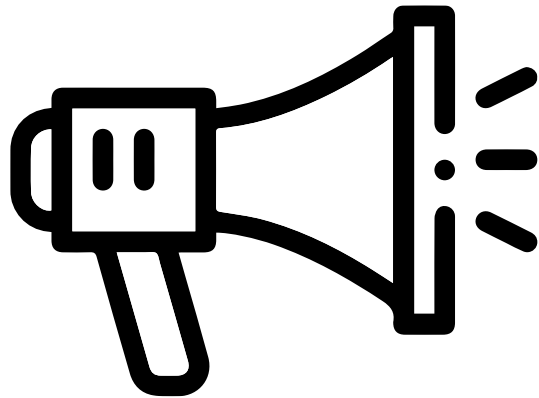


CSLF-meeting 27. June 2022, Bergen
Ragnhild Rønneberg, RCN, rr@rcn.no

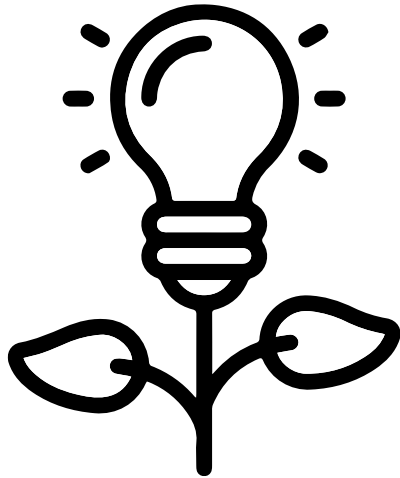


CETPartnership



- **70 national and regional** RTDI programme owners and managers from **32 countries** (26 EU Member States and 5 Associated Countries and one associated partner)
- aligning their priorities, pool national budgets of 210 Mill EUR for **two joint calls in 2022 and 2023**
- implement annual joint calls from 2022 to 2027
- CETP is coordinated by FFG in Austria (Michael Hübner and Rosa Matic)

The transnational initiative in a nutshell



- Aims to empower the **clean energy transition** and contribute to the EU's goal of becoming the first **climate-neutral continent by 2050** (and it goes beyond Europe !)
- by pooling national and regional RTDI (Research, Technology, Development, Innovation) **funding** for a broad variety of technologies and system solutions required to make the transition
- **Knowledge sharing**, maximise output, open access to data

The CETPartnership

- Builds on **15 years of transnational cooperation** in 9 energy relevant ERA-Nets
- Build up of **trust and established practices** in:
 - conducting joint calls and monitoring progress,
 - sharing data, information and knowledge beyond the projects
 - deducing strategic knowledge, maximising the impact of funded projects and their established European and international relationships



+ Joint programming platforms covering Smart Grids, EnerDigit, Regional Energy systems

The TRIs

7 Transition Research Initiatives (TRIs), thematic configuration, addressing the Challenges as described in the Strategic Research and Innovation Agenda (SRIA).

Each TRI is coordinated by one of the strategic partners in CETP.



TRI 1: Integrated Net-zero-emissions Energy System



TRI 2: Enhanced zero emission Power Technologies



TRI 3: Enabling Climate Neutrality with Storage Technologies, Renewable Fuels and CCU/CCS



