

# Funding Sources for Energy Innovation in the UK

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# Single Applicant Funding

## Innovate UK Smart Grant

Open to all technologies.

UK registered organisations can apply for a share of up to £25 million for game-changing and commercially viable R&D innovation that can significantly impact the UK economy.

If your project's duration is 6 to 18 months, it must:

- have total project costs between £100,000 and £500,000
- be single or collaborative

If your project's duration is 19 to 36 months, it must:

- have total project costs between £100,000 and £2 million
- be collaborative

Success rate of 10%



### Innovate UK Innovation Loans

- UK registered businesses can apply for loans for innovative projects with strong commercial potential to significantly improve the UK economy.
- You can apply for a loan of between £100,000 and £2 million to fund your project's eligible costs. Projects can last up to 5 years, including both the R&D and commercialisation phases. Projects are expected to start by 30th January 2023.



## EIC Accelerator

- The EIC Accelerator supports individual Small and Medium Enterprises (SMEs) to develop and scaleup game-changing innovations.
- Focused on Development & Scale up of deep-tech / disruptive innovation by start-ups /SMEs
- 2023 Energy challenges are:
  - Energy Storage
  - Architecture, Engineering and Construction digitisation for decarbonisation
- Grants 0.5M€ to 2.5M€ at 70% intervention rate
- The technology component of your innovation must have been tested and validated in a laboratory or other relevant environment (e.g. at least Technology Readiness Level (TRL) 5/6 or higher).
- UK entities are only eligible to apply for the Grant funding only



## Net Zero Technology Centre Funding

NZTC will run a funding call on Digital and data architecture, smart assets and field automation in January 2023

Businesses from across the globe applied for a share of £7 million available in the first funding window, with a maximum of £1 million awarded to each successful project



## Energy Innovation Council Challenges

- EIC is a not-for-profit organisation, owned by seven utility partners working with 7000+ innovators across the world. Over 130 calls for innovation have been launched and 85% of these calls have been successful in sourcing a solution.
- The EIC provides a shared platform to bring our partners and our innovator community together, in order to facilitate processes that take innovation projects from an idea to business as usual.
- The EIC advertise opportunities to work with energy industry partners on innovation challenges. Past challenges have included:
  - Smart Heating for Schools
  - Implications of Climate Change for Energy Networks
  - Underground Detection
  - Personal reliance on low carbon technologies
  - More Low Carbon Technologies, Better Network Resilience
  - Theft of gas





## Energy Catalyst Challenge Calls

- Supports UK and overseas businesses and organisations to develop highly innovative, market-focused energy technologies that primarily look to enable energy access in Sub-Saharan Africa and South/South East Asia
- Businesses can apply into funding competitions to get a grant to carry out an innovation project, regardless of the stage that project is at.
- Businesses can get funding for their project at any stage of the innovation lifecycle
- Early-stage projects
  - Funding in the early-stage is for technical feasibility projects that explore and evaluate the technical potential of an idea.
- Mid-stage projects
  - Funding in the mid-stage is to for research and development activities, including laboratory studies, system development and testing, as well as verification and evaluation in simulated environments.
- Late-stage projects
  - Funding in the late-stage is for experimental development projects. This can include prototyping and pilot testing of technology in realistic operating environments.

ENERGY  
CATALYST

## TechX Clean Energy Accelerator

- TechX's Clean Energy Accelerator is an intensive 15-week programme for 12 innovative clean energy start-ups with clear potential to significantly accelerate the transition to an affordable net zero energy industry.
- As a start-up on the programme, you will receive a grant of up to £100,000 and expert support from delivery partners and mentors on:
- The entry criteria are:
  - Start-ups' technology solutions must be at a technology readiness level (TRL) of 2 to 6 inclusive in order to be eligible for the Accelerator. We will accept applications from start-ups that have developed other technologies at higher TRLs as long as the innovation they are applying with is TRL 2 to TRL 6.
  - Start-ups can be based anywhere as the programme is delivered virtually, but all participants must work to a GMT time zone. In-person attendance in Aberdeen UK is expected for 3 weeks (first week, last week and a week in the middle).
  - The TechX Clean Energy Accelerator is a 15-week full time intensive programme. At a minimum one founder will need to be available full-time during the 15 weeks to take part in the programme. A maximum of two employees (including one founder) may participate in the programme.



## Knowledge Transfer Partnership

- Knowledge Transfer Partnerships is a UK-wide programme that has been helping businesses for the past 40 years to improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK Knowledge Base.
- A Knowledge Transfer Partnership serves to meet a core strategic need and to identify innovative solutions to help that business grow.
- The academic partner (known as the knowledge base) will work with a business to:
  - develop the project
  - provide academic input
  - recruit a suitable graduate, known as an associate.
- They will act as the employer of the associate, who then works at the business for the majority of the project.
- A typical KTP project delivers a package of support valued at around £80,000 – £100,000 per year.



