

# Horizon Europe Funding Opportunities – 2021-2022

## Cluster 5 –Climate, Energy and Mobility

**ISERD** is the interface between the Israeli government and the EU, for all the activities of the Framework Programme. Our goal is to promote participation of Israeli entities in European research and innovation (R&I) activity and to increase Israel's scientific and industrial collaboration with the European R&I ecosystem. ISERD holds events, information days, and [monthly Orientation Presentations](#), providing more information about funding opportunities

### Horizon Europe (HEU)

**HEU** is a 95.5-billion-euro funding programme for R&I, that covers all major scientific and technological disciplines, and encourages collaborative projects (consortia) for a joint goal.

- Consortium –
  - ✓ At least 3 partners from 3 different countries participating in the programme
  - ✓ Out of the 3, at least one partner must be from an EU country
  - ✓ A partner can be any legal entity – university, company, agency, organisation, etc...

- Funding Tools –

| Action                                 | Funding*   | Technology Readiness Level | Main Characteristics   |
|--|------------|----------------------------|--|
| RIA –<br>Research & Innovation Action  | 100% + 25% | Low TRL (4-6)              | Basic and applied <b>research</b> , technology development and integration, <b>testing</b> and validation - small-scale prototype in laboratory or simulated environment |
| IA –<br>Innovation Action              | 70% + 25%  | High TRL (6-8)             | <b>Prototyping</b> , testing, demonstrating, piloting, large-scale product validation and <b>market replication</b>  |
| CSA -<br>Coordination & Support Action | 100% + 25% |                            | <b>Networking</b> , coordination or <b>support services</b> , policy dialogues and mutual learning exercises and studies   |

\* Non-profit: always 100% + 25% overhead

**DISCLAIMER:** The participation of Israeli entities, as Associated Country (Ac) members in Horizon Europe projects is subject to the signing of the 'Association Agreement' to the programme between Israel and the EU, before the project's Grant Agreement (GA) is signed.

HEU Orientation  
Presentation

Events

Previous Funded  
Projects

Additional Funding  
Opportunities

**For further information:**

Asaf Aharon | [Asaf.aharon@iserd.org.il](mailto:Asaf.aharon@iserd.org.il) | +972-3- 5118120

| Topic  | Expected TRL | Budget per Project [M€] | No. of Projects | Action | Deadline [dd.mm.yyyy] |
|--|--------------|-------------------------|-----------------|--------|-----------------------|
| <b>Destination 3 - Sustainable, secure and competitive energy supply</b>   |              |                         |                 |        |                       |
| <b>Global leadership in renewable energy</b>   |              |                         |                 |        |                       |
| <a href="#">HORIZON-CL5-2021-D3-01-01:</a><br>Establish the grounds for a common European energy data space  | 5-7          | 8                       | 4               | IA     | 19.10.2021            |
| <a href="#">HORIZON-CL5-2021-D3-01-02:</a><br>Laying down the basis for the demonstration of a Real Time Demonstrator of Multi-Vendor Multi-Terminal HVDC with Grid Forming Capability: Coordinated action | -            | 1                       | 1               | CSA    | 19.10.2021            |
| <a href="#">HORIZON-CL5-2021-D3-01-03:</a><br>Interoperability community   | -            | 5                       | 1               | CSA    | 19.10.2021            |
|  |              |                         |                 |        |                       |
| <a href="#">HORIZON-CL5-2021-D3-02-01:</a><br>Demonstration of wave energy devices to increase experience in real sea condition  | -            | 15                      | 1               | IA     | 05.01.2022            |
| <a href="#">HORIZON-CL5-2021-D3-02-02:</a><br>Sustainability and educational aspects for renewable energy and fuel technologies  | -            | 2.5                     | 4               | CSA    | 05.01.2022            |
| <a href="#">HORIZON-CL5-2021-D3-02-03:</a><br>Market Uptake Measures of renewable energy systems   | -            | 2                       | 5               | CSA    | 05.01.2022            |
| <a href="#">HORIZON-CL5-2021-D3-02-04:</a><br>Novel tandem, high efficiency Photovoltaic technologies targeting low cost production with earth abundant materials  | 5            | 5                       | 4               | RIA    | 05.01.2022            |
| <a href="#">HORIZON-CL5-2021-D3-02-05:</a><br>Energy Sector Integration: Integrating and combining energy systems to a cost-optimised and flexible energy system of systems                                | 6-8          | 9-10                    | 3               | IA     | 05.01.2022            |
| <a href="#">HORIZON-CL5-2021-D3-02-06:</a><br>Increasing energy system flexibility based on sector-integration services to consumers (that benefits system management by DSOs and TSOs)                    | 7-8          | 8                       | 3               | IA     | 05.01.2022            |

