

International Climate Tech Program

Accelerating the Global Scaleup of Israeli Climate Technologies

The Israel Innovation Authority invites interested Israeli companies to submit applications to co-develop or pilot innovative solutions with leading Global Corporates in the field of Climate Tech.

The Program will offer the most innovative Israeli Climate Tech companies funding for a joint R&D or pilot project with the participating multinationals looking to co-develop or test technological solutions to their climate challenges. Selected Israeli companies will receive a grant of **up to 50% of the approved project budget** (+special incentives if applicable), following the applicable laws and regulations, and in-kind services from the Global Corporates. The participating Global Corporates would fund their in-kind assistance for the project and make it accessible through an applicable agreement with the selected Israeli companies. An appropriate agreement between successful applicant companies and the participating Global Corporates will need to be signed before project initiation.

Partners (by alphabetical order)

A2A

The [A2A Group](#) is the largest Italian multi utility, at the forefront of territorial services and technological solutions for ten years, with one hundred years of history and experience. We design smart and sustainable cities, with respect for the people who live there, we are protagonists of energy transition, and we implement the principle of the circular economy in all our activities. With a far-reaching strategic plan, we manage the generation, sale and distribution of electricity and gas, district heating, waste collection and recovery, e-mobility, public lighting and integrated water services.

What A2A is looking for:

- **Decentralized District Heating Thermal Storage:** Development of distributed thermal storage systems on district heating networks, both to decouple peak hours through peak shaving and increase the network heat transport capacity, thereby facilitating the connection of more new users to the existing infrastructure.



- **Enhancing Network Flexibility for Distributors:** Exploring advanced storage technologies to bolster the grid's capacity to handle peak load periods effectively, while simultaneously mitigating issues such as network congestion and critical grid stability concerns.
- **Advanced Water Spectroscopy Monitoring for Quality Assurance:** Implementation of a widespread real-time monitoring system to track changes in the composition and quality of drinking water throughout the water supply assets, beyond the entry points of the distribution network.
- **Alternative Water Harvesting Technologies:** Non-conventional innovative technologies for de-centralized water supply, easily implementable in remote locations and requiring no pre-existing infrastructure except electricity.
- **Structural analysis of older district heating duct pipes:** Solutions that can conduct visual inspections of the tunnels and of the roller bearing that support the pipelines to identify any signs of deterioration or damage that could potentially lead to leaks or dispersion.
- **Detection of water leaks in sewage systems:** Solutions that can detect events in the waste drainage network by analyzing the water, so as to trace the source within the potable water network that seeps into the drainage pipes and enable quick and efficient intervention where leakage is detected.
- **Seasonal District Heating Thermal Storage:** Seasonal storage technologies to ensure optimal use of waste heat throughout the year, maximize energy savings and reduce greenhouse gas emissions.
- **No-dig technology:** Technologies that allow the drilling and/or restoration of underground pipelines, avoiding costly and polluting operations such as excavations, and all the related activities.
- **Sector Coupling:** Solutions that are able to integrate different commodities to optimize the efficiency, sustainability and flexibility of the energy system (ex: Power-to-Heat, Power-to-Gas, Power-to-X).

In-kind support provided by A2A:

- Technological guidance;
- Manpower;
- Equipment;
- Use of labs or industrial facilities;
- Regulatory advice.

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Bayer

[Bayer](#) is a global enterprise with core competencies in the life science fields of health care and nutrition. Bayer is committed to driving sustainable development and generating a positive impact with its businesses. In fiscal 2022, the Group employed around 101,000 people and

had sales of 50.7 billion euros. R&D expenses before special items amounted to 6.2 billion euros .

As a science-based company, Bayer has recognized the risks posed by global climate change. Bayer aims to continuously reduce greenhouse gas emissions within its companies and along its entire value chain in accordance with the UN SDGs and the Paris Agreement to limit global warming to 1.5 degrees Celsius. Guided by its vision of “Health for all, Hunger for none”, Bayer is committed to providing solutions to advance a carbon-zero future for agriculture, support growers to produce higher-yielding crops with fewer resources and inputs and empower smallholder farmers.