## Global Business Incubator Programme

- The Global Incubator Programme is an acceleration programme for cohorts of 6-8 innovative SMEs to spend time in world-leading incubators abroad.
- Our structured programme uses an intensive four-stage method to tackle the challenges that most companies face when [entering global business markets](#). Small and medium-sized enterprises can explore the potential of specific overseas markets and access world-class mentors and tailored workspaces.
- The Global Incubator Programme operates on a competitive basis and businesses selected against the criteria listed on the programme page are required to actively participate in all four stages.
- [Innovate UK](#) will cover the training and incubation costs offered by this programme (conditions apply) as well as the Participate market visit. Companies must cover staff time and any travel and accommodation if a physical programme is possible.



# Collaborative Funding

## EU Innovation Fund

- The Innovation Fund is one of the world's largest funding programmes for the demonstration of innovative low-carbon technologies.
- Applicants based in the UK are eligible but proposals must relate to activities taking place in EU Member States, Norway or Iceland.
- The Innovation Fund provides grants for projects aiming at commercial deployment of innovative low-carbon technologies
- Projects may also be located in Northern Ireland on the condition that the project concerns the generation, transmission, distribution or supply of electricity.
- The [Innovation Fund third large-scale call for projects](#) will close on 16<sup>th</sup> March 2023
- There are four open calls in the third large-scale call for projects
  - [General decarbonisation](#) (€1bn)
  - [Innovative electrification in industry and hydrogen](#) (€1bn)
  - [Clean-tech manufacturing](#) (€700m)
  - [Mid-sized pilots](#) (€300m)



## Eureka Eurostars

- Eurostars is open to UK organisations. To apply, you must fulfill seven eligibility criteria:
  - The project consortium is led by an innovative SME from a Eurostars country.
  - The project consortium is composed of at least two entities that are independent from one another.
  - The project consortium is composed of entities from at least two participating countries with a minimum of one organisation from an EU or Horizon Europe Associated Country.
  - The budget of the SMEs from the participating countries (excluding any subcontracting) is 50% or more of the total project cost.
  - No single participant or country is responsible for more than 70% of the budget of the project.
  - The project duration is 36 months or less
  - The project has an exclusive focus on civil applications.
  
- Next deadline is 13<sup>th</sup> April 2023



# Collaborative Funding – Horizon Calls



# Horizon Europe Energy Calls Summary 23/24

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# A competitive and sustainable European battery value chain

Call Title	Topic ID	Deadline	Type of action	Budget per project (€)	Number of projects to be funded
<a href="#"><u>Technologies for sustainable, cost-efficient and low carbon footprint downstream processing &amp; production of battery-grade materials (Batt4EU Partnership)</u></a>	HORIZON-CL5-2023-D2-01-01	18-Apr-23	RIA	7m	3
<a href="#"><u>New processes for upcoming recycling feeds (Batt4EU Partnership)</u></a>	HORIZON-CL5-2023-D2-01-02	18-Apr-23	RIA	5m	3
<a href="#"><u>Advanced digital twins for battery cell production lines (Batt4EU Partnership)</u></a>	HORIZON-CL5-2023-D2-01-03	18-Apr-23	RIA	7m	2
<a href="#"><u>Battery management system (BMS) and battery system design for stationary energy storage systems (ESS) to improve interoperability and facilitate the integration of second life batteries (Batt4EU Partnership)</u></a>	HORIZON-CL5-2023-D2-01-04	18-Apr-23	IA	7.5m	2
<a href="#"><u>Hybrid electric energy storage solutions for grid support and charging infrastructure (Batt4EU Partnership)</u></a>	HORIZON-CL5-2023-D2-01-05	18-Apr-23	IA	6m	2

# A competitive and sustainable European battery value chain

Call Title	Call ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Advanced materials and cells development enabling large-scale production of Gen4 solid-state batteries for mobility applications (Batt4EU Partnership)</u></a>	HORIZON-CL5-2023-D2-02-01	05-Sept-23	IA	8m	3
<a href="#"><u>New Approaches to Develop Enhanced Safety Materials for Gen 3 Li-Ion Batteries for Mobility Applications (Batt4EU Partnership)</u></a>	HORIZON-CL5-2023-D2-02-02	05-Sept-23	RIA	5m	2
<a href="#"><u>Creating a digital passport to track battery materials, optimize battery performance and life, validate recycling, and promote a new business model based on data sharing (Batt4EU Partnership)</u></a>	HORIZON-CL5-2023-D2-02-03	30-Mar-23	IA	8m	1
<a href="#"><u>Advanced sustainable and safe pre-processing technologies for End-of-Life (EoL) battery recycling (Batt4EU Partnership)</u></a>	HORIZON-CL5-2024-D2-01-01	18-Apr-24	RIA	7m	3

