.
Timing/availability	<p>The timeline for the assessment depends on the type of the investment (priority or non-priority), complexity of the proposal, and completeness of the submitted file.</p>
Duration of the investment	<p>Investments financed by the Modernisation Fund need to meet the following deadlines:</p> <ul style="list-style-type: none"> • The investment has to be financed at least once every two consecutive years – e.g. the project proponent or the scheme managing authority have to provide proof of financial activity (e.g. paid invoices) on the project or within the scheme; and • The total amount received by an individual investment needs to be spent within five years from the disbursement decision; this deadline does not apply to multiannual schemes, which can last longer than five years, provided that there is a proof of payment at least every two years.
Conditions/requirements	<p>Member States implement the Modernisation Fund on their territory. To obtain financing, the beneficiary Member State has to:</p> <ul style="list-style-type: none"> • Demonstrate that the investment complies with the ETS Directive requirements. • Have sufficient funds available on its Modernisation Fund account. • Provide evidence that the investment proposal is in line with the State aid rules. • Confirm that the investment complies with any other applicable requirements of Union and national law. • Confirm that there is no double funding of the same costs with another Union or national instrument. <p>Priority investments have to fall into a priority area as defined by the ETS Directive, with the EIB confirming this. EIB confirms whether an investment is a priority or a non-priority one, and conducts financial and technical due</p>

	diligence of non-priority investments, including an assessment of the expected emission reductions.
Contacts	The Modernisation Fund will operate under the responsibility of the beneficiary Member States, who will work in close cooperation with the European Investment Bank (EIB), the Investment Committee set up for the fund and the European Commission.
Example (s)	<p><i>CZ: Modernization of energy sources to biomass without CHP; non-priority investments of the Programme “HEAT”</i></p> <p>The main aim of the proposed investments is the modernisation of energy sources and fuel base switch in the heat supply sector, with primary objectives of a substantial improvement in energy efficiency and emission reductions. The scheme supports the replacement of the energy source with a change of the fuel to renewable energy sources (RES) without high-efficiency combined heat and power (CHP). Total expected capacity of to be supported projects is 1 240 MWth.</p> <p><i>CZ: Modernisation of energy sources to biomass without CHP; non-priority investments of the Programme “ENERG ETS”</i> (Improvement of energy efficiency and reductions of emissions of greenhouse gases in EU ETS industry)</p>

7. European Bank for Reconstruction and Development

Short description	<p>The EBRD offers financial products tailored to each client. EBRD works in several countries located in five main geographical areas, as well as Turkey and Russia: South-eastern Europe; Central Europe and Baltic States; Eastern Europe and the Caucasus; Central Asia; Southern and Eastern Mediterranean. More information on the countries covered by the EBRD can be found here: https://www.ebrd.com/where-we-are.html.</p>
How to apply	<p>https://www.ebrd.com/work-with-us/project-finance/funding-process.html</p>
Covered topics (focus) Typology of funded projects	<ul style="list-style-type: none"> • Loans for larger projects (€3 million - €250 million). EBRD loans to the private sector projects usually start from a minimum of €3 million up to €250 million. The average amount is €25 million. The EBRD's loans are structured with a high degree of flexibility to provide loan profiles that match client and project needs. This approach determines each loan currency and interest rate formula. The basis for a loan is the expected cash flow of the project and the ability of the client to repay the loan over the agreed period. The credit risk can be taken entirely by the Bank or may be partly syndicated to the market. A loan may be secured by a borrower's assets and/or it may be converted into shares or be equity-linked. Full details are negotiated with the client on a case-by-case basis. • Loans for smaller projects. Projects that are too small to be financed directly by the EBRD can still benefit from our investments. The EBRD supports local commercial banks, which in turn provide loans to SMEs and municipalities. Tools that may be available include credit lines, bank-to-bank loans, standby credit facilities and equity investments in the local banks. MSMEs should contact local banks directly to access finance and check local requirements and investment limits. Loans to micro, small and medium businesses are available from these banks across the EBRD region • Equity and quasi-equity instruments. Equity funds are focused on a specific region, country or industry sector, have local presences and are run by professional venture capitalists. Their main investment criteria are consistent with the EBRD's overall investment policy. The terms and conditions of EBRD investment depend on risks and prospective returns associated with each project. They are also affected by the financial/ownership structure of the project company. As the Bank has limited capital resources, it does not take long-term equity investments or controlling interests. Nor does it assume direct responsibility for managing the project company. • Equity financing. Equity finance is available from EBRD-supported private equity funds, donor-supported equity funds and directly from the EBRD. Equity funds support all kinds of investments including business start-ups, expansion and acquisitions. Some funds specialise in financing companies in need of restructuring, in distressed situations or mezzanine capital for a later stage. Fund investments generally have a higher prospective return and require

