

#### **Enterprise Europe Network**

# Partnering Opportunities Selected Catalogue on Circularity & Renewable Energy for Enterprise Europe Network (EEN) Clients November 2025

Jointly prepared by the members of EEN Thematic Group Sustainability: Sub - Groups Green Innovation & Circular Economy







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### SME collecting end-of-life electric vehicle batteries seeks recyclers to reuse them.





#### **Summary BOFR20241205004**

A French SME is a specialist in new and used car parts and has started receiving damaged electric vehicles. Electric vehicle batteries are dismantled and evaluated for resale to partners for reuse or recycling.

#### **Advantages**

- Energy density: NCA and NMC batteries have a higher energy density, enabling greater autonomy
- Safety: LFP batteries are particularly stable and safe
- Performance: NCA and NMC batteries offer better performance, particularly at high temperatures
- Durability: LFP batteries generally last longer
- Cost: LFP batteries are often cheaper than NMC and NCA batteries.

#### **Partners Sought**

Seeking commercial agreement for creating a circular ecosystem in collection and logistics, recycling lithium-ion batteries using hydro-metallurgical processes, the extraction and purification of metals.

#### Technology Readiness Level Achieved: TRL 8

**Contact:** Sébastien Lespinard , EEN France – <u>s.lespinard@charente-maritime.cci.fr</u>









### German company offer Cost-efficient, modular saline flow batteries





#### **Summary TODE20250827017**

A German tech company in data communication, automation and microelectronics is launching a joint innovation project with research and industry partners. The goal is to develop cost-effective, nextgen energy storage systems for broad deployment in the low-budget sector. These solutions aim to support renewable energy integration using innovative materials, energy-efficient control, and smart communication technologies.

#### **Advantages**

- Use of saline-based redox-flow chemistry (non-flammable, non-toxic, based on abundant raw materials like iron and manganese)
- Substantially lower costs compared to vanadium or lithium systems
- Long cycle life (>10,000 cycles)
- Full scalability & modularity: energy capacity via tank size, power output via stack size
- IPR status: Existing know-how; intellectual property rights are currently under development.

#### **Partners Sought**

Seeking development and investment partners for cost-efficient, modular saline flow batteries

Technology Readiness Level Achieved: TRL 8

**Contact:** Jörg Buesel, EEN Germany – joerg.buesel@nbank.de









# Know-how in lithium battery recycling offered for research projects





#### **Summary** (TODE20240417002)

A German SME with unique know-how, innovative processes and facilities for lithium battery recycling and lithium recovery in high yields is interested in joining European research projects where they can contribute their know-how and further investigate and scale processes. It is one of the first recycling companies in Europe that can recover lithium in high yields from LIB (Li-lon) batteries for

various applications with market mature technology.

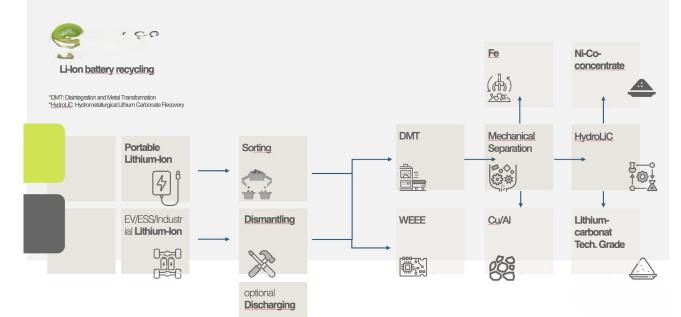
#### **Advantages**

- Transparent process
- Maximum resource recovery
- Minimum use of energy
- Lowest possible emissions

#### **Partners Sought**

The German company would like to partner with industrial companies, universities and research organisations to participate in relevant R&D projects.

Contact: Sabrina Wodrich, EEN Germany NRW.Europa - sabrina.wodrich@zenit.eu









# Company offers lightweight and circular solar panel solutions





#### **Summary TONL20250107008**

A Dutch company develops and produces innovative, lightweight, and fully recyclable solar panels designed to accelerate and sustain the energy transition. These high-performance panels are easy to install, making them an ideal solution for various applications.

#### **Advantages**

- High Efficiency: These panels deliver excellent energy output, ensuring high returns on investment for users.
- Easy Installation: The lightweight and flexible design simplifies installation, reducing labor and time requirements.
- Sustainability: The use of circular materials and avoidance of harmful substances contribute to a greener future.

#### **Partners Sought**

Seeking company seeks collaboration with end-users, distributors, installers, and Engineering, Procurement, and Construction (EPC) contractors experienced in solar energy projects.

Technology Readiness Level Achieved: TRL 8

Contact: Nils Harman, EEN Netherlands - nils.haarman@rvo.nl







# Start-up developed an innovative robotic solution for recycling photovoltaic panels





#### **Summary TOIT20250704026**

An Italian start-up is revolutionizing the recycling of photovoltaic (PV) panels through the use of innovative automated robotic processes. Their mission is to create sustainable solutions for the end-of-life management of solar panels, addressing key environmental challenges like material scarcity and waste disposal.