# A competitive and sustainable European battery value chain

Call Title	Call ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Non-Li Sustainable Batteries with European Supply Chains for Stationary Storage (Batt4EU Partnership)</u></a>	HORIZON-CL5-2024-D2-01-02	18-Apr-24	IA	7m	3
<a href="#"><u>Development of technical and business solutions to optimise the circularity, resilience, and sustainability of the European battery value chain (Batt4EU Partnership)</u></a>	HORIZON-CL5-2024-D2-01-03	18-Apr-24	RIA	5m	1
<a href="#"><u>Sustainable high-throughput production processes for stable lithium metal anodes for next generation batteries (Batt4EU Partnership)</u></a>	HORIZON-CL5-2024-D2-02-01	30-Mar-23	IA	8m	8m
<a href="#"><u>Post-Li-ion technologies and relevant manufacturing techniques for mobility applications (Generation 5) (Batt4EU Partnership)</u></a>	HORIZON-CL5-2024-D2-02-02	05-Sept-24	RIA	5m	15m

# A competitive and sustainable European battery value chain

Call Title	Call ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<u>Size &amp; weight reduction of cell and packaging of batteries system, integrating lightweight and functional materials, innovative thermal management and safe and sustainable by design approach (Batt4EU Partnership)</u>	HORIZON-CL5-2024-D2-02-03	05-Sept-2024	IA	8m	2
<u>Accelerated multi-physical and virtual testing for battery aging, reliability and safety evaluation (Batt4EU Partnership)</u>	HORIZON-CL5-2024-D2-02-04	05-Sept-2024	IA	7.5m	2

# Built Environment

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Industrialisation of sustainable and circular deep renovation workflows (Built4People Partnership)</u></a>	HORIZON-CL5-2024-D4-02-01	05-Sept-24	IA	8m	2
<a href="#"><u>Robotics and other automated solutions for construction, renovation and maintenance in a sustainable built environment (Built4People Partnership)</u></a>	HORIZON-CL5-2024-D4-02-02	05-Sept-24	RIA	4m	2
<a href="#"><u>BIM-based processes and digital twins for facilitating and optimising circular energy renovation (Built4People)</u></a>	HORIZON-CL5-2024-D4-02-03	05-Sept-24	IA	4m	2
<a href="#"><u>Design for adaptability, re-use and deconstruction of buildings, in line with the principles of circular economy (Built4People Partnership)</u></a>	HORIZON-CL5-2024-D4-02-04	05-Sept-24	RIA	4m	2

# Built Environment

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Innovative uses of lifecycle data for the management of buildings and buildings portfolios (Built4People)</u></a>	HORIZON-CL5-2023-D4-02-01	05-Sept-23	IA	5m	2
<a href="#"><u>Solutions for the identification of vulnerable buildings and people-centric built environment, and for improving their resilience in disruptive events and altered conditions in a changing climate (Built4People)</u></a>	HORIZON-CL5-2023-D4-02-02	05-Sept-23	IA	5m	2
<a href="#"><u>Demonstrate built-environment decarbonisation pathways through bottom-up technological, social and policy innovation for adaptive integrated sustainable renovation solutions (Built4People)</u></a>	HORIZON-CL5-2023-D4-02-03	05-Sept-23	IA	6m	2
<a href="#"><u>Innovative components and configurations for heat pumps</u></a>	HORIZON-CL5-2023-D3-02-04	05-Sept-2023	RIA	2m	3

# Built Environment

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Fast-tracking and promoting built environment construction and renovation innovation with local value chains (Built4People Partnership)</u></a>	HORIZON-CL5-2023-D4-02-04	05-Sept-23	CSA	2m	1
<a href="#"><u>Supporting the creation of an accessible and inclusive built environment (Built4People Partnership)</u></a>	HORIZON-CL5-2023-D4-02-05	05-Sept-23	IA	5m	2
<a href="#"><u>Digital solutions to foster participative design, planning and management of buildings, neighbourhoods and urban districts (Built4People)</u></a>	HORIZON-CL5-2024-D4-02-05	05-Sept-24	IA	5m	2
<a href="#"><u>Low-disruptive renovation processes using integration of prefabricated solutions for energy-efficient buildings</u></a>	HORIZON-CL5-2024-D4-01-01	18-Apr-24	IA	5m	2



# Built Environment

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Innovative cost-efficient solutions for zero-emission buildings</u></a>	HORIZON-CL5-2023-D4-01-01	20-Apr-23	IA	5m	2
<a href="#"><u>Future-proofing historical buildings for the clean energy transition</u></a>	HORIZON-CL5-2023-D4-01-02	20-Apr-23	RIA	4.5m	2
<a href="#"><u>Interoperable solutions for positive energy districts (PEDs), including a better integration of local renewables and local excess heat sources</u></a>	HORIZON-CL5-2023-D4-01-03	20-Apr-23	IA	4m	2
<a href="#"><u>Smart grid-ready buildings</u></a>	HORIZON-CL5-2024-D4-01-02	18-Apr-24	IA	5m	2
<a href="#"><u>Thermal management and energy optimisation of high energy demand IT systems equipment in tertiary buildings</u></a>	HORIZON-CL5-2023-D4-01-04	20-Apr-23	RIA	3m	2
<a href="#"><u>Innovative solutions for cost-effective decarbonisation of buildings through electrification</u></a>	HORIZON-CL5-2023-D4-01-05	20-Apr-23	IA	12.5m	2

