



70%

100%



+25%





המינהלת הישראלית למו"פ האירופי  
Israel-Europe R&I Directorate



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Natural Resources**



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**052-8095345**





# The European Green Deal

Striving to be the first climate-neutral continent





**Transforming the EU's economy for a sustainable future**



Mobilising research and fostering innovation

Increasing the EU's Climate ambition for 2030 and 2050

A zero pollution ambition for a toxic-free environment

Supplying clean, affordable and secure energy

Preserving and restoring ecosystems and biodiversity

Mobilising industry for a clean and circular economy

From 'Farm to Fork': a fair, healthy and environmentally friendly food system

Building and renovating in an energy and resource efficient way

Accelerating the shift to sustainable and smart mobility

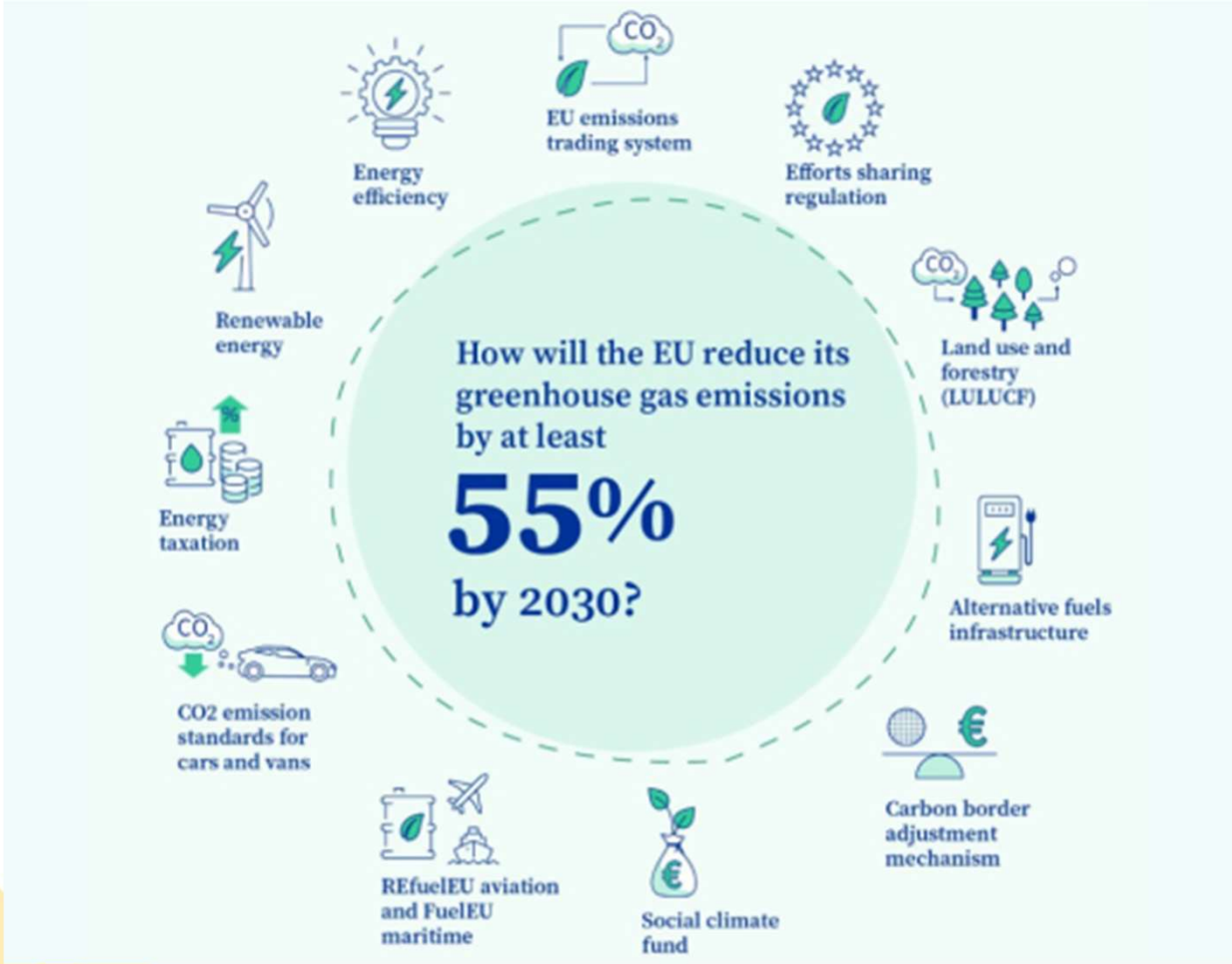
Financing the transition

Leave no one behind (Just Transition)

