NIM Industry Insights Series – Webinar 21 May 2025

Clean Energy Transition Partnership (CETP)

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EUROPEAN PARTNERSHIP

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Clean Energy Transition Partnership CETP

- initiative co-funded by the European Union that brings together public and private stakeholder from European and non-European countries and regions

- CETPartnership aims to contribute to the EU's goal of becoming the first climate-neutral continent by 2050

  => Annual transnational Research & Innovation joint calls

- CETP Knowledge Community and CETP Impact Network to boost peer2peer learning and impact maximising

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33 Countries
23 EU Member States
10 Associated Countries

50+ Funding Partners
Funding Agencies & Ministries

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13 Coordination Units
Coordinator: BMK (Austria), SWEA (Sweden)

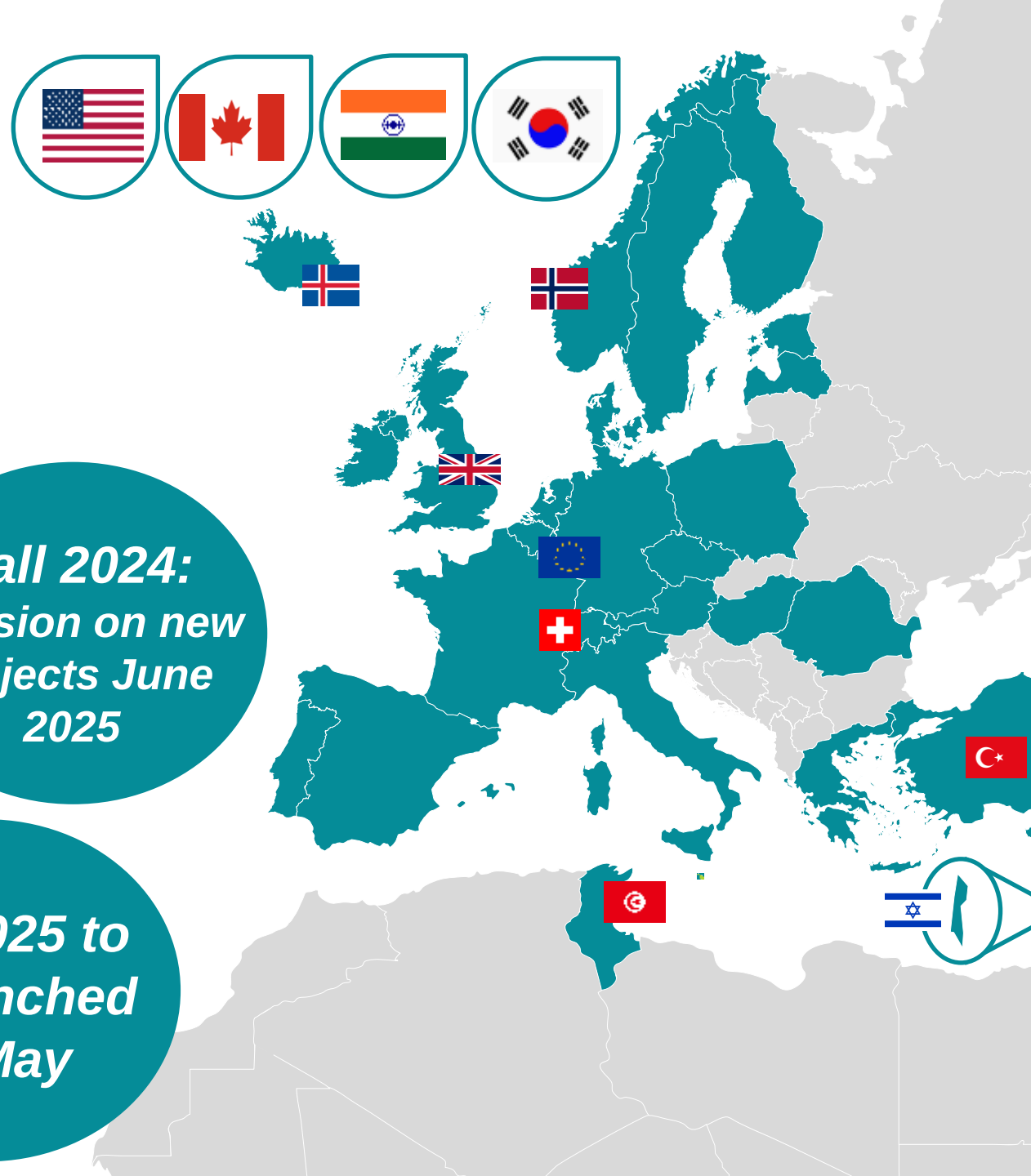
Annual Calls for RTDI Projects
Budget in the order of **€100 M** each year for 2022 – 2027

Seeking strong collaboration with Mission Innovation

108 ongoing projects

Call 2024: Decision on new projects June 2025

Call 2025 to be launched 28 May



TRI3 CCUS, Hydrogen, and Renewable Fuels

- Aims at global decarbonisation by accelerating development and implementation of carbon capture, utilisation and storage (CCUS) technologies by supporting targeted research and innovation activities to reduce costs and implement CCUS at an industrial scale.