	<p>longer-term risk capital than standard EBRD projects. Investment criteria are consistent with EBRD policy, but investment decisions are made by fund managers.</p> <ul style="list-style-type: none"> • <u>Equity participation Fund</u>. The EBRD's Equity Participation Fund (EPF) mobilises funds from global institutional investors to take part in our own direct equity investments with the goal of attracting long-term institutional capital into the private sector in the countries where we work.
Funding range	EBRD financing for private sector projects generally ranges from \$5 million to \$250 million, in the form of loans or equity. The average EBRD investment is \$25 million. Smaller projects may be financed through financial intermediaries or through special programmes for smaller direct investments in the less advanced countries.
Timing/availability	According to the duration of the client's due diligence: https://www.ebrd.com/what-we-do/client-due-diligence.html
Duration of the investment	Up to 15 years
Conditions/requirements	<p>Projects may be considered for EBRD assistance if they:</p> <ul style="list-style-type: none"> • Are located in an economy where the EBRD works. • Have good prospects of being profitable. • Have significant equity contributions in cash or in kind from the project sponsor. • Would benefit the local economy. • Satisfy the EBRD's environmental standards as well as those of the host country. <p>Prospective clients have to demonstrate that their proposed project or business meets the minimum requirements to be eligible to be considered for EBRD involvement.</p> <p>The Green Economy Transition (GET) approach is the Bank's strategy for helping countries where the EBRD works build low carbon and resilient economies.</p>
Contacts	<p>Energy Europe Middle East and Africa: https://www.ebrd.com/contacts.html Energy Eurasia Director: Aida Sitdikova Enquiries: Tel. +44 20 7338 7500</p>
Example (s)	<p>Graanul Invest Phase III (EE)</p> <p>The EBRD is considering a senior secured corporate loan of up to EUR 42M with a maturity of 10 years to AS Graanul Invest (Graanul or the Company) to finance part of Graanul's two year (2015-2016) investment programme. The proceeds will be used in financing part of the construction cost of two new biomass combined-heat-and-power plants (CHP) located in Imavere and Osula, Estonia (the Project).</p> <p>The new CHPs will have an installed capacity of 10 MWe, 28 MW heat each and will be located adjacent to the existing Imavere and Osula pellet</p>

	<p>production plants in Imavere and Voru Parish respectively. The CHPs will be based on grate type biomass boiler and will be able to burn efficiently significant proportion of forest wood wastes, thus reducing significantly related environmental and safety risks.</p> <p>Saturn Biomass (PL)</p> <p>The project covers the construction of the biomass facility and the modernisation of the existing combined heat and power plant (the “CHP”) owned by Saturn Management, a project company set up to supply heat and energy to Mondi Swiecie, one of the largest European paper producers. In 2009 the Bank co-financed Saturn Management realising two projects in order to extend the operation of CHP: conversion of the existing coal boiler into a biomass boiler with 80MWt capacity, and large repairs, modernizations and new investments in the existing installations, together the “Project”.</p> <p>Currently the Bank is considering an extension of the financing, project dedicated to finance additional investments at the CHP facility which includes a new turbine and additional modernisation. This extension will further improve the efficiency of the CHP and ensure it meets the best international practices. The Project will support the first large scale biomass fired power plant in Poland owned by a local investor with a strategy for expanding biomass operations. As such, the Project has the potential to lead to important demonstration effects of large scale biomass energy which could attract new developers and investors in the renewable energy sector.</p>
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8. Horizon Europe/Pillar II- Global challenges and European industrial competitiveness

Short description	The pillar 'Global Challenges and European Industrial Competitiveness' is established through clusters of research and innovation activities, in order to maximise integration and synergies across the respective thematic areas while securing high and sustainable levels of impact for the Union in relation to the resources that are expended.
How to apply	Through the Funding and Tenders' Portal .
Covered topics (focus)	Cluster 4- Digital, Industry and Space . Cluster 5- Climate, Energy and Mobility . Cluster 6- Food, Bioeconomy, Natural Resources, Agriculture and Environment . Clean Hydrogen Partnership . Climate-Neutral and Smart Cities Mission . A Soil Deal for Europe Mission .
Typology of funded projects	Research and Innovation actions (RIA): Interdisciplinary projects that usually include applied research. The funding rate for all participants is 100%. (TRL 4- 6). Innovation actions (IA): Interdisciplinary projects focused on bringing a pre-existing concept or innovation closer to practical application on market or in society. The funding rate is 100% for non-profit entities, and 70% for other participants. (TRL 6- 8). Coordination and support actions (CSA): Support activities e.g., establishing networks or platforms or mapping existing knowledge on a certain topic. Such project does not aim at funding research as such. However, participation might result in successful applications for research projects in the future. Again, the funding rate is 100% for all participants.
Funding range	2- 10 million €
Timing/availability	Upon completion of the evaluation process (around 8 months from call closure).
Duration of the investment	3- 5 years, depending on the project's duration.
Conditions/ requirements	The theoretical minimal requirement in RIA and IA is the participation of at least 3 legal entities from 3 different countries (EU member states or countries associated to Horizon Europe). Specific requirements and criteria are identified in each call document that can be found as an Annex to the call text, available on the Funding and Tender Portal.
Contacts	Helpdesk and Support Services .
Example (s)	Results over ongoing funded project can be found on CORDIS .

9. EU Innovation Fund

<p>Short description</p>	<p>The Innovation Fund improves the risk-sharing for projects by giving more funding in a more flexible way through a simpler selection process and is also open to projects from energy-intensive industries. The Innovation Fund will focus on highly innovative technologies and big flagship projects with European value added that can bring on significant emission reductions. It is about sharing the risk with project promoters to help with the demonstration of first-of-a-kind highly innovative projects. It aims to finance a varied project pipeline achieving an optimal balance of a wide range of innovative technologies in all eligible sectors (energy intensive industries, renewable energy, energy storage, CCS and CCU) and Member States. At the same time, the projects need to be sufficiently mature in terms of planning, business model and financial and legal structure.</p> <p>A pilot auction for Competitive Bidding under the Innovation Fund will be opened in November 2023. A €800 million budget will be available for bidders (project developers). Funding will be awarded as a fixed premium in €/kg of verified and certified RFNBO hydrogen produced, on top of market revenues that developers can achieve, and guaranteed for up to ten years of operation.</p>
<p>How to apply</p>	<p>Large-scale calls (> 100 M€): Large-scale calls (europa.eu) Small-scale calls (< 20 M€): Small-scale calls (europa.eu) A medium-scale projects category (between 20 and 100 M€) is going to be created as well, and will be launching calls starting from end 2023.</p>
<p>Covered topics (focus)</p>	<ul style="list-style-type: none"> • Innovative low-carbon technologies and processes in energy-intensive industries, including products substituting carbon intensive ones. • Carbon capture and utilisation (CCU). • Construction and operation of carbon capture and storage (CCS). • Innovative renewable energy generation. • Energy storage. • Aviation and maritime applications.
<p>Typology of funded projects</p>	<p>First-of-A-Kind demonstrations.</p>
<p>Funding range</p>	<p>The Innovation Fund may finance up to 60% of the relevant cost. The relevant costs are defined as the additional costs borne (considering both CAPEX and OPEX) by the applicant as a result of the application of the innovative technology related to the reduction or avoidance of the GHG emissions, compared to a reference scenario. Their calculation is considered for a maximum period of 10 years and they are not limited to any specific type of expenditure.</p>
<p>Timing/availability</p>	<p>Time to grant is around 18 months (for two-stage process).</p>
<p>Duration of the investment</p>	<p>Financial close should be within 4 years after the signature of the grant agreement. The time to enter the operation is agreed on the GA but must be shortly after the financial close (e.g. 2-3 years).</p>