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|--|--------------|-------------------------|-----------------|--------|-----------------------|
| <a href="#">HORIZON-CL5-2021-D3-02-07:</a><br>Reliability and resilience of the grid: Measures for cybersecurity, vulnerabilities, failures, risks and privacy         | 5-6          | 7-8                     | 2               | IA     | 05.01.2022            |
| <a href="#">HORIZON-CL5-2021-D3-02-08:</a><br>Electricity system reliability and resilience by design: High-Voltage, Direct Current (HVDC)-based systems and solutions | 5-6          | 7-8                     | 2               | RIA    | 05.01.2022            |
| <a href="#">HORIZON-CL5-2021-D3-02-09:</a><br>Demonstration of superconducting systems and elpipes   | 8            | 15                      | 1               | IA     | 05.01.2022            |
| <a href="#">HORIZON-CL5-2021-D3-02-10:</a><br>Demonstration of advanced Power Electronics for application in the energy sector   | 5-6          | 5                       | 2               | IA     | 05.01.2022            |
| <a href="#">HORIZON-CL5-2021-D3-02-11:</a><br>Reinforcing digitalisation related know how of local energy ecosystems   | -            | 4                       | 1               | CSA    | 05.01.2022            |
| <a href="#">HORIZON-CL5-2021-D3-02-12:</a><br>Integration of CCUS in hubs and clusters, including knowledge sharing activities   | -            | 2                       | 1               | CSA    | 05.01.2022            |
| <a href="#">HORIZON-CL5-2021-D3-02-13:</a><br>Cost reduction of CO2 capture (new or improved technologies)   | 6            | 10-15                   | 2               | RIA    | 05.01.2022            |
| <a href="#">HORIZON-CL5-2021-D3-02-14:</a><br>Support to the activities of the European Geological Services  | -            | 20                      | 1               | CSA    | 05.01.2022            |
| <a href="#">HORIZON-CL5-2021-D3-02-15:</a><br>Support to the activities of the ETIPs and technology areas of the SET-Plan  | -            | 1                       | 10              | CSA    | 05.01.2022            |
|  |              |                         |                 |        |                       |
| <a href="#">HORIZON-CL5-2021-D3-03-01:</a><br>AU-EU Water Energy Food Nexus  | 4            | 2.5                     | 2               | RIA    | 23.02.2022            |

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|--|--------------|-------------------------|-----------------|--------|-----------------------|
| <a href="#">HORIZON-CL5-2021-D3-03-02:</a><br>Next generation of renewable energy technologies   | 3-4          | 3                       | 11              | RIA    | 23.02.2022            |
| <a href="#">HORIZON-CL5-2021-D3-03-03:</a><br>Hybrid catalytic conversion of renewable energy to carbon-neutral fuels  | 3-4          | 3.3                     | 3               | RIA    | 23.02.2022            |
| <a href="#">HORIZON-CL5-2021-D3-03-04:</a><br>Physics and aerodynamics of atmospheric flow of wind for power production  | 5            | 6                       | 3               | RIA    | 23.02.2022            |
| <a href="#">HORIZON-CL5-2021-D3-03-05:</a><br>Wind energy in the natural and social environment  | 5            | 3                       | 3               | RIA    | 23.02.2022            |
| <a href="#">HORIZON-CL5-2021-D3-03-06:</a><br>Novel approaches to concentrated solar power (CSP)   | 4-5          | 3                       | 3               | RIA    | 23.02.2022            |
| <a href="#">HORIZON-CL5-2021-D3-03-07:</a><br>Stable high-performance Perovskite Photovoltaics   | 5            | 5                       | 3               | RIA    | 23.02.2022            |
| <a href="#">HORIZON-CL5-2021-D3-03-08:</a><br>Cost-effective micro-CHP and hybrid heating systems  | 5            | 3-5                     | 2               | RIA    | 23.02.2022            |
| <a href="#">HORIZON-CL5-2021-D3-03-09:</a><br>Carbon-negative sustainable biofuel production   | 4-5          | 5                       | 3               | RIA    | 23.02.2022            |
| <a href="#">HORIZON-CL5-2021-D3-03-10:</a><br>Innovative foundations, floating substructures and connection systems for floating PV and ocean energy devices   | 4-5          | 3.5                     | 3               | RIA    | 23.02.2022            |
| <a href="#">HORIZON-CL5-2021-D3-03-11:</a><br>Development of hydropower equipment for hidden hydropower  | 5            | 3-5                     | 2               | RIA    | 23.02.2022            |
| <a href="#">HORIZON-CL5-2021-D3-03-12:</a><br>Innovation on floating wind energy deployment optimized for deep waters and different sea basins (Mediterranean Sea, Black Sea, Baltic Sea, North-east Atlantic Ocean) | 7            | 16                      | 3               | IA     | 23.02.2022            |