What Bayer is looking for:

Protected agriculture:

- Water: Recycling/ reuse, water quality, water filter (salinity)
- Carbon Footprint:
 - Recycling energy
 - Energy storage: solar powered LEDs that absorb sunlight when they're not needed to power themselves for some of the time they are needed
 - Photovoltaics: powering heat, cooling, electrics from smart glass/smart plastic without losing light to grow
- Input reduction:
 - 'Nutrient scrubbing: what can be pulled from the air or exhaust gases to 'fix' for growing / Substrate washing/disinfection
- Waste management:
 - Recycling: Plastic structures: Controlled chamber digestion for nutrient recovery into C H O from old plastics
 - Alternative plastic solutions

Open-field agriculture:

- Water:
 - Solutions to enable effective prediction of timing, measurement, recommendation of irrigation to reduce water usage
 - Water quality / recycling, reuse, etc.
- Climate Resilience:
 - Solutions to increase climate stress resilient to F&V growers (e.g, temperature change, drought, salinity, etc.)
 - Crop management to recover from events/stress/impact
- Food loss reduction:
 - Solutions to enable effective prediction of timing (forecast right moment to harvest, etc), quality and quantity of harvest to maximize marketable yield and reduce food loss
 - Measurement of carbon reduction from food loss
- Carbon reduction: Capture carbon footprint in open field, field production and trade, along the value chain (field to table)

In-kind support provided by Bayer:



- **Expertise:** Agronomic and technical mentoring and advising by Bayer field experts
- **Logistics:** Access to on the ground facilities and resources such as experimental fields and testing facilities operated by Bayer Mexico, USA , Italy , Benelux and Spain.

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CombiEnt Foundry (under Vinnova)

[CombiEnt Foundry](#) is CombiEnt's Global Venture Client Alliance, speeding up innovation across the [CombiEnt network](#)¹ companies by leveraging world-class startups through a shared venture client model.

The Foundry turns specific business needs into Venture Client opportunities. These are being shared with leading startup ecosystems across the globe. Selected startups then provide their initial value propositions for the Venture Client opportunities. And finally, workshops are arranged with selected startups to clarify mutual value propositions and launch projects that bring speed and scalable execution.

What CombiEnt Foundry is looking for:

CombiEnt Foundry is looking for innovative solutions for five of its network's industry leaders:

Epiroc

[Epiroc AB](#) is a Swedish manufacturer of mining and infrastructure equipment. It is headquartered in Stockholm, Sweden and has its manufacturing facilities in Sweden, the United States, Canada, Australia, China, India, Japan, and Germany (US\$ 4.5 Billion revenue in 2022).

- Water Recycling System for Sustainable Drilling: As a pioneer in innovative drilling solutions, Epiroc is dedicated to advancing sustainable practices within the drilling industry. At present, water is necessary for drilling. Recognizing the global scarcity of water resources in many drilling locations, Epiroc is determined to enhance the eco-friendliness and cost-effectiveness of its operations. To achieve this, Epiroc seeks an innovative solution that significantly reduces water consumption by recycling and treating used water directly at the drilling site.
- Orebody Knowledge for Sustainable Mining: As a leading provider of innovative mining equipment, technology, and services, Epiroc is dedicated to advancing the mining industry through cutting-edge solutions that enhance efficiency, safety, and sustainability. Epiroc seeks a novel solution to harness real-time rock data as part of its commitment. This data-driven approach aims to optimize mining operations,

¹ The CombiEnt network, founded in 2015, is a group of 30 Nordic businesses which work together to share digital transformation strategies and figure out how best to use new technologies.



minimize waste rock handling, and achieve more environmentally friendly and resource-efficient mining practices.

Munters

[Munters](#) is a global leader in energy efficient air treatment and climate solutions. Using innovative technologies, Munters creates the perfect climate for customers in a wide range of industries. Munters has been defining the future of air treatment since 1955. Today, around 3,900 employees carry out manufacturing and sales in more than 30 countries. Munters Group AB reported annual net sales of more than US\$ 900 Million in 2022 and is listed on Nasdaq Stockholm.

- Alternative Piping Systems: Munters is on the lookout for novel or existing materials that can serve as substitutes for copper piping in low-pressure refrigeration systems for data center cooling. Ultimately, Munters is searching for innovative approaches that increase the sustainability and operational efficiency of installing these cooling systems without compromising cost.

Scania

[Scania](#) is a world-leading provider of transport solutions, including trucks and buses for heavy transport applications. Headquartered in Sweden with nearly 57,000 employees in more than 100 countries and US\$ 15 Billion revenue in 2022, Scania is driving the shift towards a sustainable transport system.