<p>Conditions/ requirements</p>	<p>Projects with a CAPEX of > 7.5 million € for the current call (another call for projects whose total cost is less than 7.5 million € is expected to be published by the end of 2020). The project must be implemented in one of the EU Member States (or Norway or Iceland). Selection criteria:</p> <ul style="list-style-type: none"> • GHG emissions avoidance. • Degree of innovation. • Project maturity. • Scalability. • Cost efficiency.
<p>Contacts</p>	<p>CLIMA-IF-EXPERTGROUP@ec.europa.eu</p>
<p>Example (s)</p>	<p>BioOstrand: Biorefinery Östrand - The first commercial deployment of solid biomass-and-power-to- Sustainable Aviation Fuels technology line-up. BIOZIN: Conversion of waste and residue BIOmass from Norwegian forestry and sawmills to advanced low carbon fuels for Zero emission transportation Industry. Beccs Stockholm: Bio Energy Carbon Capture and Storage by Stockholm Exergy.</p>

10. Recovery and Resilience Facility (RRF)

Short description	<p>The Facility is a temporary recovery instrument. It allows the Commission to raise funds to help Member States implement reforms and investments that are in line with the EU's priorities and that address the challenges identified in country-specific recommendations under the European Semester framework of economic and social policy coordination. It makes available €723.8 billion (in current prices) in loans (€385.8 billion) and grants (€338 billion) for that purpose.</p> <p>The RRF helps the EU achieve its target of climate neutrality by 2050 and sets Europe on a path of digital transition, creating jobs and spurring growth in the process</p>
How to apply	<p>To the government of each Member State on the basis of the respective National Energy and Climate Plan (https://ec.europa.eu/info/energy-climate-change-environment/implementation-eu-countries/energy-and-climate-governance-and-reporting/national-energy-and-climate-plans_en)</p>
Covered topics (focus)	<ul style="list-style-type: none"> • Accelerate the reduction of emission through fast deployment of renewable energy and hydrogen • Increasing action on energy efficiency of buildings. • Investing in public transport and in infrastructure that supports the shift towards more sustainable and smart mobility. • Boosting demand for zero- and low-emission vehicles and accelerating the rollout of recharging and refuelling infrastructure. • Low carbon energy technologies and value chains, including hydrogen or batteries, and on sustainable energy infrastructure. • Promote a more circular economy, improve environmental infrastructure and protect and restore biodiversity. Circular economy creates local, sustainable jobs through waste prevention and reuse, repair, remanufacturing and recycling. • Improve environmental infrastructure, in particular for waste and water management and reducing pollution, protects the health and well-being of citizens from environment-related risks and impacts. • Protecting and restoring biodiversity and natural ecosystems and ensuring sustainable food systems is key to strengthening the carbon sink, boosting resilience and preventing the emergence and spread of future outbreaks.
Typology of funded projects	<p>Investment projects to support the green and digital transition, according to the Plans submitted by the Member States, and approved by the European Commission.</p>
Funding range	<p>It depends on the country.</p> <p>Funding under the Facility will be made available in accordance with the estimated costs of the proposed reforms and investments included in the recovery and resilience plans to be submitted by the Member States. The estimated cost should be in line with the expected impact of that investments.</p> <p>An allocation key will fix a maximum possible amount for the grant component of the Recovery and Resilience Facility per Member State.</p>

Timing/availability	Funding under the Recovery and Resilience (RRF) will need to be committed by the end of 2023.
Duration of the investment	<p>Member States submit the national plans of investments and reforms with clear milestone and targets (30 April).</p> <p>The European Commission assesses these recovery and resilience plans (within 2 months of receipt)</p> <p>The Council approves national plans on a case-by-case basis (within one month)</p> <p>Commission: the EU pays 13% of the total support upfront to kick-start the recovery (within two months).</p> <p>Member States request further disbursements upon reaching agreed milestones and targets (up to twice a year).</p> <p>The Commission prepares preliminary assessments of the request (within two months).</p> <p>The reforms and public investment projects will be implemented up to 2026.</p>
Conditions/requirements	<p>It depends on each country.</p> <p>To be eligible for financing, national recovery and resilience plans must focus on key EU policy areas - the green transition including biodiversity, digital transformation, economic cohesion and competitiveness, and social and territorial cohesion.</p> <p>Each plan has to dedicate at least 37% of its budget to climate. They should have a lasting impact in both social and economic terms, including comprehensive reforms and a robust investment package, and must not significantly harm environmental objectives.</p> <p>The regulation also stipulates that only Member States committed to respecting the rule of law and the European Union's fundamental values can receive money from the RRF.</p>
Contacts	EC-RECOVER@ec.europa.eu
Example (s)	Ongoing projects can be found on the countries' pages: https://commission.europa.eu/business-economy-euro/economic-recovery/recovery-and-resilience-facility/country-pages_en