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| <a href="#">HORIZON-CL5-2021-D3-03-13:</a><br>Demonstration pilot lines for alternative and innovative PV technologies (Novel c-Si tandem, thin film tandem, bifacial, CPV, etc.)  | 7            | 15                      | 3               | IA     | 23.02.2022            |
| <a href="#">HORIZON-CL5-2021-D3-03-14:</a><br>Demonstration of large-scale CHP technologies for a shift to the use of biogenic residues and wastes   | 7            | 10                      | 1               | IA     | 23.02.2022            |
| <a href="#">HORIZON-CL5-2021-D3-03-15:</a><br>Solutions for more sustainable geothermal energy   | 5            | 5                       | 2               | RIA    | 23.02.2022            |
| <a href="#">HORIZON-CL5-2021-D3-03-16:</a><br>Innovative biomethane production as an energy carrier and a fuel   | 6-7          | 10                      | 2               | IA     | 23.02.2022            |
|  |              |                         |                 |        |                       |
| <a href="#">HORIZON-CL5-2022-D3-01-01:</a><br>Demonstration of cost-effective advanced biofuel technologies utilizing existing industrial plants   | 6-7          | 10                      | 2               | IA     | 26.4.2022             |
| <a href="#">HORIZON-CL5-2022-D3-01-02:</a><br>Demonstration of innovative materials, supply cycles, recycling technologies to increase the overall circularity of wind energy technology and to reduce the primary use of critical raw materials | 6-7          | 13                      | 3               | IA     | 26.4.2022             |
| <a href="#">HORIZON-CL5-2022-D3-01-03:</a><br>Advanced manufacturing of Integrated PV  | 7            | 16                      | 2               | IA     | 26.4.2022             |
| <a href="#">HORIZON-CL5-2022-D3-01-04:</a><br>Demonstrate the use of high temperature geothermal reservoirs to provide energy storage for the energy system  | 7            | 20                      | 1               | IA     | 26.4.2022             |
| <a href="#">HORIZON-CL5-2022-D3-01-05:</a><br>Demonstration of innovative plug-and play solutions for system management and renewables storage in off-grid applications  | 8            | 10                      | 1               | IA     | 26.4.2022             |
| <a href="#">HORIZON-CL5-2022-D3-01-06:</a><br>Novel Agro-Photovoltaic systems  | 7            | 5                       | 2               | IA     | 26.4.2022             |
| <a href="#">HORIZON-CL5-2022-D3-01-07:</a><br>Demonstration of innovative rotor, blades and control systems for tidal energy devices   | 7            | 10                      | 1               | IA     | 26.4.2022             |