# CCUS

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#">Development of near zero-emission biomass heat and/or CHP including carbon capture</a>	HORIZON-CL5-2023-D3-02-01	05-Sept-23	RIA	4m	2
<a href="#">Development of Carbon fixation technologies for biogenic flue gases</a>	HORIZON-CL5-2024-D3-01-05	30-Jan-24	RIA	4m	2
<a href="#">Development of CO2 transport and storage demo projects</a>	HORIZON-CL5-2023-D3-01-17	30-Mar-23	IA	20m	2
<a href="#">CCU for the production of fuels</a>	HORIZON-CL5-2024-D3-02-11	05-Sept-24	IA	7m	2
<a href="#">DACCS and BECCS for CO2 removal/negative emissions</a>	HORIZON-CL5-2024-D3-02-12	05-Sept-24	IA	5-7m	2

# Energy Storage

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Demonstration of innovative, large-scale, seasonal heat and/or cooling storage technologies for decarbonisation and security of supply</u></a>	HORIZON-CL5-2023-D3-01-14	30-Mar-2023	IA	10m	3
<a href="#"><u>Novel thermal energy storage for Concentrated Solar Power (CSP)</u></a>	HORIZON-CL5-2023-D3-02-02	05-Sept-2023	RIA	2.5m	2
<a href="#"><u>Development of novel long-term electricity storage technologies</u></a>	HORIZON-CL5-2023-D3-01-13	30-Mar-2023	RIA	4-5m	3
<a href="#"><u>Demonstration of innovative pumped storage equipment and tools in combination with innovative storage management systems</u></a>	HORIZON-CL5-2024-D3-01-16	16-Jan-2024	IA	8m	1

# Energy Systems

Call Title	Call ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<u>Development and integration of advanced software tools in SCADA systems for High, Medium and Low voltage AC/DC hybrid systems</u>	HORIZON-CL5-2024-D3-01-17	16-Jan-24	IA	6m	2
<u>AI Testing and Experimentation Facility (TEF) for the energy sector – bringing technology to the market</u>	HORIZON-CL5-2024-D3-01-11	16-Jan-24	IA	5m	3
<u>System approach for grid planning and upgrade in support of a dominant electric mobility (vehicles and vessels) using AI tools</u>	HORIZON-CL5-2023-D3-03-03	10-Oct-23	IA	11m	1
<u>Digital tools for enhancing the uptake of digital services in the energy market</u>	HORIZON-CL5-2023-D3-03-04	10-Oct-23	IA	3-4m	3

# Energy Systems

Call Title	Call ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Creation of a standardised and open-source peer-to-peer energy sharing platform architecture for the energy sector</u></a>	HORIZON-CL5-2023-D3-03-05	10-Oct-23	IA	5m	1
<a href="#"><u>Supporting the development of a digital twin to improve management, operations and resilience of the EU Electricity System in support to RePowerEU</u></a>	HORIZON-CL5-2023-D3-01-10	30-Mar-23	IA	20m	1
<a href="#"><u>Supporting the green and digital transformation of the energy ecosystem and enhancing its resilience through the development and piloting of AI-IoT Edge-cloud and platform solutions</u></a>	HORIZON-CL5-2023-D3-01-15	30-Mar-23	IA	18m	1

# Energy Systems

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Development of MVDC, HVDC and High-Power Transmission systems and components for a resilient grid</u></a>	HORIZON-CL5-2023-D3-01-12	30-Mar-2023	IA	11m	2
<a href="#"><u>HVAC, HVDC and High-Power cable systems</u></a>	HORIZON-CL5-2024-D3-01-15	16-Jan-2024	RIA	5-5.5m	3
<a href="#"><u>Increasing the efficiency of innovative static energy conversion devices for electricity and heat/cold generation</u></a>	HORIZON-CL5-2023-D3-03-01	10-Oct-2023	RIA	3m	3
<a href="#"><u>Integration of renewable gases, other than hydrogen or methane, and which have not access to gas grids and interfacing with electricity and heat sectors</u></a>	HORIZON-CL5-2023-D3-03-02	10-Oct-2023	IA	6m	2
<a href="#"><u>Energy Management Systems for flexibility services</u></a>	HORIZON-CL5-2024-D3-01-12	16-Jan-2024	IA	5m	2

# Energy Systems

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>DC and AC/DC hybrid transmission and distribution systems</u></a>	HORIZON-CL5-2024-D3-01-13	16-Jan-2024	RIA	6m	2
<a href="#"><u>Demonstration of DC powered data centre, buildings, industry and ports</u></a>	HORIZON-CL5-2023-D3-01-11	30-Mar-2023	IA	9m	2
<a href="#"><u>Components and interfacing for AC &amp; DC side protection system – AC &amp; DC grid: components and systems for grid optimisation</u></a>	HORIZON-CL5-2023-D3-03-06	10-Oct-2023	IA	5m	2
<a href="#"><u>Condition &amp; Health Monitoring in Power Electronics (PE) - Wide Band Gap PE for the energy sector</u></a>	HORIZON-CL5-2024-D3-01-14	30-Jan-2024	RIA	4m	3