11. Just Transition Fund

<p>Short description</p>	<p>The Just transition Fund is the first pillar of the Just Transition Mechanism. <i>It is an EU funding tool for regions dependent on fossil fuels and high-emission industries.</i></p> <p>The fund will support the economic diversification and reconversion of the territories concerned. This means backing productive investments in Small and Medium-sized Enterprises, creation of new firms, research and innovation, environmental rehabilitation, clean energy, up- and reskilling of workers, job-search assistance and active inclusion of jobseekers programmes, as well as the transformation of existing carbon-intensive installations when these investments lead to substantial emission cuts and job protection.</p> <p>Accelerating the move out of fossil fuel extraction and carbon-intensive activities through targeted support for economic diversification and creation of new economic opportunities and jobs has enormous potential to get Europe's economy growing.</p>
<p>How to apply</p>	<p>Through each Member State.</p>
<p>Covered topics (focus)</p>	<p>Support carbon-intensive regions in diversifying their economies and creating new jobs:</p> <ul style="list-style-type: none"> • Environmental rehabilitation. • Creation of new firms. • Research and innovation. • Investments in Small and Medium-sized Enterprises. • Environmental rehabilitation. • Clean energy. • Reskilling of workers. • Job-search assistance. • Active inclusion of jobseekers programmes.
<p>Typology of funded projects</p>	<p>Several types of projects will be supported according to the Plans devised by the Member States.</p> <p>The Just Transition Platform will play a key role in providing tailored technical support to authorities drafting the Territorial Just Transition Plan throughout the process, in order to ensure that they reflect the specific needs of each region.</p>
<p>Funding range</p>	<p>Overall budget of €19.32 billion, €8.453 billion come from the MMF and 10.87 billion from the Next Generation EU.</p>
<p>Timing/availability</p>	<p>The approved projects will be carried out in the period 2021-2027.</p>
<p>Duration of the investment</p>	<p>Financial impact from 2021 to 2027 for commitment appropriations and from 2021 to 2027 for payment appropriations.</p>
<p>Conditions/requirements</p>	<p>In the <i>Territorial Just Transition Plans</i>, EU countries will need to identify the territories and sectors eligible for funding under the Just Transition Fund. The identification of these territories will be carried out through a dialogue with the Commission. The approval of the plans by the Commission will open the door to dedicated financing not only from the Just Transition Fund but also from the dedicated just transition scheme under InvestEU and the EIB public sector loan facility. The plans will be annexed to the Cohesion</p>

	Policy programmes entailing support for the Just Transition Fund and will be adopted by the Commission together with these programmes.
Contacts	https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/just-transition-mechanism/just-transition-platform-contact-page_en
Example (s)	No biomass-related projects have been found. .

12. Clean Energy Transition Partnership (CETP)

<p>Short description</p>	<p>The Clean Energy Transition Partnership is a transformative Research and Innovation Programme across Europe boosting energy transition in all its dimensions. It enables energy transition from regional to national and global level.</p> <p>The collaboration in this partnership will accelerate the progress of the Union as well as the progress of the participating MS(Member States)/ACs (Associated Countries) and regions through a common understanding of challenges, areas to be addressed and activities to support energy research and innovation that will speed up the clean energy transition. It is possible because stakeholders bring together their knowledge, priorities and resources, based on their energy policies and energy research and innovation policies in the SRIA. This allows the CETP to act on the joint priorities of the MS/AC and the European Commission.</p>
<p>How to apply</p>	<p>Call for proposals will be regularly launched.</p> <p>Relevant information is available on this website: https://cetpartnership.eu/</p>
<p>Covered topics (focus)</p>	<ul style="list-style-type: none"> • Integrated regional energy systems. • Digital transformation. • Storage solutions. • Heating and cooling transition. • Carbon capture use and storage. • Geothermal energy. • Ocean energy. • Solar power generation, photovoltaic. • Wind energy. • Bioenergy and renewable fuels.
<p>Typology of funded projects</p>	<p>Bioenergy and renewable fuels:</p> <ul style="list-style-type: none"> • Synthetic liquid fuels and/or hydrocarbons and blending components via gasification. • Bio-methane from biomass via gasification and synthetic gaseous fuels. • High-efficiency heat and power generation via gasification of biomass • Bioenergy carriers via other thermochemical processes (e.g. pyrolysis, torrefaction). • Ethanol and higher alcohols from lignocellulosic feedstock via fermentation. • Renewable hydrocarbons through biological and/or chemical synthesis from biomass containing carbohydrates. • Bioenergy carriers from CO₂ and sunlight through microorganismbased production and upgrading into fuels and valuable bioproducts. • Renewable hydrogen production.
<p>Funding range</p>	<p>In total at least EUR 500 million in national contributions are expected (on average, at least EUR 70 million per year).</p>

	<p>Assuming that the EC provides 50% of the national R&I investments as EC Co-fund, the EC will provide at least EUR 250 million for the CETP (on average, about EUR 35 million per year).</p> <p>In total, the partnership will invest at least EUR 750 million (2021-2030) in joint projects (spending about € 106 million per year until 2030).</p>
Timing/availability	106 million each year during 2021-2027.
Duration of the investment	Average projects duration of 3-4 years.
Conditions/requirements	<p>Since CETP is part of the Horizon Europe programme, applying organisations need to respect the HE general rules.</p> <p>Only organisations coming from those members which have subscribed to the CETP will entitle to receive funds from their Member State.</p>
Contacts	<p>Lead entity (main contact): Lisa Lundmark, Swedish Energy Agency, lisa.lundmark@energimyndigheten.se Michael Huebner , Austrian Federal Ministry of Climate Action, Environment, Energy, Transport, Innovation and Technology, michael.huebner@bmk.gv.at Hans-Günther Schwarz, Austrian Federal Ministry of Climate Action, Environment, Energy, Transport, Innovation and Technology, hans-guenther.schwarz@bmk.gv.at</p> <p>Commission services (main contact): DG R&I, Maria Getsiou, Maria.Getsiou@ec.europa.eu DG ENERGY, Alessia Clocchiatti, Alessia.Clocchiatti@ec.europa.eu</p>
Example (s)	<p>ERANET BIOENERGY SUSTAINING THE FUTURE (BESTF3)</p> <p>The ERA-NET Cofund BESTF promotes the better use of bioenergy with different stakeholders in different countries.</p> <p>This is the third initiative of BESTF ERA-NET, aiming to attract large investments to implement bioenergy projects. The total fund reached 6.5 million €, whereas the EU contribution was a little more than 2 million €, 9 Member States have participated in this project: Austria, Denmark, Finland, Germany, Netherlands, Poland, Spain, Sweden and the UK, being the last one the coordinator.</p>