#### **Advantages**

- Utilization Automated Recycling Technology: integrating robotics and Al-driven solutions to automate the
  entire recycling process. This automation reduces human error and optimizes resource recovery,
  ensuring higher quality outputs and reducing labor costs.
- Enhanced Material Recovery: separation and recovery of valuable/critical materials, such as silicon, glass, plastics and metals, from used photovoltaic panels. This increases the purity and efficiency of recovered resources, which can then be reintegrated into new manufacturing cycles, supporting the circular economy.

#### Partners Sought

Seeking research institutions, industry players, and technology developers who can collaborate with them on commercial agreement, R&D or investment.

Technology Readiness Level Achieved: TRL 6

**Contact:** Guido Dominoni , EEN Italy – guido.dominoni@finlombarda.it







# Company offers modular bioethanol reforming system for decentralized hydrogen production





#### **Summary TOES20250709027**

A Spanish hardware developing company in renewable energy offers a modular innovative technology for decentralized hydrogen production via catalytic reforming of renewable bioethanol.

#### **Advantages**

 This hydrogen generation system is a modular unit based on catalytic steam reforming of renewable bioethanol, designed for on-demand, autonomous operation in isolated or infrastructure-limited environments. The complete process includes pre-heating, catalytic reforming, water-gas shift (WGS) reaction, and purification via Pressure Swing Adsorption (PSA), producing hydrogen suitable for PEM fuel cells.

#### **Partners Sought**

Seeking a research organisation, applied R&D institute, engineering consultancy or innovation-driven company with capabilities in hydrogen technologies, process integration or clean energy systems.

Technology Readiness Level Achieved: TRL 6

Contact: Raquel Martínez, EEN Spain - raquel.martinezdominguez@jcyl.es









#### German SME offers membrane electrode assemblies (MEAs) with improved sustainability and cost efficiency for green hydrogen production







#### **Summary (TODE20250820007)**

The company develops, builds, and recycles the elementary component of hydrogen proton exchange membrane (PEM) electrolyzers, the membrane electrode assemblies (MEAs), using 20 times less iridium while maintaining the same performance.

#### **Advantages**

- 5-layer MEA uses 20 times less iridium while maintaining performance
- Up to 50% cost reduction makes green hydrogen scalable and competitive
- recycling of rare raw materials reduces supply chain gaps
- The support-free structure avoids additional corrosion and ensures high durability.
- PFAS-free membrane reduces environmental impact and ensures regulatory compliance

#### **Partners Sought**

Commercial agreements with technical assistance are offered to manufacturers of PEM electrolyzers, hydrogen producers, plant operators and other interested partners. The company is also open for R&D cooperation for further refinement MEA design and operation or piloting new applications.

#### Technology Readiness Level Achieved 6

**Contact:** Silke Schleiff, EEN Germany schleiff@tutech.de









# University develops Innovative materials for sustainable hydrogen production





#### **Summary TODE20250307012**

A German university has developed a high-performance nickel-based alloy that significantly improves the efficiency and stability of alkaline water electrolysis. With low overpotentials and high resistance to reverse currents, this material offers new prospects for the decarbonization of energy-intensive industries. The university is looking for partners for the further development of the technology and its implementation in industry or partners for joint production.

#### **Advantages**

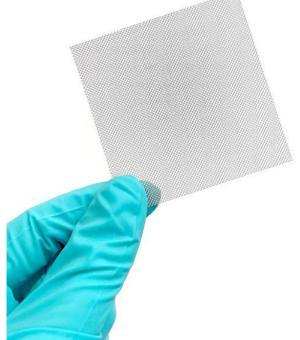
- The enhanced efficiency and stability can reduce electrolyser operating costs
- Energy industries benefit since they can decarbonize their processes with cheaper, longer-lasting electrolysis systems.

#### **Partners Sought**

Seeking partners for the further development of the technology and its implementation in industry or partners for joint production.

Technology Readiness Level Achieved: TRL 6

Contact: Claudia Mühlenfeld, EEN Germany – Claudia.Muehlenfeld@zenit.eu









# HYDROS POWER SL, specialized in green H2 seeks consortiums to develop and test H2 storage, last mile distribution and plug and play refueling capsules for mobility and logistics.

#### Summary (EEN POD ref. TOES20250212009)

In this topic (HORIZON-JU-CLEANH2-2025-03-01), Hydros plans the development of plug-and-play pressurized hydrogen capsules. These capsules are designed to revolutionize the current hydrogen supply chain by offering a rapid supply, as well as a scalable, efficient, and cost-effective solution for hydrogen storage and last-mile distribution. The initiative not only promises to enhance the viability of green hydrogen as a key player in the energy sector but also paves the way for its widespread adoption across various industries.