# General

Call Title	Call ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Next generation of renewable energy technologies</u></a>	HORIZON-CL5-2024-D3-01-10	16-Jan-2024	RIA	3m	9
<a href="#"><u>Emerging breakthrough technologies and climate solutions</u></a>	HORIZON-CL5-2024-D2-01-04	18-Apr-2024	RIA	1.5-2.5m	4
<a href="#"><u>Renewable Energy Valleys to increase energy security while accelerating the green transition in Europe</u></a>	HORIZON-CL5-2023-D3-01-01	30-Mar-2023	IA	20m	2
<a href="#"><u>Accelerating the green transition and energy access in Africa</u></a>	HORIZON-CL5-2023-D3-02-16	05-Sept-2023	IA	5m	4
<a href="#"><u>Market Uptake Measures of renewable energy systems</u></a>	HORIZON-CL5-2024-D3-02-10	05-Sept-2024	CSA	2m	4



# Geothermal

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Advanced exploration technologies for geothermal resources in a wide range of geological settings</u></a>	HORIZON-CL5-2023-D3-02-05	05-Sept-23	RIA	4m	2
<a href="#"><u>Smart use of geothermal electricity and heating and cooling in the energy system</u></a>	HORIZON-CL5-2023-D3-02-06	05-Sept-23	IA	5m	3
<a href="#"><u>Innovative applications/integration of geothermal heating and cooling in industry</u></a>	HORIZON-CL5-2024-D3-01-06	16-Jan-24	RIA	3m	3

# Heating & Cooling (Industry)

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Integration of renewable heat or industrial waste heat in heat-to-cold conversion systems to generate cold for industrial processes</u></a>	HORIZON-CL5-2023-D4-01-06	20-Apr-23	IA	10m	2
<a href="#"><u>Alternative heating systems for efficient, flexible and electrified heat generation in industry</u></a>	HORIZON-CL5-2024-D4-01-03	18-Apr-24	IA	5.3m	3
<a href="#"><u>Waste heat reutilisation from data centres</u></a>	HORIZON-CL5-2023-D3-01-09	30-Mar-2023	IA	6m	2

# Hydro

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Demonstration of sustainable hydropower refurbishment</u></a>	HORIZON-CL5-2023-D3-02-09	05-Sept-2023	IA	8m	1
<a href="#"><u>Development of hydropower equipment for improving techno-economic efficiency and equipment resilience in refurbishment situations</u></a>	HORIZON-CL5-2024-D3-01-07	16-Jan-2024	RIA	4m	2

# Clean Hydrogen Partnership (Production)

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects funded
<a href="#"><u>Innovative electrolysis cells for hydrogen production</u></a>	HORIZON-JTI-CLEANH2-2023-01-01	18-Apr-23	RIA	3m	2
<a href="#"><u>Innovative Solid Oxide electrolysis cells for intermediate temperature hydrogen production</u></a>	HORIZON-JTI-CLEANH2-2023-01-02	18-Apr-23	RIA	3m	1
<a href="#"><u>Advances in alkaline electrolysis technology</u></a>	HORIZON-JTI-CLEANH2-2023-01-03	18-Apr-23	RIA	2.5m	1
<a href="#"><u>Photoelectrochemical (PEC) and/or Photocatalytic (PC) production of hydrogen</u></a>	HORIZON-JTI-CLEANH2-2023-01-04	18-Apr-23	RIA	2.5m	1
<a href="#"><u>Waste-to-hydrogen demonstration plant</u></a>	HORIZON-JTI-CLEANH2-2023-01-05	18-Apr-23	IA	10m	1

# Clean Hydrogen Partnership (Production)

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects funded
<a href="#"><u>Valorisation of by-product O2 and/or heat from electrolysis</u></a>	HORIZON- JTI- CLEANH2- 2023-01-06	18-Apr-23	IA	10m	1
<a href="#"><u>Hydrogen use by an industrial cluster via a local pipeline network</u></a>	HORIZON- JTI- CLEANH2- 2023-01-07	18-Apr-23	IA	15m	1

# Clean Hydrogen Partnership (Storage & Distribution)

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects funded
<a href="#">Large-scale demonstration of underground hydrogen storage</a>	HORIZON-JTI-CLEANH2-2023-02-01	18-Apr-23	IA	20m	1
<a href="#">Pre-Normative Research about the compatibility of transmission gas grid steels with hydrogen and development of mitigation techniques</a>	HORIZON-JTI-CLEANH2-2023-02-02	18-Apr-23	RIA	4m	4m
<a href="#">Novel insulation concepts for LH2 storage tanks</a>	HORIZON-JTI-CLEANH2-2023-02-03	18-Apr-23	RIA	2m	1
<a href="#">Demonstration of high pressure (500-700 bar) supply chain</a>	HORIZON-JTI-CLEANH2-2023-02-04	18-Apr-23	IA	5m	1
<a href="#">Demonstration action on LH2 HRS for Heavy Duty applications</a>	HORIZON-JTI-CLEANH2-2023-02-05	18-Apr-23	IA	10m	1