TRI 4: Efficient zero emission Heating and Cooling Solutions



TRI 5: Integrated Regional Energy Systems



TRI 6: Integrated Industrial Energy Systems



TRI 7: Integration in the Built Environment

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Calls

TRI no	TRI1	TRI2	TRI3	TRI4	TRI5	TRI6	TRI7
# call modules	2	2	2	1	1	1	2
Topics	<p>Demonstrating solutions to enhance system flexibility</p> <p>Tools and methods to foster the development of the energy system, through advanced integrated modelling</p>	<p>Advancing RE technologies for power production through cost reduction</p> <p>Supporting breakthrough R&D to increase RE power technology efficiency</p>	<p>CCS & CCU technologies to maximise carbon reuse in a circular economy, to remove carbon from the energy system</p> <p>Hydrogen and Renewable fuels</p>	<p>Heating and cooling; thermal energy models, technologies and system integration (high and low TRL)</p>	<p>Development of integrated local and regional energy systems, solutions to provide, host and utilise high shares of renewables</p>	<p>Reduction of industrial emissions; removing industrial carbon emissions from the carbon cycle; integrated energy and resource efficient industrial systems; carbon capture for energy storage</p>	<p>Integrate renewable energy conversion technologies for power, heat & cold in buildings</p> <p>Digitalization for planning, construction phase, commissioning & operation</p> <p>Application & demonstration</p>
Lead	RSE, IT	MUR, IT	RCN, NO	RVO, NL	BMK, AU	SWEA, SW	AEI, ES

CET Partnership

Call in 2022
estimated total
budget+100 M€

Preliminary Call Module vs Funding matrix (I)

Organisation	Acronym	Country/region	TRI1 PowerPl anningToo	TRI1 RESDemP owerflex	TRI2 Advancing RE technologi es for power production through cost reduction	TRI2 Breakthrou gh R&D to increase RE power technologie s efficiency	TRI3 Enabling Climate Neutrality with Storage Technologies, Renewable Fuels and CCU/CCS	TRI3 Enabling Climate Neutralit y with renewab le fuels and hydroge n	TRI4 Heating & Cooling	TRI5 Integrated Regional Energy Systems for a Resilient, Secure, and Renewable Energy Supply systems	TRI6 Industria l energy environme nt	TRI7 R&I in clean energy integration in the built environme nt	TRI7 Solutions to energy transition in the built environme nt
Austrian Research Promotion Agency	FFG	Austria								X	X		
Research and Innovation Foundation	RIF	Cyprus	X	X	X	X	X	X	X	X	X	X	X
Technology Agency of the Czech Republic	TA CR	Czech Republic	X	X	X	X	X	X	X	X	X	X	X
Energy Technology Development and Demonstration Programme	EUDP	Denmark		X			X	X		X	X		
Innovation Fund Denmark	IFD	Denmark			X	X			X			X	X
Ministry of Economic Affairs and Communications	MKM	Estonia	X	X	X	X	X	X	X	X	X	X	X
Estonian Research Council	ETAG	Estonia	X	X	X	X	X	X	X	X	X	X	X
Innovaatiorahoituskeskus Business Finland	BF	Finland	X	X	X	X	X	X	X	X	X	X	X
Fonds Innoveren en Ondernemen	FIO	Flanders	X	X	X	X	X	X	X	X	X	X	X
Agence Nationale de la Recherche	ANR	France	X			X	X	X	X			X	
Agence de la transition écologique	ADEME	France	X	X			X				X		
Forschungszentrum Jülich GmbH (on behalf of BMWK)	FZJ/PtJ	Germany	X	X	X	X	X		X	X	X		X
Forschungszentrum Jülich GmbH (on behalf of MWIDE)	FZJ/PtJ	Germany	X	X	X	X	X	X			X		
General Secretariat for Research and Technology	GSRT	Greece	X	X			X	X					
National Research, Development and Innovation Office	NKFIH	Hungary	X	X	X	X	X	X	X	X	X	X	X
The Icelandic Centre for Research	RANNIS	Iceland					X	X	X				
Department of the Environment, Climate & Communications/Geological Survey Ireland	GSI	Ireland						X					
Sustainable Energy Authority of Ireland	SEAI	Ireland	X	X	X	X	X	X	X	X	X	X	X
Ministry of National Infrastructure, Energy and Water Resources	IMNIEWR	Israel	X	X	X	X	X	X	X	X	X	X	X
Ministero dell'Università e della Ricerca	MUR	Italy	X		X*	X	X*	X			X*	X	
Ministry of Economic Development	MISE	Italy		X	X		X		X	X	X		X
Latvian Council of Science	LZP	Latvia	X	X	X	X	X	X	X	X	X	X	X
Ministry of Energy of the Republic of Lithuania	ENMIN	Lithuania			X			X		(X)			
Malta Council for Science and Technology	MCST	Malta	X	X	X	X	X	X	X	X	X	X	X