The EU as a global leader

A European Climate Pact

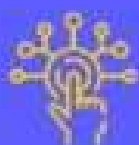




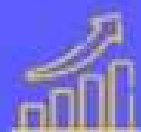
## The pillars of the Recovery and Resilience Facility



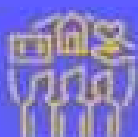
Green transition



Digital transformation



Economic cohesion, productivity  
and competitiveness



Social and territorial  
cohesion



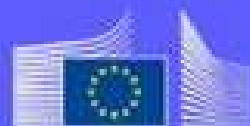
Health, economic, social  
and institutional resilience



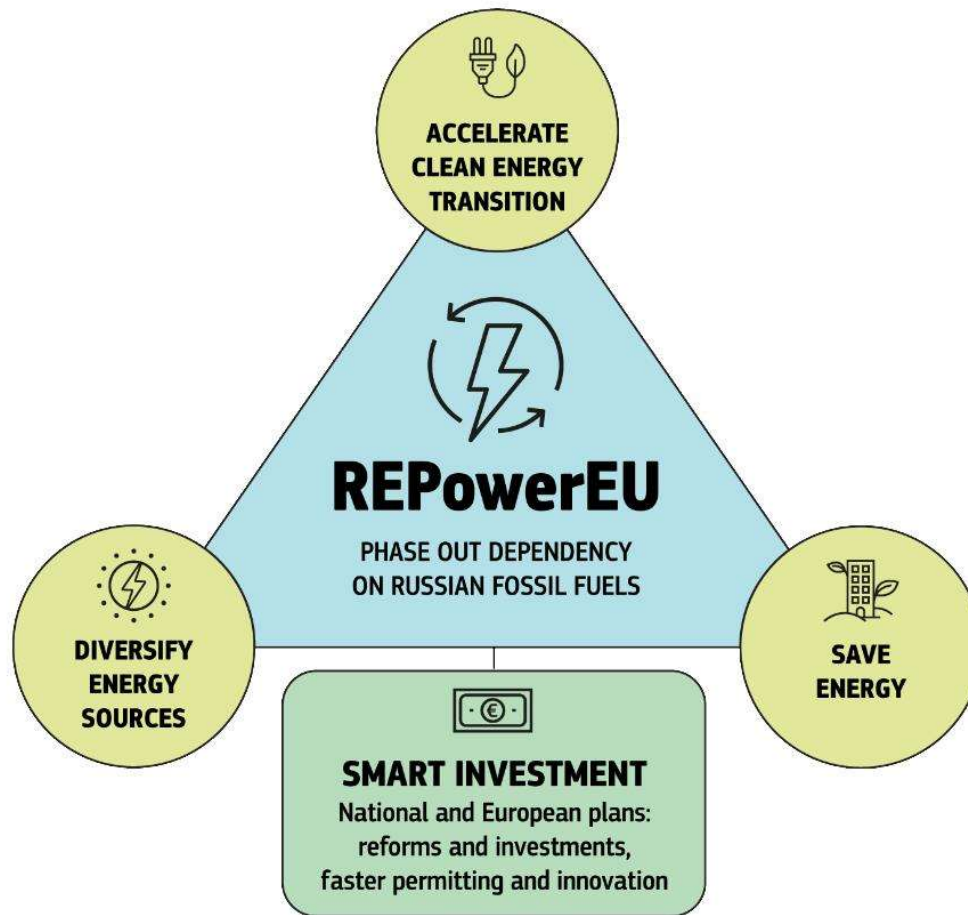
Policies for the next  
generation

**NEXT  
GEN  
EU**

EUR **806.9** billion\*  
through NextGenerationEU



European  
Commission





# What are the new rules about?

## 1. *Creating a market for hydrogen*

- competitive EU market and dedicated infrastructure for hydrogen
- creation of European Network of Network Operators for Hydrogen
- facilitated trade with non-EU countries