# Clean Hydrogen Partnership (Transport Applications)

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects funded
<a href="#">Real environment demonstration of Non-Road Mobile Machinery (NRMM)</a>	HORIZON-JTI-CLEANH2-2023-03-01	18-Apr-23	IA	5m	2
<a href="#">Development of a large fuel cell stack for maritime applications</a>	HORIZON-JTI-CLEANH2-2023-03-02	18-Apr-23	RIA	7.5m	1
<a href="#">Ultra-low NOx combustion system for aviation</a>	HORIZON-JTI-CLEANH2-2023-03-03	18-Apr-23	RIA	8m	1

# Clean Hydrogen Partnership (Clean Heat & Power)

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects funded
<a href="#"><u>Development and validation of high power and impurity tolerant fuel cell systems ready to run on industrial quality dry hydrogen</u></a>	HORIZON-JTI-CLEANH2-2023-04-01	18-Apr-23	RIA	4m	2
<a href="#"><u>Research on fundamental combustion physics, flame velocity and structure, pathways of emissions formation for hydrogen and variable blends of hydrogen, including ammonia</u></a>	HORIZON-JTI-CLEANH2-2023-04-02	18-Apr-23	RIA	3m	1
<a href="#"><u>Retrofitting of existing industrial sector natural gas turbomachinery cogeneration systems for hydrogen combustion</u></a>	HORIZON-JTI-CLEANH2-2023-04-03	18-Apr-23	IA	6m	1
<a href="#"><u>Hydrogen for heat production for hard-to-abate industries (e.g. retrofitted burners, furnaces)</u></a>	HORIZON-JTI-CLEANH2-2023-04-04	18-Apr-23	IA	6m	1



# Clean Hydrogen Partnership (Hydrogen Valleys)

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects funded
<a href="#">Large-scale Hydrogen Valley</a>	HORIZON- JTI- CLEANH2- 2023-06-01	18-Apr-23	IA	20m	1
<a href="#">Small-scale Hydrogen Valley</a>	HORIZON- JTI- CLEANH2- 2023-06-02	18-Apr-23	IA	9m	2

# Clean Hydrogen Partnership (Strategic Research Challenges)

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects funded
<a href="#"><u>Advanced materials for hydrogen storage</u></a>	HORIZON- JTI- CLEANH2- 2023-07- 01	18-Apr-23	RIA	10m	1
<a href="#"><u>Increasing the lifetime of fuel cells and electrolyzers</u></a>	HORIZON- JTI- CLEANH2- 2023-07- 02	18-Apr-23	RIA	10m	1

# Clean Hydrogen Partnership (Cross-cutting)

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects funded
<a href="#">Product Environmental Footprint Pilot for FCH Systems</a>	HORIZON-JTI-CLEANH2-2023-05-01	18-Apr-23	CSA	1.5m	1
<a href="#">European Hydrogen Academy</a>	HORIZON-JTI-CLEANH2-2023-05-02	18-Apr-23	CSA	3m	1
<a href="#">Pre-Normative Research on the determination of hydrogen releases from the hydrogen value chain</a>	HORIZON-JTI-CLEANH2-2023-05-03	18-Apr-23	RIA	3m	1

# Hydrogen (Other)

Call Title	Deadline	Type of action	Budget (€)
<u>Open Pilot Line/Test-Bed for hydrogen</u>	20-Apr-23	IA	10m
<u>Hydrogen-powered aviation</u>	20-Apr-23	IA	8-10m
<u>Accelerating climate neutral hydrogen-powered/electrified aviation</u>	20-Apr-23	RIA	3-4m

# Low Carbon Fuels

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Demonstration of advanced biofuel technologies for aviation and/or shipping</u></a>	HORIZON-CL5-2023-D3-01-06	30-Mar-23	IA	9m	2
<a href="#"><u>Demonstration of synthetic renewable fuel technologies for aviation and shipping</u></a>	HORIZON-CL5-2023-D3-01-07	30-Mar-23	IA	9m	2
<a href="#"><u>Demonstration of improved intermediate renewable energy carrier technologies for transport fuels</u></a>	HORIZON-CL5-2024-D3-01-03	16-Jan-24	IA	10m	2
<a href="#"><u>Development of next generation advanced biofuel technologies</u></a>	HORIZON-CL5-2023-D3-02-07	05-Sept-23	RIA	4m	3