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|---|--------------|-------------------------|-----------------|--------|-----------------------|
| <a href="#">HORIZON-CL5-2022-D3-01-08:</a><br>Supporting the action of consumers in the energy market and guide them to act as prosumers, communities and other active forms of active participation in the energy activities | 6-8          | 5-6                     | 3               | IA     | 26.4.2022             |
| <a href="#">HORIZON-CL5-2022-D3-01-09:</a><br>Real Time Demonstrator of Multi-Vendor Multi-Terminal VSC-HVDC with Grid Forming Capability (in support of the offshore strategy)   | 6-7          | 55                      | 1               | IA     | 26.4.2022             |
| <a href="#">HORIZON-CL5-2022-D3-01-10:</a><br>Interoperable solutions for flexibility services using distributed energy storage   | 5-7          | 2-3                     | 3               | IA     | 26.4.2022             |
| <a href="#">HORIZON-CL5-2022-D3-01-11:</a><br>Demonstration of innovative forms of storage and their successful operation and integration into innovative energy systems and grid architectures                               | 6-7          | 7-8                     | 4               | IA     | 26.4.2022             |
| <a href="#">HORIZON-CL5-2022-D3-01-12:</a><br>Replicable solutions for a cross sector compliant energy ecosystem  | 6-7          | 8-9                     | 4               | IA     | 26.4.2022             |
| <a href="#">HORIZON-CL5-2022-D3-01-13:</a><br>Energy system modelling, optimisation and planning tools  | -            | 6                       | 1               | RIA    | 26.4.2022             |
| <a href="#">HORIZON-CL5-2022-D3-01-14:</a><br>Thermal energy storage solutions  | 6-7          | 7-8                     | 4               | IA     | 26.4.2022             |
| <a href="#">HORIZON-CL5-2022-D3-01-15:</a><br>Decarbonising industry with CCUS  | 7-8          | 29                      | 2               | IA     | 26.4.2022             |
| <a href="#">HORIZON-CL5-2022-D3-02-01:</a><br>Digital solutions for defining synergies in international renewable energy value chains   | 5            | 3                       | 3               | RIA    | 27.10.2022            |
| <a href="#">HORIZON-CL5-2022-D3-02-02:</a><br>AU-EU Energy System Modelling   | -            | 2.5                     | 2               | RIA    | 27.10.2022            |
| <a href="#">HORIZON-CL5-2022-D3-02-03:</a><br>Innovative renewable energy carrier production for heating from renewable energies  | 7            | 10                      | 1               | IA     | 27.10.2022            |

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| <a href="#">HORIZON-CL5-2022-D3-02-04:</a><br>Technological interfaces between solar fuel technologies and other renewables   | 4            | 3-5                     | 2               | RIA    | 27.10.2022            |
| <a href="#">HORIZON-CL5-2022-D3-02-05:</a><br>Renewable energy carriers from variable renewable electricity surplus and carbon emissions from energy consuming sectors                      | 7            | 10                      | 2               | IA     | 27.10.2022            |
| <a href="#">HORIZON-CL5-2022-D3-02-06:</a><br>Direct renewable energy integration into process energy demands of the chemical industry  | 4-5          | 3-5                     | 2               | RIA    | 27.10.2022            |
| <a href="#">HORIZON-CL5-2022-D3-02-07:</a><br>Renewable energy incorporation in agriculture and forestry  | 6-7          | 7.5                     | 2               | IA     | 27.10.2022            |
| <a href="#">HORIZON-CL5-2022-D3-02-08:</a><br>Demonstration of complete value chains for advanced biofuel and non-biological renewable fuel production                                      | 6-7          | 10                      | 2               | IA     | 27.10.2022            |
|   |              |                         |                 |        |                       |
| <a href="#">HORIZON-CL5-2022-D3-03-01:</a><br>Innovative components and/or sub-systems for CSP plants and/or concentrating solar thermal installations                                      | 6-7          | 5.5                     | 3               | IA     | 10.1.2023             |
| <a href="#">HORIZON-CL5-2022-D3-03-02:</a><br>Best international practice for scaling up sustainable biofuels   | 4-5          | 3                       | 3               | RIA    | 10.1.2023             |
| <a href="#">HORIZON-CL5-2022-D3-03-03:</a><br>Efficient and circular artificial photosynthesis  | 5            | 3-5                     | 2               | RIA    | 10.1.2023             |
| <a href="#">HORIZON-CL5-2022-D3-03-04:</a><br>Integrated wind farm control  | 5            | 6                       | 3               | RIA    | 10.1.2023             |
| <a href="#">HORIZON-CL5-2022-D3-03-05:</a><br>Novel Thin Film (TF) technologies targeting high efficiencies   | 5            | 5                       | 4               | RIA    | 10.1.2023             |
| <a href="#">HORIZON-CL5-2022-D3-03-06:</a><br>Efficient and low-emission technologies for industrial use of combustion and gasification systems from low-value biogenic residues and wastes | 5            | 3-5                     | 2               | RIA    | 10.1.2023             |
| <a href="#">HORIZON-CL5-2022-D3-03-07:</a><br>Development of algal and renewable fuels of non-biological origin   | 4-5          | 5                       | 3               | RIA    | 10.1.2023             |

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| <a href="#">HORIZON-CL5-2022-D3-03-08:</a><br>Development of digital solutions for existing hydropower operation and maintenance | 5            | 3-4.5                   | 3               | RIA    | 10.1.2023             |
| <a href="#">HORIZON-CL5-2022-D3-03-09:</a><br>Recycling end of life PV module  | 7            | 6-7                     | 3               | IA     | 10.1.2023             |