### EU hydrogen goals for 2030:



**40 gigawatts**  
of renewable hydrogen  
electrolyser capacity



**10 million tonnes**  
of renewable hydrogen





# HORIZON EUROPE

THE EU RESEARCH &  
INNOVATION PROGRAMME  
2021 - 2027

#HorizonEU

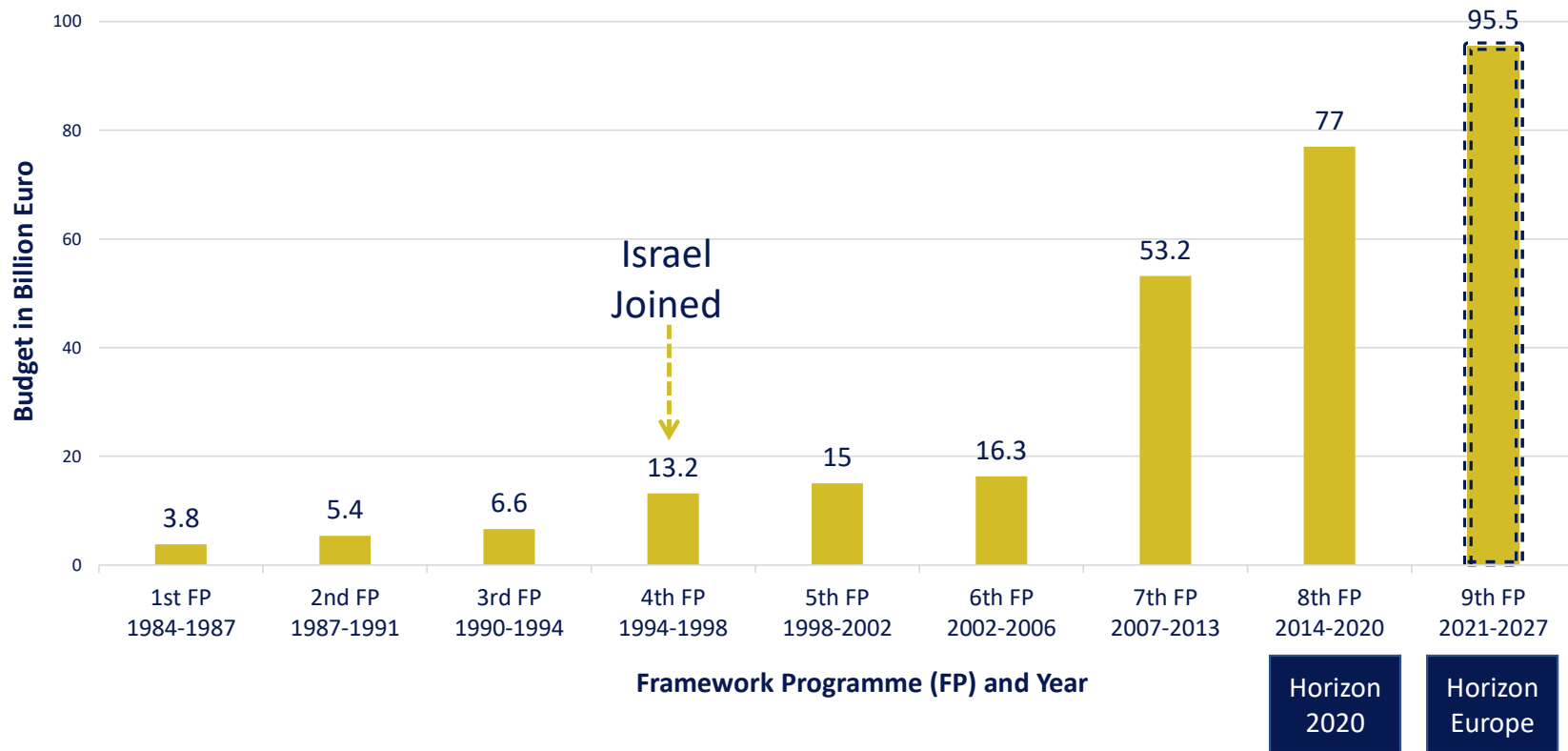