13. EUREKA

Short description	Eureka is an intergovernmental network established in 1985, which aims at facilitating innovation, by providing a proven platform for international R&D&I cooperation. It also promotes and supports market-oriented international R&D&I project generation as well as facilitates access to finance for companies involved in its projects. Eureka supports the financing of transnational project, whose funds are provided by Member States. Only organisations from the EUREKA network would be entitled to receive funds from their Member State.
How to apply	<ul style="list-style-type: none"> • Open calls for network projects applications are available here: Eureka Calls for Projects (eurekanetwork.org) • Eurogia 2030: Brokerage tool https://eurogia.eu/eurogia-brokerage-tool/ Submit a Project: https://eurogia.eu/how-to-participate/ • Eurostars: https://www.eurekanetwork.org/countries/belgium-brussels/eurostars/apply
Covered topics (focus)	<ul style="list-style-type: none"> • Clusters: Industry-driven programmes with thematic communities of experts, large companies, SMEs, universities and research organizations. Collaborate on R&D projects of any size • Eurostars: R&D SMEs lead international project consortia and receive national and EU funding to realise their innovation. • GlobalStars: Calls for R&D projects with partners in a specific country outside the Eureka network. • Network projects: A flexible programme for R&D projects with any technological focus. You can propose or join a project at any time or take part in our regular calls. • InvestHorizon: Preparing deep tech companies for Series A investment through an accelerator programme (in association with the European Commission).
Typology of funded projects	<p>Clusters of interest:</p> <ul style="list-style-type: none"> • EUROGIA 2030 (sustainable energy solutions): Develop clean, energy efficient technologies and low carbon solutions for energy generation, distribution and storage. • Metallurgy Europe (metal optimisation) supports projects optimising material discovery (e.g. for use in renewable energy production), recycling, design and processing. Join projects that aim to improve key industrial applications. • ITEA 3 (Software innovation). • CELTIC-NEXT. Next-generation communications. • EURIPIDES². Smart electronic systems. • SMART. Advanced manufacturing. • PENTA. Micro and nanoelectronics.
Funding range	It depends on the project, the country and the type of organisation (SME, large company, research organization or university):

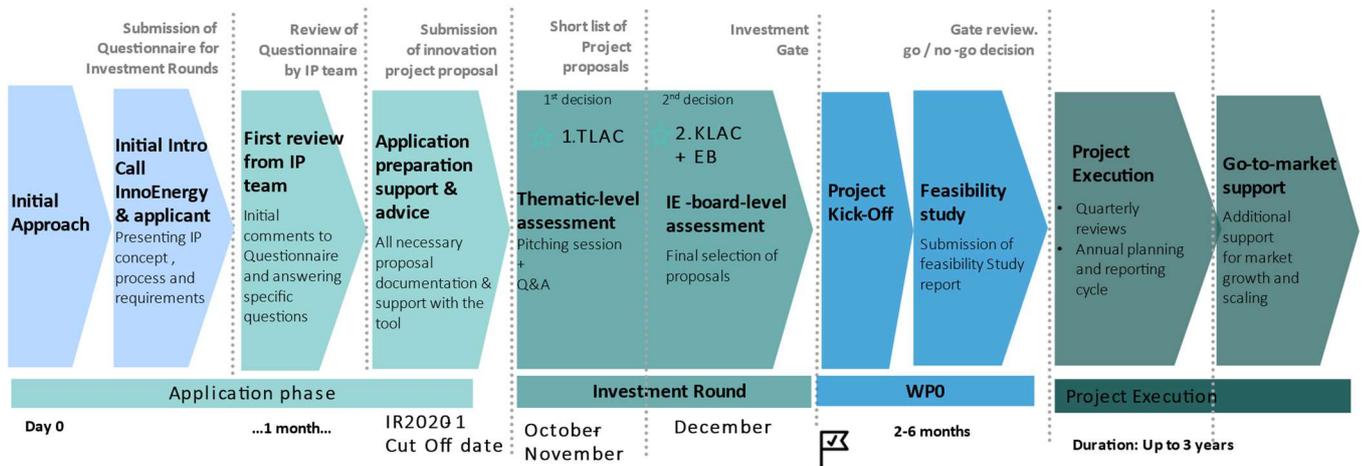
	<ul style="list-style-type: none"> • Eurostars (select the country of interest): https://www.eurekanetwork.org/countries/malta/eurostars/funding • Network projects (select the country of interest): https://www.eurekanetwork.org/countries/spain/network-projects/funding
Timing/availability	It differs according to the type of programme (e.g. clusters have independent procedures and deadlines).
Duration of the investment	2-4 years
Conditions/requirements	<p>It mainly depends on each country and the type of project.</p> <ul style="list-style-type: none"> • Eurostars: https://www.eurekanetwork.org/countries/belgium-brussels/eurostars/eligibility • Network projects: https://www.eurekanetwork.org/countries/italy/network-projects/eligibility • Eurogia 2030: https://eurogia.eu/how-to-participate/
Contacts	https://www.eurekanetwork.org/footer/engage-with-us/contact-us
Example (s)	BIOWINS has received the EUROGIA2020 label. It will install a selected number of gasification installations in different application settings in different EU Member States and will analyse their operational performance over the period of one year. The installations will provide low carbon, cost effective heat and power at a building, community and potentially district scale. Based on the testing results of the applications, best practice and guidance will be provided to duplicate the use the gasification technology in other sites.