- Machine Learning for Aerodynamics: Scania is looking for solutions to speed up the prediction and optimization of vehicle aerodynamic drag utilizing Machine Learning or Artificial Intelligence models on large datasets such as existing vehicle simulation data. The goal is to quickly generate and propose new vehicle designs while processing a large number of alternatives to improve vehicle efficiency, performance, and sustainability.

SKF

[SKF](#) is a Swedish bearing and seal manufacturing company founded in Gothenburg, Sweden, in 1907. The company manufactures and supplies bearings, seals, lubrication and lubrication systems, maintenance products, mechatronics products, power transmission products, condition monitoring systems and related services globally.

SKF is the world's largest bearing manufacturer and employs 44,000 people in 108 manufacturing units. It has the largest industrial distributor network in the industry, with 17,000 distributor locations encompassing 130 countries. SKF is one of the largest companies in Sweden and among the largest public companies in the world (US\$ 7 Billion revenue in 2021).

- Validating Energy Efficiency in Bearing Arrangements: SKF is committed to driving increasingly sustainable operations. As part of this goal, SKF is now looking for innovative solutions to measure and validate energy consumption in bearing arrangements within customer applications. Quantifying energy consumption is considered to become a significant factor in product performance evaluation, and advanced prediction tools with agile validation methods during testing or usage will be central to meeting this demand.



- Bearing Unit with Wireless Power Transfer: SKF is committed to offering products at the forefront of innovation while supporting clean solutions in the industry. As part of this commitment, SKF is seeking a solution to address the drawbacks associated with current methods of transmitting electrical energy to the rotating shaft of Separately/Externally Excited Synchronous Motors, used in electric vehicles to create a high-speed and reliable wireless electric connection between the rotating shaft and the power electronics of the motor.

Stora Enso

Stora Enso is a leading provider of renewable products in packaging, biomaterials, and wooden construction. Headquartered in Helsinki, Finland and Stockholm, Sweden, Stora Enso develops and produces solutions based on wood and biomass for a range of industries and applications worldwide and is one of the world's largest forest, paper and packaging industry companies (€ 10 Billion revenue in 2021).

- Generative AI for Customized Design: As a leader in renewable packaging, Stora Enso is looking for Generative AI solutions to streamline the process of creating new designs and optimizing them for production, transport, and specific use cases. Stora Enso's vision is to provide sustainable, affordable, and customized 3D-printed designs for their clients with shorter lead times.

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Enel

Enel is a leading integrated player in the global power and renewables markets. At global level, it is the largest renewable private player, the foremost network operator by number of end users and the biggest retail operator by customer base .

Enel is serving over 75 million end users in 30 countries producing energy with over 88 GW of total capacity. Enel's renewables arm Enel Green Power has a total capacity of around 59 GW and a generation mix that includes wind, solar, geothermal, and hydroelectric power, as well as energy storage facilities, installed in Europe, the Americas, Africa, Asia, and Oceania. Enel Grids manages over 2 million km of power lines, with more than 45 million smart meters produced & installed.

What Enel is looking for:

- Materials and sustainability - Innovative and sustainable materials or components to be used in the entire value chain of energy production and distribution (including plastics, insulation, electronics and specific network components like poles, switches, conductors, transformers, cables, wind blade and tower, PV panel, batteries, etc)
- Automation & Digitalization – Robotic solutions and AI application for plant and grid construction, maintenance and operation, worker safety & operational excellence for Enel's assets (including Innovative and comfortable PPEs)



- Grids of the future & Resilience:
 - Quicker fault localization, predictive maintenance and fault analysis
 - Forecasting algorithm and AI applications for Grid's flexibility services
 - Adaptation to extreme weather and new services
 - New technologies for the grids of the future
- New technologies for renewables including: long duration storage, PV, Hydrogen generation and storage, ammonia, geothermal.

In-kind support provided by Enel:

- Logistics - Access to on the ground facilities and resources such as experimental fields and testing facilities operated by Enel.
- Expertise - Technical mentoring and advising by Enel personnel in the approval and project management process.
- Hosting - as part of the collaboration Enel AI&Robotics offer hosting in the lab that includes an open space, makers lab and access to equipment, data and expertise.

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Hyundai CRADLE

Hyundai CRADLE is Hyundai Motor's venture capital and open innovation arm, which partners and invests in prominent global startups to accelerate the development of advanced future automotive technologies.