EUROPEAN UNION

## Horizon Europe European Framework Programme

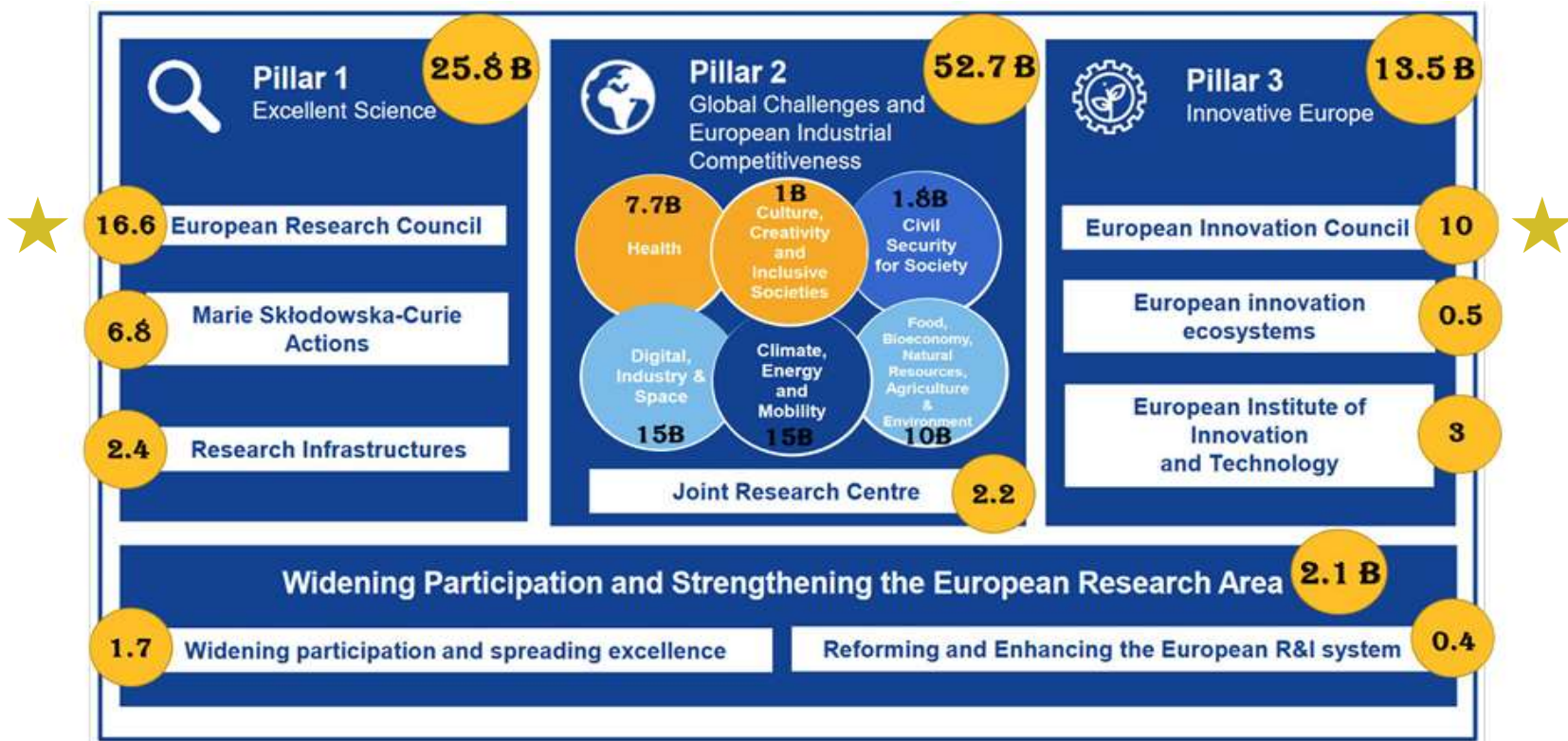
- What is Horizon Europe?
- EU's main funding instrument for R&D (since 1984)
- Covering all major scientific and technological disciplines
- Targeting the major European industrial sectors