# Low Carbon Fuels

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Development of microalgae and/or direct solar fuel production and purification technologies for advanced aviation and /or shipping fuels</u></a>	HORIZON-CL5-2023-D3-02-08	05-Sept-2023	RIA	4m	2
<a href="#"><u>Development of smart concepts of integrated energy driven bio-refineries for co-production of advanced biofuels, bio-chemicals and biomaterials</u></a>	HORIZON-CL5-2024-D3-02-03	05-Sept-24	RIA	3.5m	2
<a href="#"><u>Improvement of light harvesting and carbon fixation with synthetic biology and/or bio-inspired/biomimetic pathways for renewable direct solar fuels production</u></a>	HORIZON-CL5-2024-D3-01-04	30-Jan-2024	RIA	4m	2
<a href="#"><u>Development of next generation synthetic renewable fuel technologies</u></a>	HORIZON-CL5-2024-D3-02-02	05-Sept-24	RIA	4m	3

# Offshore Wind

Call Title	Call ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Digital twin for forecasting of power production to wind energy demand</u></a>	HORIZON-CL5-2023-D3-02-14	05-Sept-2023	RIA	6m	2
<a href="#"><u>Minimisation of environmental, and optimisation of socio-economic impacts in the deployment, operation and decommissioning of offshore wind farms</u></a>	HORIZON-CL5-2024-D3-02-08	05-Sept-2024	RIA	5m	2
<a href="#"><u>Critical technologies for the offshore wind farm of the future</u></a>	HORIZON-CL5-2023-D3-01-05	30-Mar-2023	RIA	6m	3
<a href="#"><u>Critical technologies to improve the life-time, efficient decommissioning and increase the circularity of offshore and onshore wind energy systems</u></a>	HORIZON-CL5-2023-D3-02-15	05-Sept-2023	RIA	4m	3
<a href="#"><u>Demonstrations of innovative floating wind concepts</u></a>	HORIZON-CL5-2024-D3-02-09	05-Sept-2024	IA	15m	2

# Solar

Call Title	Call ID	Deadline	Type of action	Budget per project (€)	Number of projects to be funded
<a href="#"><u>PV integration in buildings and in infrastructure</u></a>	HORIZON-CL5-2023-D3-01-02	30-Mar-2023	IA	8m	2
<a href="#"><u>Floating PV Systems</u></a>	HORIZON-CL5-2023-D3-01-03	30-Mar-2023	IA	7m	2
<a href="#"><u>Solar Systems for Industrial Process Heat and Power</u></a>	HORIZON-CL5-2023-D3-01-04	30-Mar-2023	IA	7m	2
<a href="#"><u>Industrial manufacturing for lower-cost solar thermal components and systems</u></a>	HORIZON-CL5-2023-D3-02-03	05-Sept-23	IA	3m	2
<a href="#"><u>Digital tools for CSP and solar thermal plants</u></a>	HORIZON-CL5-2024-D3-02-01	05-Sept-24	IA	3m	2



# Solar

Call Title	Call ID	Deadline	Type of action	Budget per project (€)	Number of projects to be funded
<a href="#"><u>PV-integrated electric mobility applications</u></a>	HORIZON-CL5-2024-D3-02-05	05-Sept-2024	IA	7m	2
<a href="#"><u>Innovative, Community-Integrated PV systems</u></a>	HORIZON-CL5-2024-D3-02-06	05-Sept-2024	IA	5m	2
<a href="#"><u>Resource Efficiency of PV in Production, Use and Disposal</u></a>	HORIZON-CL5-2024-D3-02-07	05-Sept-2024	CSA	3m	1
<a href="#"><u>Low-power PV</u></a>	HORIZON-CL5-2024-D3-01-02	16-Jan-24	IA	3m	2
<a href="#"><u>Operation, Performance and Maintenance of PV Systems</u></a>	HORIZON-CL5-2023-D3-02-13	05-Sept-23	IA	5m	2

# Solar

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Alternative equipment and processes for advanced manufacturing of PV technologies</u></a>	HORIZON-CL5-2024-D3-01-01	16-Jan-24	IA	12m	2
<a href="#"><u>Advanced concepts for crystalline Silicon technology</u></a>	HORIZON-CL5-2023-D3-02-11	05-Sept-23	RIA	3m	3
<a href="#"><u>Large Area Perovskite solar cells and modules</u></a>	HORIZON-CL5-2023-D3-02-12	05-Sept-23	IA	7m	2

# Wave & Tidal

Call Title	Topic ID	Deadline	Type of action	Budget (€)	Number of projects to be funded
<a href="#"><u>Demonstration of sustainable tidal energy farms</u></a>	HORIZON-CL5-2023-D3-01-08	30-Mar-2023	IA	20m	2
<a href="#"><u>Development of innovative power take-off and control systems for wave energy devices</u></a>	HORIZON-CL5-2023-D3-02-10	05-Sept-2023	RIA	4m	2
<a href="#"><u>Demonstration of sustainable wave energy farms</u></a>	HORIZON-CL5-2024-D3-01-08	16-Jan-2024	IA	18-20m	2
<a href="#"><u>Critical technologies for the future ocean energy farms</u></a>	HORIZON-CL5-2024-D3-02-04	05-Sept-2024	RIA	4m	2