14. EIT InnoEnergy

Short description	The Knowledge and Innovation Community dedicated to sustainable energy (EIT InnoEnergy) aims at building a sustainable long-lasting operational framework between the three actors of the innovation triangle in the energy sector: industry, research and higher education. They offer several services to: innovators; start-ups and scale-ups; and students and learners, including the financing of innovative projects via their Investment Round.
How to apply	https://www.innoenergy.com/for-innovators/apply-form/
Covered topics (focus)	<ul style="list-style-type: none"> • Energy storage • Renewable energies • Energy for transport and mobility • Sustainable buildings and cities • Energy efficiency • Energy for circular economy: • Smart electric grid
Typology of funded projects	From TRL 5
Funding range	Average investment between 100k € to 4-5M €. However, the total budget of the project depends on the initiative itself. There is no limit to the project budget. When it comes to funding, part of the project will be financed by KIC InnoEnergy and the other part by the partners. KIC will consider funding between 20 % to 80 % of the proposed project budget.
Timing/availability	According to the schedule of regular calls.
Duration of the investment	The project should last between two and three years, with the product on the market within five years – any longer and it probably means the research is not complete. We want to support projects which have the proof of concept finished.
Conditions/ requirements	<p>Aim to develop an innovative product or service that should be ready to go to market within 5 years.</p> <p>The proof of concept should have already been validated (TRL >5).</p> <p>Part of a consortium of at least three (but no more than seven) organisations.</p> <p>The project partners should come from at least two EU countries. One of the partners should be a company ready to commercialise the product or service.</p>
Contacts	info@innoenergy.com https://www.innoenergy.com/contact/
Example (s)	<p>Bio-Eco-Matic. Straw-powered biomass boilers</p> <p>The Bio-Eco-Matic boiler from MetalERG is a fully automatic straw-powered batch boiler with an energy range of 200kW to 995kW. The boiler delivers significant cost savings by using a readily available, independent and low-cost fuel. Its automatic loading system means it can use whole straw bales for combustion without additional manual intervention. It can also be fitted with an automatic ash-removal system</p>

and heat-exchanger cleaning system to minimise maintenance requirements.
<https://investmentround.innoenergy.com/success-stories/bio-eco-matic-straw-powered-biomass-boilers-innoenergy/>

Process: From day 0 to End



<https://investmentround.innoenergy.com/>

15. New Renewable Energy financing mechanism (REFM)

Short description	EU renewable energy financing mechanism is a new initiative of the Commission to better support renewable energy projects in order to enable EU countries to work together easily. It brings together investor and project developers to improve the efficiency of that investment, by pooling resources and finding the right balance between public and private funds. The mechanism links countries that voluntarily pay into the mechanism (contributing countries) with countries that agree to have new projects built on their soil (hosting countries). The mechanism provides support in the form of low- interest loans or grants.
How to apply	The financial contributions that enter the financing mechanism scheme are allocated to new renewable projects through competitive tenders for grants. Eligible to participate in these tenders are projects located on the territory of the EU countries that agreed to participate as host countries. Following the binding commitment by Finland and Luxembourg, the first cross-border tender for renewables opened on 18 April 2023. In parallel, the Commission will first launch a new call for expression of interest among EU countries and by the end of 2023, the second tender, reflecting the preferences of the participating countries.
Covered topics (focus)	The mechanism can support all technologies that are referred to as renewable energy pursuant to the Renewables Directive (EU) 2018/2001 and are applicable across the electricity, heating and cooling and transport sector: <ul style="list-style-type: none"> • Wind. • Solar (solar thermal and solar photovoltaic). • Geothermal energy. • Ambient energy. • Tide. • Wave and other ocean energy. • Hydropower. • Biomass. • Landfill gas. • Sewage treatment plant gas. • Biogas.
Typology of funded projects	TRL 8-9.
Funding range	The financial contributions that enter the financing mechanism scheme will, through competitive tenders for grants, support new renewable energy projects in all EU countries that are willing to host such projects. The grants cover either the installation of a renewable-production facility with certain capacity (investment support), or the actual production of renewable energy (operating support). The size of the grant 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. As a private investor you can also make a payment to the mechanism. This payment is not linked to a financial return, but can form part of the sustainability and decarbonisation portfolio of the company and diversifies its

	investment agenda. Such financial contributions will count to the EU binding target of at least 32 % of renewable energy
<i>Timing/availability</i>	Implementation periods should be technology-specific and should reflect realistic project delivery periods for each technology, whereas at the same time aiming for a significant level of pre-development required from bidders. Implementation periods should be unvaried across Member States, unless the Commission concludes, on the basis of justified exemptions such as to mitigate systematic disadvantages for some specific projects, that country-specific implementation periods are appropriate.
<i>Duration of the investment</i>	Depending on the type of project. This would normally be specified in the call for tender.
<i>Conditions/requirements</i>	The eligibility criteria and selection criteria as well as the award criteria shall be established in the call for proposals. The award criteria for the proposals should take into consideration the preferences by Member States, notably on environmental criteria. For demonstration projects representing a relevant innovation, the call for proposals might determine specific award criteria, in particular with respect to applications in a technology-specific award procedure or a project-specific award procedure.
<i>Contacts</i>	ENER-FIN-MECH-SUPPORT@ec.europa.eu
<i>Example (s)</i>	Not available yet