# Progression of FP Budgets Over Time



# Horizon Europe (2021-2027)

★ Participation alone



Budget of € 95.5 billion for Horizon Europe

# Conditions for Participation

- At least **THREE** entities from **THREE** different participating countries (member or associated)
- A minimum of **ONE** Member State
- A coordinator leading the consortium

27 Member States (MS)



19 Associated Countries (AC)



# Participating Countries

## 27 Member States (MS)

 Austria (AT)	 France (FR)	 Malta (MT)
 Belgium (BE)	 Germany (DE)	 Netherlands (NL)
 Bulgaria (BG)	 Greece (GR/EL)	 Poland (PL)
 Croatia (HR)	 Hungary (HU)	 Portugal (PT)
 Cyprus (CY)	 Ireland (IE)	 Romania (RO)
 Czech Republic (CZ)	 Italy (IT)	 Slovakia (SK)
 Denmark (DK)	 Latvia (LV)	 Slovenia (SI)
 Estonia (EE)	 Lithuania (LT)	 Spain (ES)
 Finland (FI)	 Luxembourg (LU)	 Sweden (SE)

## 19 Associated Countries (AC)

 Albania (AL)	 Montenegro (ME)
 Armenia (AM)	 New Zealand (NZ) *
 Bosnia and Herzegovina (BA)	 North Macedonia (MK)
 Canada (CA) *	 Norway (NO)
 Faroe Islands (FO)	 Serbia (RS)
 Georgia (GE)	 Tunisia (TN)
 Iceland (IS)	 Turkey (TR)
 Israel (IL)	 Ukraine (UA)
 Kosovo (XK)	 United Kingdom (UK)
 Moldova (MD)	

\* only participates in Pillar 2

## List of Participating Countries in Horizon Europe



# ISERD - Israel Europe R&I Directorate

**ISERD** aims at maximizing the benefits of Israel's participation in the Framework Programmes - Horizon Europe

- › **National Contact Point (NCP)** for the different themes
- › An **interface** between the Israeli government and the European Union
- › **Encouraging** Israeli entities to participate
- › **Assistance** throughout projects' submission and management
- › **Information dissemination**
- › **Representing** Israel in the programme committees of the EC

# Technology Readiness Level (TRL)

- TRL 1 - Basic principles observed
- TRL 2 - Technology concept formulated
- TRL 3 - Experimental proof of concept
- TRL 4 - Technology validated in lab
- TRL 5 - Technology validated in relevant environment
- TRL 6 - Technology demonstrated in relevant environment
- TRL 7 - System prototype demonstration in operational environment
- TRL 8 - System complete and qualified
- TRL 9 - Actual system proven in operational environment



[TRL definition](#)