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Call

Preliminary Call Module vs Funding matrix (II)

Organisation	Acronym	Country/region	TRI1 PowerPla nningTool	TRI1 RESDemPo werflex	TRI2 Advancing RE technologies for power production through cost reduction	TRI2 Breakthroug h R&D to increase RE power technologies efficiency	TRI3 Enabling Climate Neutrality with Storage Technologies, Renewable Fuels and CCU/CCS	TRI3 Enabling Climate Neutrality with renewabl e fuels and hydrogen	TRI4 Heating & Cooling	TRI5 Integrated Regional Energy Systems for a Resilient, Secure, and Renewable Energy Supply	TRI6 Industrial energy systems	TRI7 R&I in clean energy integration in the built environmen t	TRI7 Solutions to energy transition in the built environme nt
The Research Council of Norway	RCN	Norway					x	x	x				
Pays de la Loire Region Council	RPL	Pays de la Loire			x								
National Centre for Research and Development	NCBR	Poland	x	x	x	x				x	x		
Fundação para a Ciência e a Tecnologia	FCT	Portugal	x	x	x	x	x	x	x	x	x	x	x
Executive Agency for Higher Education, Research, Development and Innovation Funding	UEFISCDI	Romania					x	x	x	x			
Saxon State Ministry for Science, Culture and Tourism	SMWK	Saxony	x	x	x	x	x	x	x	x	x	x	x
Scottish Enterprise	SCOTENT	Scotland				x		x	x		x		x
Agencia Estatal de Investigación	AEI	Spain	x	x	x	x	x	x	x	x	x	x	x
Ente Vasco de la Energía	EVE	Spain											
Fundación para el fomento en Asturias de la Investigacion Cientifica Aplicada y la Tecnologia	FICYT	Spain	x	x	x	x	x	x	x	x	x	x	x
The Centre for the Development of Industrial Technology	CDTI	Spain	x	x	x	x	x	x	x	x	x	x	x
Departamento de Desarrollo Económico, Sostenibilidad y Medio Ambiente. Eusko Jaurilaritza-Gobierno Vasco	EUSKADI SODERCA	Spain			x	x					x		
Regional Development Agency of Cantabria	N	Spain	x	x	x	x	x	x	x	x	x	x	x
Swedish Energy Agency	SWEA	Sweden	x	x	x	x	x	x	x	x	x	x	x
Federal Department of the Environment, Transport, Energy and Communications	DETEC- SFOE	Switzerland		x	x		x		x			x	
Swiss National Science Foundation	SNSF	Switzerland								x		x	(x)
Dutch Research Council	NWO	The Netherlands			x	x							
Netherlands Enterprise Agency	RVO	The Netherlands	x		x		x	x	x	x	x	x	
The Scientific and Technological Research Council of Turkey	TUBITAK	Turkey	x	x	x	x	x	x	x	x	x	x	x
Service public de Wallonie	SPW	Wallonia	x	x	x	x	x	x	x	x	x	x	x

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The
TRIs

TRI 3: Enabling Climate Neutrality with Storage Technologies, Hydrogen and Renewable Fuels, and CCU/CCS