16. Interreg

Short description	<p>Interreg is a key European Union (EU) instruments that strengthens cooperation between regions and countries within the EU. As part of the EU's Cohesion Policy, Interreg plays a vital role in promoting regional development, cohesion, and reducing economic disparities.</p> <p>Interreg is composed of several types of programmes:</p> <ul style="list-style-type: none"> • Cross-border cooperation • Trans-national cooperation • Interregional cooperation • The Instrument for Pre-accession Assistance (IPA) Cross - Border Cooperation • NEXT Cooperation
How to apply	<p>Several calls are regularly open, depending on the programme of interest: https://interreg.eu/call-for-project/</p>
Covered topics (focus)	<p>For the 2021-2027 period, Interreg is focused on addressing current challenges like climate change, digital transformation, and social inclusion.</p>
Typology of funded projects	<p>Depending on the programme</p>
Funding range	<p>The co-financing rate at the level of each Interreg programme shall be not higher than 80 %.</p>
Timing/availability	<p>Depending on the programme.</p> <p>The example of Interreg Europe is presented afterwards.</p>
Duration of the investment	
Conditions/requirements	
Contacts	

a. Interreg Europe

Short description	Interreg Europe helps regional and local governments across Europe to develop and deliver better policy. They aim to make sure that government investment, innovation and implementation efforts all lead to integrated and sustainable impact for people and place.
How to apply	Full information here: https://www.interregeurope.eu/apply-for-the-call
Covered topics (focus)	<ul style="list-style-type: none"> • Research and innovation such as Smart SMEs for Industry 4.0, smart and green mining or european Life Science Ecosystems. • SME competitiveness: sustainable reuse centres, building regional resilience, female participation in high-tech enterprises, save rural retail. • Low-carbon economy: renewable energies for agriculture, e-mobility, hydrogen-electric mobility by tackling main infrastructural. • Environmental resource efficiency.
Typology of funded projects	
Funding range	Total fund: 474 million €. 278 projects: 1.7 million for each project.
Timing/availability	Upon project approval (8-12 months after submission deadline).
Duration of the investment	The project lasts between 3 to 5 years. Phase 1 lasts from 1 to three years. Phase 2 lasts two years (3 months more to close the project)
Conditions/requirements	<p>An interregional cooperation project is a project in which partners from at least three different countries work together on a shared regional policy issue by exchanging their experiences and practices in order to integrate the lessons learnt from this cooperation into their policies</p> <p>-Submission of the application form, partner declaration, letter of support.</p> <p>-Eligibility criteria:</p> <ul style="list-style-type: none"> • Respect of the deadline. • Completeness of the application, correctness of the application form and correctness of the support letter • Geographical coverage • Focus on Structural funds
Contacts	Contact us Interreg Europe
Example (s)	<i>Shifting towards Renewable Energy for Transition to Low Carbon Energy:</i> Partners jointly work aiming at encouraging business investments into renewable energy and new innovative

	<p>technologies and increasing involvement of energy consumers as active players. To achieve the project goals partners will look at possibilities to encourage technological development in renewable energy (support for business, industry to develop new technologies) as well as to use of social innovation concept to involve consumers (households, communities, industry, business representatives, public authorities) in the transition process shifting towards renewable energy production and consumption. The main project outputs are: 57 interregional learning events, 8 Action Plans addressing 7 ERDF and 1 local policy instruments, at least 15 good practices will be analysed and shared, 130 people will increase their professional capacities.</p> <p>https://www.interregeurope.eu/shrec/</p>
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17. Interregional Innovation Investment (I3) Instrument

Short description	<p>The Interregional innovation investments instrument as part of the European Regional and Development Fund (ERDF) aims at supporting interregional innovation projects in their commercialisation and scale-up phases giving them the tools to overcome regulatory and other barriers and bring their project to investment level.</p> <p>The agency will implement two call strands:</p> <ul style="list-style-type: none"> • Financial and advisory support for investments in interregional innovation projects; • Financial and advisory support to the development of value chains in less developed regions.
How to apply	<p>Via the Funding and Tender Portal: https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home Guidelines for Applicants</p>
Covered topics (focus)	<p>Accelerating innovation, bringing innovative solutions and new products in:</p> <ul style="list-style-type: none"> • Digital transition • Green transition • Smart manufacturing <p>Financial and advisory support for joint innovation projects Smart economic transformation by moving from investment ideas to actual implementation Direct investment to companies (mainly SMEs).</p>
Typology of funded projects	<p>Testing, demonstration, piloting, large-scale product validation and market replication, adaptation of existing prototypes (TRL 6-9).</p>
Funding range	<p>2 to 10 million €. 70% of EU contribution for all beneficiaries and cost categories.</p>
Timing/availability	<p>Upon the proposal's evaluation (Around 8 months since call closure).</p>
Duration of the investment	<p>Depending on the project's duration (18- 36 months).</p>
Conditions/requirements	<p>Specified in the „Call document“</p>
Contacts	<p>Heldesk and support services.</p>
Example (s)	<p>Hydrogen Valley in the Province of Mantova: HYMANTOVALLEY aims at demonstrating the de-carbonization of a quite air-polluted area in Europe laying in the Italian Padany Plain (Pianura Padana) by building a replicable green hydrogen ecosystem implemented as an integrated model of hydrogen production, storage, transportation and utilisation for heat, power and mobility. Including the development and use of hydrogen-fed and zero-emissions ships, trains, buses and buildings.</p>