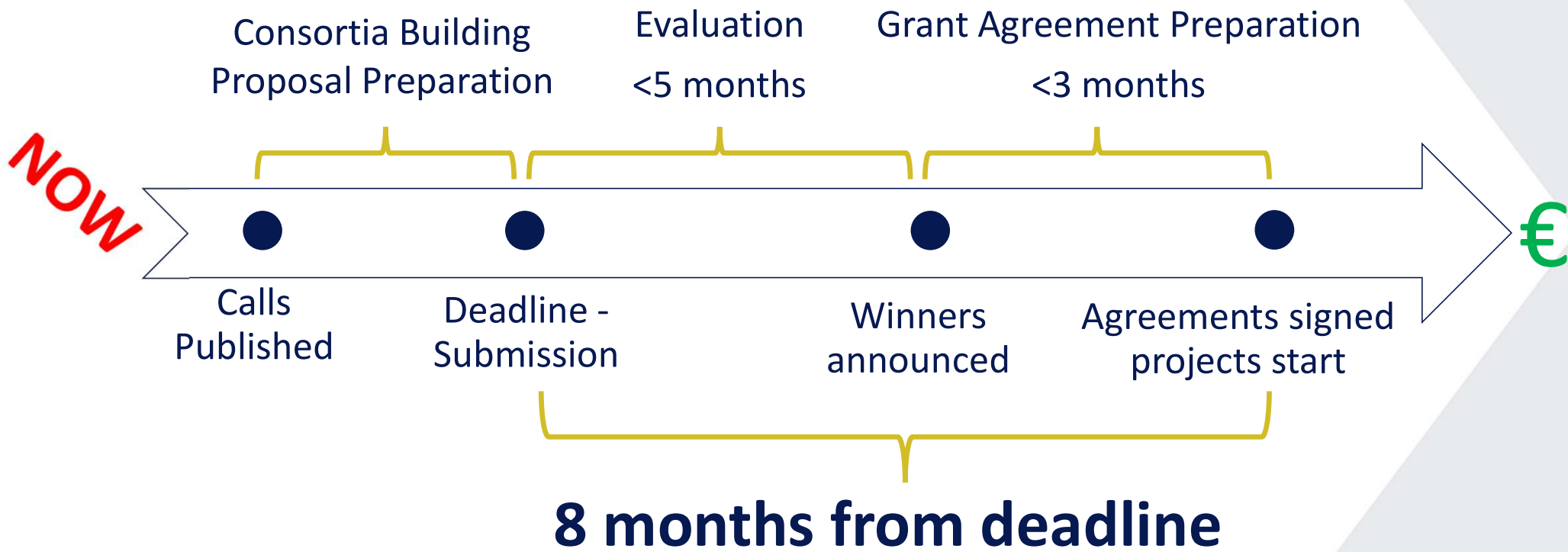
# Main Types of Action

Action	Funding*	Main Characteristics
RIA - <b>Research &amp; Innovation Action</b>	100% + 25%	Basic and applied <b>research</b> , technology development and integration, <b>testing</b> and validation - small-scale prototype in laboratory or simulated environment. <b>Usually low TRL</b>
IA - <b>Innovation Action</b>	70% + 25%	<b>Prototyping</b> , testing, demonstrating, piloting, large-scale product validation and <b>market replication</b> . <b>Usually high TRL</b>
CSA - <b>Coordination &amp; Support Action</b>	100% + 25%	<b>Networking</b> , coordination or <b>support services</b> , policy dialogues and mutual learning exercises and studies

\*Non-profit - always 100%

Lump-sum - Funding procedure aimed to simplify budget allocation

# Submission Timeline



Topic	Expected TRL	Project Budget [M€]	No. of Projects	Action	Deadline [dd.mm.yyyy]
<b>PILLAR 1: RENEWABLE HYDROGEN PRODUCTION</b>					
HORIZON-JTI-CLEANH2-2024-01-01: Innovative electrolysis cells for low temperature hydrogen production	4	3	1	RIA	17.4.2024
HORIZON-JTI-CLEANH2-2024-01-02: Advanced anion exchange membrane electrolyzers for low-cost hydrogen production for high power range applications	5	4	1	RIA	17.4.2024
HORIZON-JTI-CLEANH2-2024-01-03: Development of innovative technologies for direct seawater electrolysis	2	4	1	RIA	17.4.2024
HORIZON-JTI-CLEANH2-2024-01-04: Development and implementation of online monitoring and diagnostic tools for electrolyzers	6	4	1	RIA	17.4.2024
HORIZON-JTI-CLEANH2-2024-01-05: Hydrogen production and integration in energy-intensive or specialty chemical industries in a circular approach to maximise total process efficiency and substance utilisation*	7	10	1	IA	17.4.2024
<b>PILLAR 2: HYDROGEN STORAGE AND DISTRIBUTION</b>					
HORIZON-JTI-CLEANH2-2024-02-01: Investigation of microbial interaction for underground hydrogen porous media storage	4	3	1	RIA	17.4.2024
HORIZON-JTI-CLEANH2-2024-02-02: Novel large scale aboveground storage solutions					