Hyundai CRADLE Tel-Aviv invests extensively in promising startups in Israel and builds partnerships to evaluate technologies that will fit the strategic direction of Hyundai Motor Group.

Hyundai CRADLE is looking for startups and partners for Open Innovation projects and POCs, which may later develop into an investment, depending on success. Hyundai CRADLE has the network within Hyundai's business units to promote ideas, and the local ecosystem to execute the project in Israel via its variety of partner programs and its POC Platform (its vehicle converted to a testbed).

What Hyundai CRADLE is looking for:

- Innovative solutions to increase plastic recycling content from post-consumer recycling, for instrument panel or center console parts, for instance: optimized recycling sorting process, new recycled material, technology that helps reduce smells or increases recycling material performance, improved waste cleaning, increased recycling purity, etc.
- Carbon capture technology, water electrolysis system technology.
- CDR (Carbon Dioxide Removal) in 4 fields: Air / Ocean / Land / Rock Solution to solve water supply issues and marine CDR (Carbon Dioxide Removal) technology when producing green hydrogen by water electrolysis in the future.



- Battery recycling, lithium recycling, plastic recycling, eco-friendly material that can be recycled etc.
- Catalyst and CO2 (cooling, electricity generation, collection), battery swap, battery diagnosis (SOC, SOH), NPU, vehicle communication redundancy.

In-kind support provided by Hyundai CRADLE:

- Technological guidance;
- Manpower;
- Equipment;
- Use of labs;
- Beta site for technology evaluation.

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ReNew

[ReNew](#) is India's largest renewable energy company and one of the world's leading decarbonization companies listed on NASDAQ with an aggregated renewable energy capacity of 13+ GW. With a strong commitment to sustainability, ReNew has built an impressive portfolio of 15mn+ renewable energy offsets per annum. Its solutions encompass a varied range of renewable solutions like energy storage, green hydrogen, solar manufacturing, carbon removal.

What ReNew is looking for:

To further expand its decarbonisation efforts, ReNew is actively looking to develop carbon projects across all geographies. These projects are implemented by carbon financing. These can be categorized into 3 different buckets based on the kind of interventions:

1. **Nature-Based Solutions** – Activities focused on reducing or locking GHG emissions through carbon financing
 - The projects are implemented to protect and manage existing forests along with sustainable development of local communities.
 - Portfolio of projects include REDD+, Afforestation, Wetland restoration, agriculture land management and avoided conversion of grasslands (ACoGS)
 - Improved Forest Management (IFM) which result in increased carbon stocks within forests and/or reduce GHG emissions from forestry activities when compared to business-as-usual forestry practices.
2. **Community-based Solutions** – Activities to reduce the GHG emissions with focus on community interventions like clean cooking and biogas.
 - Currently, our portfolio has clean cooking projects where we deploy improved cookstoves reducing wood consumption and carbon emissions.
 - We are disseminating 200,000 cookstoves, in India impacting more than 1 million direct beneficiaries.



3. **Engineered Removals** – Using technology solutions that remove and permanently store carbon dioxide from the atmosphere.
- Biochar Production: The carbon is permanently locked in the form of biochar, produced through the pyrolysis of biomass. Large-scale projects improving soil health and generating high-quality carbon credits.
 - Carbon Capture as a service: Development of DAC and CCUS projects where carbon dioxide is removed from the atmosphere or flue gas. The captured carbon is either stored permanently in geological formations or converted into valuable products.
 - Carbon captured from DAC/CCUS is locked into concrete through mineralization and utilized as building materials.

ReNew is keen to explore projects in these areas specifically in tech-based carbon removal projects through collaboration with technology companies based in Israel.

In-kind support provided by ReNew:

The in-kind support from ReNew would be dependent on the nature and scale of the projects and technology partner.

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Shizen Energy (under Startup Fukuoka City)

[Shizen Energy](#) is a major Japanese renewable energy company, actively expanding overseas in support of the worldwide energy transition, currently launching their relationship with the Israeli renewables ecosystem.

Shizen specializes in the development, construction, and operation of renewable power projects. The company was founded in 2011 with the goal of “taking action for our blue planet” by promoting the use of clean and sustainable energy sources to combat climate change and reduce reliance on fossil fuels. They are committed to promoting clean energy sources, engaging with local communities, and contributing to the global transition towards a sustainable future.