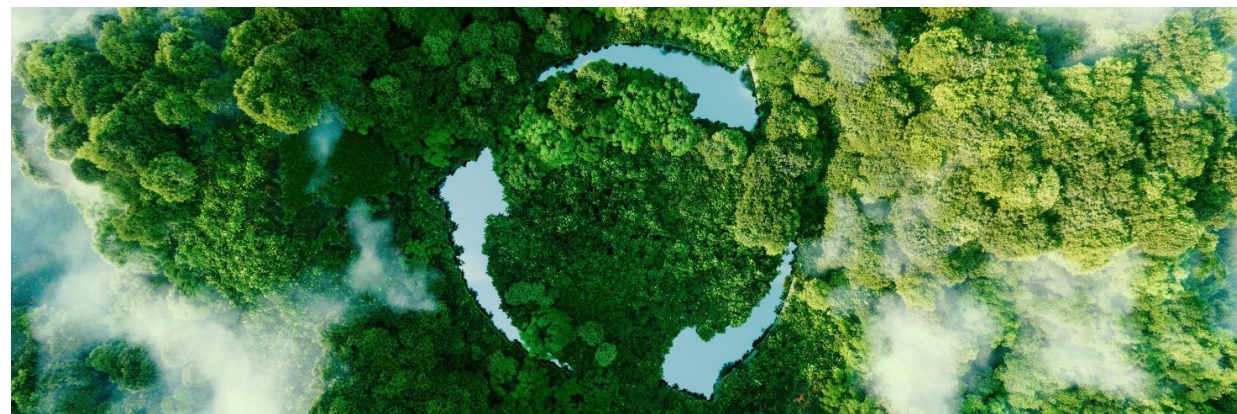
The main aim of TRI 3 is to **provide technological cleaner solutions for storage technologies, hydrogen and renewable fuels, CCS (Carbon Capture and Storage) and CCU (Carbon Capture and Utilisation)**, promoting RD&D and innovation projects until 2030, to achieve the European goal of climate neutrality by 2050

TRI 3 Lead

Ragnhild Rønneberg (RCN, NO)
rr@forskningsradet.no

TRI 3 Office

Aiko Nakano Hylander (SWEA, SE)
TRI3@CETPartnership.eu



Research target areas for CCU/CSS

- CO₂-capture
- CO₂-storage sites
- Enabling CCU/CCS technology
- Transport and injection
- Negative emission

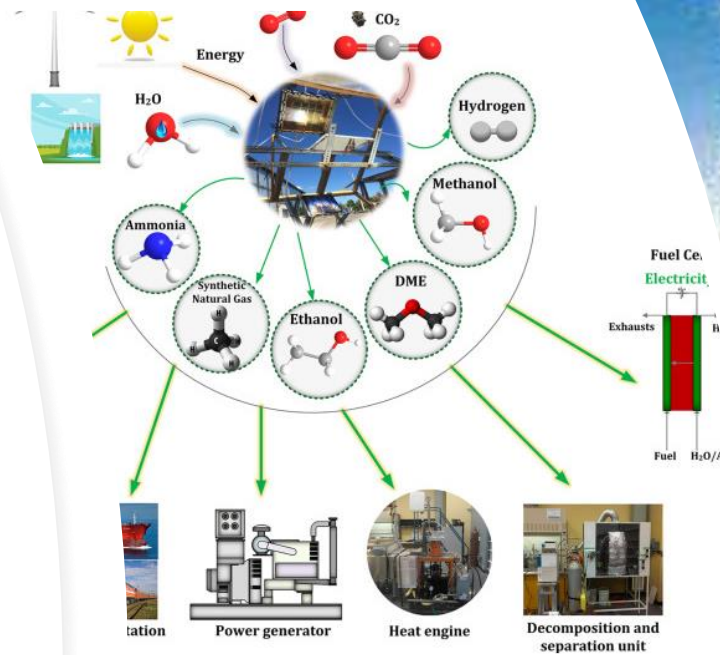
- Projects should aim at TRL5 or higher – smaller parts at lower TRL are allowed
- provide significant results to the CCUS domain by 2030