- 20 topics (calls for proposals)
- 117.5M
- Deadline 17.4.23
- Lump Sum

For all Topics



Reference	Topic
TC1-01	Improvements in lifetime and cost of low temperature electrolyzers by introducing advanced materials and components in stacks and balance of plant
TC1-02	Improved lifetime and cost of high-temperature electrolyzers by introducing innovative materials and components in stacks and BoP
TC1-03	Manufacturing scale-up and optimisation of materials, cells, and stacks
TC1-04	Efficient electrolysis coupling with variable renewable electricity and/or heat integration
TC1-05	Innovative co-electrolysis systems and integration with downstream processes
TC1-06	Innovative hydrogen and solid carbon production from renewable gases/biogenic waste processes
TC1-07	Solar thermochemical water splitting – a next stage on the route towards scalable and cost competitive hydrogen production
TC1-08	Evaluation of natural hydrogen potential in Europe
TC2-01	Development of mined, lined rock cavern for hydrogen storage
TC2-02	Development of cost effective and high-capacity compression solutions for hydrogen
TC2-03	Demonstration of modular and scalable ammonia cracking technology
TC3-01	Development of Configurable Fuel Cell Powertrain for Non-Road Mobile Machinery
TC3-02	Scalable innovative processes for the production of PEMFC MEAs
TC3-03	Development and demonstration of a reliable, efficient, scalable and low-cost 1 MW-scale fuel cell system
TC3-04	Development and demonstration of a SOFC stack as a building block for a 500 kW power module for maritime applications
TC4-01	Stationary fuel cells for resilience of remote energy communities
TC4-02	Integrating industrial hydrogen into stationary low- and medium-temperature Fuel Cells
TC5-01	Simultaneous ionomer and Iridium recycling
TC5-02	Understanding emissions of PFAS from electrolyzers and/or fuel cells under product use
TC5-03	Ensuring the safety and reliability of hydrogen infrastructure operation through lifetime assessment and monitoring of critical systems
TC5-04	Identification of legal-administrative barriers for the installation and operation of key FCH technologies
TC5-05	Analysis and improvement of assessment and licensing procedures, including knowledge transfer for the training of civil servants/safety officials
TC7-01	Large-scale Hydrogen Valley
TC7-02	Small-scale Hydrogen Valley
24	



European Partnership



## Clean Hydrogen Partnership

- Home
- About Us
- Projects
- Get involved
- Apply for funding
- Knowledge management
- Media
- European Hydrogen Week

[European Commission](#) > [Clean Hydrogen Partnership](#)

### European Partnership for Hydrogen Technologies

The Clean Hydrogen Partnership's main objective is to contribute to EU Green Deal and Hydrogen Strategy through optimised funding of R&I activities. The Clean Hydrogen Partnership is the successor of the Fuel Cells and Hydrogen 2 Joint Undertaking (FCH 2 JU) and has taken over its legacy portfolio as of 30 November 2021.

[Fuel Cells and Hydrogen JU](#)



# European Clean Hydrogen Partnership



## Organisation

The Clean Hydrogen Partnership is a unique public private partnership supporting research and innovation (R&I) activities in hydrogen technologies in Europe. The three members of the JU are:



# ISERD's Support Mechanisms

Service	Target audience	Requirements	Support given
ISERD guidance	All participants	None	<ul style="list-style-type: none"> <li>Finding the best topic</li> <li>Updates on events and opportunities</li> <li>Supporting partner search efforts</li> </ul>
Concept Development	Participants in consortium topics	Have at least one European partner and an abstract	<b>15 hours of support by an Israel Innovation Authority expert</b> to develop the idea and identify potential partners
Red Team	All participants	Submit your proposal to ISERD a month before the deadline	A confidential <b>proposal feedback by an Israel Innovation Authority expert</b>
<a href="#">Track 37</a>	For-profit entities in consortium topics	Submit a proposal to a consortium topic	<b>30,000NIS (partner) / 60,000NIS (coordinator)</b> for consultants' services and partner search travels

# Next Steps - After You Have an Idea

➤ Identify the best call for proposal

➤ Form a consortium:

- Use your network
- Use [your National Contact Point \(NCP\)](#)
- Matchmaking events
- Identify leading groups - partnerships, online platforms
- [CORDIS: Search previously funded projects](#)

➤ Write a proposal - you can get help from:

- National Contact Point
- [Horizon Europe Online Manual](#)
- Experienced colleagues
- Consultants
- Red Team and ISERD's aid fund (route 37)

**Parallel  
process**





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THANK YOU

INNOVATION  
BREAKS BOUNDARIES

052-8095345

www.iserd.org.il

רשות החדשנות  
Israel Innovation  
Authority

Ministry of Science  
Technology & Space

המסגרת  
הממשלתית  
למחקר ופיתוח  
מקדם