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TRI6 Integrated Industrial Energy Systems

aims at developing and demonstrating a set of technical solutions for integrated industrial energy systems enabling efficient carbon-neutral industrial production sites

- Special emphasis in the initiative is placed on solutions for system- and process-level integration of technologies for efficient industrial power, heating, and cooling.
- The aim is to support projects so that they can lead to faster market uptake and/or upscaling

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CCU/S RDI needs (1/2)

	NOW	2030	
Carbon Capture tech	• Efficient low cost Carbon Capture with high capture rates • Upscaling Carbon Capture technologies – large scale plants • Lower cost materials • Bio-CO_2	• DAC	• Reduce plant sizes / space requirement
CCUS process	• Costs down and energy efficiency up for all parts of CCUS processes • R&D needs for preparation for upscaling • Utilisation also for non energy products • Pilot plants and further upscaling	• Energy and Cost efficiency remains topic	
CO_2 logistics	• CCUS atlas: industrial hubs for infra planning • CO_2 logistics (rail/trucks/ships/pipelines) linking sources and sinks, large and small volumes	• European CO_2 pipeline network	
CO_2 storage	• Reservoir integrity • Drillhole tech and integrity • Monitoring • Competing reservoir uses (e.g. H_2 storage), capacity estimation and modeling • Emerging storage options like mineralization and long-term CO_2 storage in the soil • Small-scale CO_2 storage opportunities for smaller industries		

• Monitoring/ metering tech for Carbon Capture/CO_2 quality

• Metering technology

• CO_2 storage atlas

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CCU/S RDI needs (1/2)

	NOW	2030
Business models, value chains, industry symbiosis	• Varied CCU solutions, connections between industries • Modeling functioning business options, integrated solutions and value-chains: actors, new businesses, gaps • Supporting/optimising the integration of new technologies into existing facilities, side streams and infrastructure	• Upscaling: Cost vs size
Standards	• RDI to support standards: CO_2 quality, Carbon Capture, utilisation, transport and storage	
Environmental impact	• LCA and sustainablility	• Environmental assessment from large plants
Cross-cutting topics	• Update of carbon capture and main synthesis roadmaps based on TRL • AI based technologies (e.g. control of plants) • Research infra, shared European pilot plants	• Capacity building - labour requirements

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Market shaping (1/3)

WHAT			HOW	WITH WHOM
Carbon Capture, CCU, CCS 	NEED 1	Understanding industry needs: what will enforce, enable, or inhibit CCUS	• Bringing industry and public authorities together, webinars for shared understanding	• Working group with stakeholders, also local authorities, financing • Ministries, regulatory agencies. National funding bodies. Policy makers.
	NEED 2	Regulatory framework, with standards, legislation, taxation and incentives, including both larger and tsmaller emitters, addressing both CCU and CCS	• Proposing regulations: for carbon binding and recycling; accounting for negative emissions; source of carbon; CCU fuels, chemicals and materials. Quality and safety specifications. • Analysing options for incentivising CCUS plants and end product markets, especially for hard-to-abate industry	• Working group, with stakeholders also local authorities, financing • Strong connection btw research institutes and industry is key to bring CCUS forward
CO_2 logistics 	NEED 3	CO_2 infrastructure	• Investing in infrastructure • Multilateral agreements between member states	• Transport providers, including infrastructure industry (Fluxys, TES)
	NEED 4	Standards, specifications for CO_2 transport	• Agreeing on temperature and pressure requirements to facilitate multi-modal infrastructure. CO_2 quality specifications	
	NEED 5	CO_2 Import/export	• Regulation for cross border exchange and CBAM	• Regulatory Agencies

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Market shaping (2/3)