As part of their expansion plans, Shizen has been actively involved in international projects. They have collaborated with partners in various countries to develop renewable energy projects outside Japan, including Indonesia, Malaysia and Brazil. This approach allows them to contribute to the global transition towards clean energy and support sustainable development worldwide. Shizen have just successfully completed their first trip to Israel and are looking forward to continuing to collaborate.

What Shizen Energy is looking for:

- Energy management systems
- Solar PV component and system innovations
- Floating solar technologies
- Innovation in wind power generation



- Innovation in small hydropower, biomass, and other renewable energy systems
- Energy storage technologies
- Battery integration technologies
- Grid technologies
- Energy efficiency
- Operation and maintenance technologies
- Energy forecasting and trading systems
- Remote monitoring
- Corporate PPA innovations

In-kind support provided by Shizen Energy:

Commercialization Potential & Global Expansion:

- Exposure to the Japanese power market, one of the biggest integrated power markets in the world
- Immediate access to Shizen's projects and businesses, which cover East Asia, Southeast Asia and the Americas
- Validation and endorsement of technology by Shizen, a recognized Japanese renewable energy player

Mentorship and Resources:

- Expense-paid trip to Fukuoka for 2 team members per selected startup (approx. 1 week)
- Practical support to set up business in Japan, facilitated by Shizen and our partner Fukuoka City including: fast track Start-Up Visa Eligibility (the first such initiative in Japan)
- Access to Shizen management to establish development roadmap
- Support and mentorship to guide selected startups in business building

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Snam

[Snam](#) is the leading European operator in natural gas transport, with a network of around 38,000 km in Italy and abroad. The company also deals with storage, of which it holds 17.1% of the European capacity, and regasification, with 6.5 billion cubic meters of gas that will rise to 16.6 billion cubic meters to 2024 due to the installation of regasification plants in Piombino and Ravenna. Snam is among the leading Italian listed companies by market capitalisation.

With its 80 years of experience in the development and management of infrastructure, Snam guarantees security of supply and promotes energy transition with investments in green gas (biomethane and hydrogen), energy efficiency and CCS (Carbon Capture and Storage) technology. It also creates new green areas through a benefit company focused on urban forestation projects.

Snam is committed, among the first companies in the energy sector, to achieving zero net greenhouse gas emissions ("Scope 1" and "Scope 2" emissions) by 2040. As of 2021, the company has set a reduction target on indirect "Scope 3" emissions compared to subsidiaries and suppliers by 2030. The corporate business model of the company is based on sustainable

growth, transparency, the development of talent and diversity and the protection and social development of local communities.

What Snam is looking for:

- **Carbon Capture and Utilisation:** technologies to enable carbon sequestration from atmosphere or industrial sites and allow CO2 utilization (e.g. conversion into synthetic fuels or new materials).
- **Hydrogen blending and measurement:** solutions to facilitate hydrogen blending with natural gas in transportation grid, monitor the quality of the process over time and quantify the hydrogen and energy content.

In-kind support provided by Snam:

- Connection with Snam's ecosystem of industrial partners and suppliers
- Access to Snam Hydrogen Innovation Center and network of research labs
- A dedicated team to provide you technological expertise as well as market knowledge, and mentorship to scale up your solution
- Expertise gained from the HyAccelerator, Snam's corporate accelerator, in accompanying startups towards growth
- Team support to explore possibility of developing joint projects
- Potential involvement and support for the application to public funding calls

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Process & Timeline

Program launch	11/09/2023
Applicants submit Expression of Interest (EOI) form	12/11/2023
IIA and the International Partners invite shortlisted applicants to submit a full application to the Israel Innovation Authority, according to the incentive program R&D and Pilots with International Partners	1-7/12/2023



<p>Shortlisted applicants submit a full online application to the IIA. The deadline for the full application submission is February 26, 2024 at noon Israel Time. The full application should be submitted here.</p> <p>The full application should include a detailed description of the project. It is highly recommended to form the project with the advice the selected Global Corporate, to optimize the quality of the proposal. The full proposal should include an LOI signed by the company and the the Global Corporate as detailed here.</p>	26/02/2024
<p>The research committee will discuss the proposals of the shortlisted companies, to select the winning proposals in May 2024.</p>	~ May 2024
<p>Agreement signing and submission to the IIA</p>	~ June-July 2024

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