18. LIFE/ Clean Energy Transition (2021-2027)

<p>Short description</p>	<p>The LIFE Programme is the EU’s funding instrument for the environment and climate action.</p> <p>The LIFE Clean Energy Transition sub-programme has a budget of nearly EUR 1 billion over the period of 2021-2027 and 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. These are actions of high EU added-value, which are targeted at breaking market barriers that hamper the socio-economic transition to sustainable energy, and typically engage multiple small and medium-sized stakeholders, multiple actors including local and regional public authorities and non-profit organisations, as well as consumers.</p>
<p>How to apply</p>	<p>You are eligible to submit a proposal under the LIFE Programme, if you are:</p> <ul style="list-style-type: none"> • a public or private legal entity registered in the EU or an overseas country or territory linked to it; • a third country associated to the LIFE programme; or • a legal entity created under Union law or any international organisation. <p>Information on upcoming calls for proposals is available under: https://cinea.ec.europa.eu/life/life-calls-proposals_en</p>
<p>Covered topics (focus)</p> <p>Typology of funded projects</p>	<p>Projects are co-financed under the LIFE Clean Energy Transition sub-programme in the following five areas of intervention:</p> <ul style="list-style-type: none"> • 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. <p>The TRL is normally higher than 7, since these projects focus on market uptake.</p>
<p>Funding range</p>	<p>Maximum EU co-financing rates for projects are 60%, 75% and 95%, depending on the project type and topic. The Multiannual Work Programme (MAWP) 2021-2024 and the 2021 Call Documentation are useful sources of information on project topics and policy areas.</p>
<p>Timing/availability</p>	<p>Normally within eight months from the proposal submission.</p>
<p>Duration of the investment</p>	<p>Three to four years, according to the project duration.</p>

Conditions/ requirements	The eligibility criteria for the different project types are detailed in the MAWP 2021-2024 and the application guidelines published alongside each call.
Contacts	https://cinea.ec.europa.eu/life/about-life/life-contacts_en
Example (s)	A searchable projects database is available online: https://webgate.ec.europa.eu/life/publicWebsite/search

19. Crowdfunding Platforms

More recently, crowdfunding is being explored as an additional investment source for the development of renewable energy projects. Crowdfunding raises funds through dedicated web platforms.

A recent project co-financed by HORIZON2020, CrowdfundRES (www.crowdfundres.eu) has explored the role and potential of crowdfunding to support the development of renewable energy projects. Three interesting reports have been prepared to this extent:

[Guidelines for Investors in Clean Energy Projects via Crowdfunding](#)

[Guidelines for RES project developers interested in financing their projects through crowdfunding](#)

[Guidelines for crowdfunding platforms interested in hosting RES projects](#)

The European Crowdfunding Network (ECN) provides a directory of its members, where it is possible to look for several crowdfunding platforms, according to the investors' needs.

20. Advisory Hubs and Accelerators

This chapter presents some advisory services that are available to project developers who are looking for funds to finance their project (e.g. match-making).

a. InvestEU Advisory Hub¹¹

The InvestEU programme provides technical assistance and advisory support through the InvestEU Advisory Hub. It helps public and private project promoters identify, develop and implement green investment projects. At the same time, the InvestEU Portal will continue to offer a free, online, user-friendly tool, providing EU businesses and project promoters in search of financing with the visibility and networking with investors worldwide.

The InvestEU Advisory Hub complements the InvestEU Fund by supporting the identification, preparation and development of investment projects across the European Union. Together with the InvestEU Portal –the EU's online matchmaking tool– we aim to strengthen Europe's investment and business environment

b. InvestHorizon¹²

It is a EUREKA accelerator programme that selects, via regular competitive calls, some companies, focusing on deeptech (including cleantech) companies that have already received series A funding, and are looking for further support over 2,5 million €. Its role of accelerator is to help companies raising funds, by organising pitching events, coaching academy and boot camp.

c. Get.Invest Finance Catalyst¹³

¹¹ https://europa.eu/investeu/investeu-advisory-hub_en

¹² www.investhorizon.eu

¹³ <https://www.get-invest.eu/>

The GET.invest Finance Catalyst links renewable energy projects and companies with finance opportunities and vice versa, targeting small- and medium-scale renewable energy opportunities, currently in sub-Saharan Africa and the Caribbean.

It provides advisory support on investment strategy, business case structuring, as well as accessing finance through a team of dedicated experts with extensive experience in renewable energy project development and finance.

Projects and businesses with strong underlying fundamentals can be supported to access debt and equity, possibly combined with grants, aiming to reach financial close. Our support covers the entire spectrum of renewable energy technologies. The team has dealt with wind, solar, hybrid, hydro, biomass and biogas projects in a variety of business models.

d. Circular Economy Finance Support Platform

The European Circular Economy Stakeholder Platform is a joint initiative by the European Commission and the European Economic and Social Committee. It brings together stakeholders active in the field of the circular economy in Europe. It provides a meeting place for stakeholders to share and boost effective solutions at local, regional and national level in order to support the implementation of circular economy.

The platform's goals are:

- To drive the circular economy in the EU countries at local and regional level, and civil society organisations and businesses.
- To strengthen cooperation between stakeholder networks to facilitate the exchange of expertise, good practices, knowledge and lessons learnt in the circular economy.
- To identify social, economic and cultural barriers to the transition into a circular economy with the intention of advising public policies.

The Annual Circular Economy Stakeholder Conference takes place every year, with different types of stakeholders such as government authorities, NGOs, businesses, communities of interest and society organisations.

More information is available here: <https://circulareconomy.europa.eu/platform/en>

e. European Local Energy Assistance (ELENA)

ELENA is a technical assistance facility operated by the EIB in cooperation with the Commission for sustainable energy investment programmes (targeting buildings, innovative urban transport and energy efficiency) that mobilize more than €30 million.

Activities eligible for ELENA grants include:

- Technical studies, energy audits.
- Business plans and financial advisory.
- Legal advice.



- Tendering procedure preparation.
- Project bundling.
- Project management.

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