# Scotland-only Funding

## Clean Energy Transition Partnership

- New European funding competition only open to applicants in Scotland
- This new transformative research, development and innovation programme will support transnational collaborative projects in the renewable energy sector (offshore renewables, heat pumps and heat networks), fuels (green hydrogen), the systems and storage solutions which optimise their use, as well as Carbon Capture and Storage (CCUS).
- Next call expected Sept 2023



**CETPartnership**

## Scottish Enterprise SMART Grant

- Aims to support high-risk, highly ambitious projects.
- It covers conducting feasibility studies.
- Can support up to 70% of the eligible costs for a small enterprise and up to 60% of the eligible costs for a medium enterprise.
- Studies must last between 6 and 18 months
- The maximum grant is £100,000.
- Feasibility is paid with a third of the grant in an upfront instalment and the rest is quarterly in arrears.
- They accept new applications all year round.



## Interface R&D Grants

- Purpose is to encourage new first time partnerships between a company and a university or further education college (FEC).
- Value of between £1,000 and £5,000 (covers the academic project costs and is paid directly to the university/FEC).
- Company contributes an equal value in cash or in-kind (such as staff time, materials or equipment) or a combination of both.
- Projects must be innovative (a novel/pioneering idea) and lead to either new products, services, processes or an innovative workplace business process/workplace practice/business expertise that will benefit the company, the academic institution and the Scottish economy.



## ETP Scotland Knowledge Exchange Network

- ETP provides knowledge exchange and business development support to SMEs. ETP increases SME capability in low carbon technical innovation and makes it easier for SMEs and universities to connect through the Knowledge Exchange Network (KEN).
- You can receive funding worth up to £10,000.
- Welcome applications from Scottish SMEs or non-Scottish SMEs who have or want to establish a base in Scotland
- Focused on 8 areas: Energy Conversion & Storage; Energy Distribution & Infrastructure; Energy Efficiency in Buildings; Energy Systems; Heat Energy; Hydrogen; Marine Energy; and Wind Energy.





## Low Carbon Manufacturing Challenge Fund (LCMCF)

- Grants with a minimum value of £150,000 are available
- If you're looking to grow your Scottish manufacturing business through developing low carbon products, processes or services, you can apply for the LCMCF grant.
- Your project can use pure Research and Development (R&D), capital investment or environmental aid support in its effort to speed-up the transition to a low carbon economy in manufacturing
- The challenge applies to companies based in Scotland.



## CO2 Utilisation Challenge

- Suitable projects may use chemical, biological reactions or mineralisation to transform CO2 into a product or component with commercial value. Projects that focus on products and processes with low carbon intensity will be prioritised.
- The challenge will support projects to develop and test products and to enable infrastructure developments at emissions sources for use in your project. However, projects with a strong focus on carbon capture technology are out of scope, as are projects which do not involve CO2 transformation – using CO2 as a solvent or working fluid, for example.
- Funding is available from 11 April 2022 until 31 March 2024
- To secure an R&D grant, companies will be legally obligated to create and/or safeguard jobs throughout the project and maintain these positions for a period of up to 24 months after the project is completed.



## Scottish Edge

- For early-stage companies/social enterprises across all sectors, offering funding of up to £100,000 on a split grant/loan basis.
- If you have an innovative, high-growth potential business then you could win up to £100,000 plus a fantastic package of support from Scottish EDGE. The application process consists of each business completing the Scottish EDGE Online Application Form (available from our website) and producing a 3-minute video presentation.
- Deadline 23/08/22



## High Growth Spin Out Programme

- The High-Growth Spin-out Programme helps researchers to take their ideas and inventions from the lab to the global marketplace by awarding funding and support.
- Can support with:
  - Commercialising research and innovation
  - Market assessment
  - IP protection
  - Building a commercial team
  - Company formation



# Wales-only Funding

## SMART Partnerships

- SMART Partnerships offers financial support to innovative collaboration projects that require a range of expertise to help businesses grow, improve productivity and increase competitiveness.
- The aim of SMART Partnerships is to support collaborative projects, with a clear focus to increase the capacity and capabilities of Welsh businesses to develop R&D activities by linking them with Research Organisations and an associate, to work on a specific project to develop new products, processes and services in alignment with Smart Specialisation.
- It is offered to Welsh businesses and Welsh Research organisations. The project must demonstrate it is an effective collaboration and will deliver positive Welsh economic and Well-being of Future Generations impacts.
- Funding will support 50% of the total eligible project costs. The business partner shall provide the remaining balance of the total eligible projects costs. The funding will be awarded to the research organisation.
- Duration of projects: 6-12 months



# Northern Ireland-only Funding

## Innovation Vouchers

- An Innovation Voucher offers you £5000 to ‘purchase’ specialist knowledge from one of 39 respected universities, colleges and research organisations throughout Northern Ireland and the Republic of Ireland. This knowledge can help you to expand, improve or create new products, services and processes.
- Support is available up to £5,000 to:
  - Investigate or plan your idea
  - Make and test a prototype
  - Experiment and refine your design
  - Handle intellectual property costs