WHAT			HOW	WITH WHOM
CO_2 storage	NEED 6	Availability of storage solutions for full CCS chain demonstration, taking into account storage competition between technologies: CCS, Geothermal energy, H_2	• Support the establishment of CO_2 storage facilities. Clarify regulation for utilization of underground storage for competing technologies. • At national level, decide on specific nodes where CO_2 aggregation would facilitate scaling of CCS	• Ministries responsible for energy and environmental policies, to secure support for CCUS infrastructure
Business models, value chains, industry symbiosis	NEED 7	Carbon Capture (CC) targets	• CC targets with quota, bans or support (subsidies, taxes, certificates) • Support pilots in all sectors – also energy-intensive industry	• Ministries responsible for energy and environmental policies, alignment with goals
	NEED 8	Long-term transparent framework for incentives reducing investment risks	• Incentivising CCUS plants and end product markets • Matchmaking for project developers and funders • Regulated markets. Market model to guide participants (demand on green plastic, bio-fuels). Price on CCS for industry to sell carbon credits. Voluntary carbon market (especially with BECCS). Biogenic CCU - premium product on existing market.	• Energy Regulatory Authorities
	NEED 9	Value chains	• Boost development of CCUS value chains	• Industrial clusters, business associations, EU technology platforms. Mission innovation. Processes4Planet and other partnerships

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Market shaping (3/3)

WHAT			HOW	WITH WHOM
Standards	NEED 10	Technological standards (e.g. concrete)	• Formulate recommendations for European standards for CEN approval to be adopted regarding technical aspects of CCS and CCU, as well fuels derived from CO_2	• Standardisation bodies
	NEED 11	Science based evidence, data to support	• R&D projects to provide data and basis for recommendations	• Research institutes
Knowledge sharing	NEED 12	Networking between stakeholders	• Create certificates or stamps for brands to boost premium green products. Example: "Fossil indicator" to compare the environmental impact of a product. • Best practices, dissemination, competence building. Working groups, platforms, communication materials	• EC/national governments, supporting concrete and functional working groups
Social acceptance	NEED 13	Interaction with the public, dialogue with society and citizens, education	• Best practices, communication, competence building, dialogue and listening • Working groups, platforms, communication materials • Example: 'Decarbonised modern living' to support stakeholder management/permitting	• Society, citizens, local communities • EC/national governments, supporting concrete and functional working groups
Environmental impact	NEED 14	Defining environmentally friendly CCU	• Share EIAs • LCA	• Environmental groups • Policy makers

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Joint call 2025 opening soon
TRI6 Call Module for Industrial Energy Systems (CM8)

INTEGRATED INDUSTRIAL ENERGY SYSTEMS

INDUSTRIES
FOOD AND DRINK
CEMENT
PULP AND PAPER (FOREST INDUSTRY)
STEEL
CHEMICALS

REDUCING EMISSIONS FROM INDUSTRIAL PROCESSES

- Efficiency (utilising excess heat etc.)
- Circularity
- Electrification
- Green hydrogen: energy carrier and raw material in processes
- CCU (CO2 to chemicals or long lasting products)
- Bio-CCU enabling negative emissions
- Reduction of emissions other than GHG

FLEXIBILITY FOR ENERGY SYSTEM

- Enabling flexible use of renewable electricity in industry
- Flexible use of electricity including flexibility from heat/process storage buffers
- Energy sector coupling in industry: power and heat networks and industrial symbiosis

ACCELERATING INDUSTRIAL DECARBONISATION

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Impacts from international R&D projects

- Larger projects with higher impact than what would have been possible with only national projects.
- Well-functioning RD&I collaboration across borders is established.
- Strong relations between academia and industry established.
- International cooperation already in the research phase increases chances for transnational large-scale implementation of CCUS.
- Results from CETP projects are relevant for the European Strategic Energy Plan (SET-plan) and for Mission Innovation.
- Important contributions to dissemination of key messages beyond the scientific community.

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TRI6 is organising a Matchmaking pitch event 18.6

Join us at this online Matchmaking Event aiming to bring industry together with researchers to boost collaboration in projects related to Call Module 2025–08: Integrated Industrial Energy Systems.

Whether you're focused on developing solutions for industry decarbonisation, increased use of renewable energy in industry or industry symbiosis with circularity, pitch your project idea to industry stakeholders to find the perfect match for your solution. Industry is also welcome to pitch ideas where they are searching for research partners for transnational collaboration.

Ready to pitch? Sign up as a pitcher https://link.webropolsurveys.com/EP/9B39313DFB53C326
If you want to join the event only as a listener, please register by clicking the green 'attend' button at the event page
We look forward to seeing you! Please don't hesitate to contact us if you have any questions.

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Upcoming events

- CETP Call Launch webinar 28 May
- TRI3 & TRI6 Call launch webinar 13 June
- TRI6 Matchmaking event 18 June

https://cetpartnership.eu/calls/joint-call-2025

https://www.b2match.com/e/clean-energy-transition-partnership-2024/events/204

- CCUS Knowledge Sharing Workshop, Leipzig 24-25 September

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