Research targets for Hydrogen and Renewable fuels

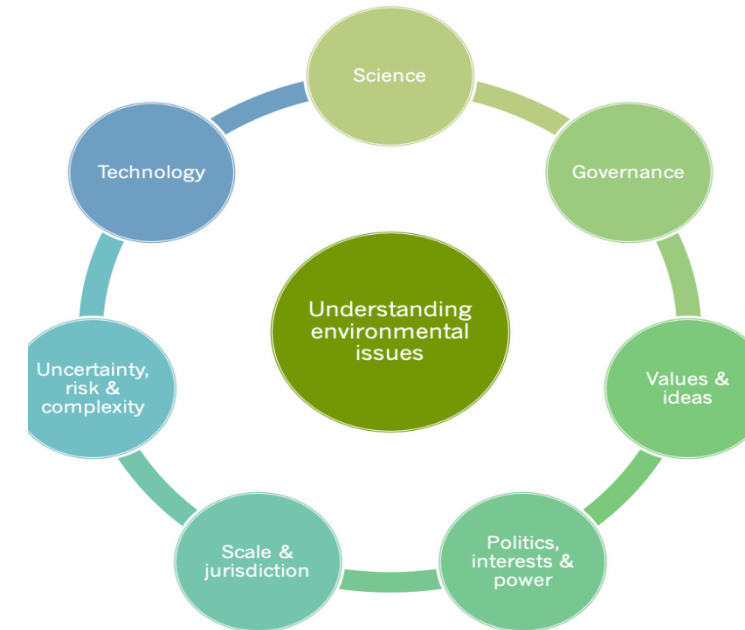
Focus on **cost- and energy efficient technologies** for

- **Hydrogen**
- **Renewable Fuels**
- Support projects aiming to reach **TRL5 or above**



Crosscutting topics – for both modules

- **Consumer** attitudes, public acceptance, **risk** perception and the levers which could influence consumer behavior
- **Life cycle** techno-economic and **environmental impact** analyses, including mass, water, land and energy consumptions aspects
- The **legal** framework, **business** models, **digitalization**
- **Barriers, opportunities and solutions to scaling up**
- **System analysis** and integration of processes in the energy system, continuity/intermittence
 - Infrastructure and distribution (storage-tanks pipes, ship) aspects, including pipeline reuse and cost competitive materials for pipelines



Partners interested in the TRI3 call modules

Many partners have not yet allocated budget specific TRIs

	TRI3 CCU/CSS	TRI3 Hydrogen and Renewable fuels
The Scientific and Technological Research Council of Turkey - TUBITAK	x	x
Technology Agency of the Czech Republic - TA CR	x	x
DETEC-SFOE, Switzerland	x	
The Research Council of Norway (RCN) - allocate up to 10 Mill EUR	up to 6 M€	1 to 3 M€
Saxon State Ministry for Science, Culture and Tourism - SMWK	x	x
Agencia Estatal de Investigación - AEI	x	x
Energy Technology Development and Demonstration Programme (EUDP)	x	x
Scottish Enterprise - SCOTENT		1M€
Agence Nationale de la Recherche - ANR	x	x
Fundación para el fomento en Asturias de la Investigación Científica Aplicada	x	x
Forschungszentrum Jülich GmbH (on behalf of BMWK)	x	
Forschungszentrum Jülich GmbH (on behalf of MWIDE)	x	x
Agence de la transition écologique - ADEME	x	
Statens Energimyndighet -SWEA	x	x
General Secretariat for Research and Technology	x	x
Research and Innovation Foundation - Cyprus - RIF	x	x
MUR - Ministero dell'Università e della Ricerca	x*	x
Netherlands Enterprise Agency	x	x
RANNÍS	x	x
Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI)	x	x
CDTI	x	x
Ministry of Economics and Communications MKM	x	x
Sustainable Energy Authority of Ireland - SEAI	x	x
Estonian Research Council - ETAG	x	x
Innovaatorahoituskeskus Business Finland - BF	x	x
Regional Development Agency of Cantabria	x	x
MISE-Ministero dello sviluppo economico	x	
Latvian Council of Science (Latvia)	x	x
Ministry of Energy of the Republic of Lithuania		400 000 €
Emissions Reduction Alberta (ERA)	1,47M€	2 M€
US-DOE	up to 5 M€	1 M€



Tentative - Timeschedule

- June 2022 -Pre-launch
- **Mid. Sep. 2022- Call launch**
- End of November 2022 - Submission of pre-proposals
- End of March 2023 - Full proposals
- End of June 2023 - Decision for funding
- September 2023 - Projects start

More information and link to submission platform on:

<https://cetpartnership.eu/calls>

Thank you for your attention !

For more information on CETP

www.cetpartnership.eu



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