#### **Advantages**

- Significant reductions in hydrogen supply chain costs.
- · More scalable, efficient and environmentally friendly approach.
- Distinct from current market offerings, opens new markets and opportunities.

#### **Partners Sought**

Cooperation agreement sought with a wide range of possible partners.

#### Technology Readiness Level Achieved: TRL 6

Contact: Yolanda López Cenador, EEN SEIMED (Spain) – yolanda.cenador@ua.es























# Circular, energy recovery solution for wastewater sludge treatment and energy efficiency





#### **Summary TONL20241024006**

A Dutch SME has developed processing methods for treatment of sludge, wet biomass and mixed plastics on-site, which are converted into biofuels, biogas, fertilizers, and raw materials for new plastics, replacing incineration of sludge. The Dutch SME is a spin-off of the Dutch independent Research Center for Natural Sciences.

#### **Advantages**

- Patented reactor for effective energy recovery
- Excellent dewatering of sludge by mechanical filtration
- Effective treatment of the filtrated water
- 60% lower opex (no waste incineration)
- 95% CO2 footprint reduction for sludge treatment.

#### **Partners Sought**

Seeking long-term partnering with system integrators & WWTPs (especially UK), that can build the system. Cooperation is offered in the framework of a joint-venture-, or license agreement.

Technology Readiness Level Achieved: TRL 7

Contact: Janine Kaya, EEN Netherlands – janine.kaya@rvo.nl









# Circular Waste-to-Energy Technology for Renewable Integration in Industrial Facilities





#### **Summary TOUA20250722022**

A Ukrainian SME offers clean thermal energy generation from waste. It offers a certified gasification-based waste-to-energy boiler that enables eco-friendly processing of hazardous and non-hazardous combustible waste to produce low-cost heat. The technology is designed for industrial applications and supports integration into broader circular and low-carbon transition frameworks.

#### **Advantages**

This solution is adaptable for on-site thermal energy production in industrial clusters or facilities,

- · contributing to renewable integration, fossil fuel replacement, and
- CO<sub>2</sub> emissions reduction

#### **Partners Sought**

Seeking R&D partners focused on renewable integration, emission control, and digital monitoring:

Technology Readiness Level Achieved: TRL 8









Contact: Vasyl Namoniuk, EEN Ukraine – vasyl.namoniuk@knu.ua

# Austrian Startup offering zero-emission heating through the utilisation of waste heat from servers looking for pilot customers and pilot plants

#### **Summary** (TOAT20250811015)

An Austrian startup has developed a modular server technology that integrates decentralised server units directly into heating circuits, using waste heat from computing processes to supply buildings with heat. By doing so, it enables climate-neutral heat supply and significant reduction of heating costs.

#### Advantages & Certification (if any)

- Up to 98% efficiency in converting electricity into both server power and usable heat
- 0 g CO2 emissions during operation
- 100% compatibility with existing heating systems

#### **Partners Sought**

Partners and test customers for pilot installations with the technical capacity to host, operate, and maintain decentralised server-based heating units: e.g. energy communities, companies, data centers, cloud service providers etc. Collaboration under technical or R&D cooperation agreement.

#### Technology Readiness Level Achieved: TRL 7

**Contact:** Viktoria Fink, EEN Austria – viktoria.fink@standort-tirol.at



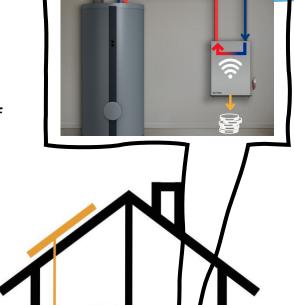












# Indian company - converting non-recyclable plastics, RDF, biomass to biofuel and green coal





#### **Summary TOIN20250203011**

Goenvi- an Award-winning India/UK startup revolutionizing waste management and carbon removal. Using patented catalytic pyrolysis, the company converts complex waste streams—including non-recyclable plastics, (Refuse Derived Fuel) RDF, and biomass—into valuable products like biofuel, green coal, and carbon-sequestering biochar.

#### **Advantages**

- Patented Catalytic Pyrolysis for Efficient Waste-to-Resource Conversion
- Ability to Process Diverse Waste Streams, Including Non-Recyclable Plastics and RDF
- Scalable Technology Adaptable to Different Waste Compositions and Regulation.
- Significant Carbon Removal Impact, Reducing Waste Pollution and Emissions
- Supports Circular Economy by Turning Waste into Usable Resources
- Enables Sustainable Waste Management Across Various Industries.

#### **Partners Sought**

Seeking partners and mainly potential clients/customers who have a requirement for turnkey, customizable waste-to-energy solutions.

The company is also open to licensing partnerships, strategic alliances and pilot project partners.

#### Technology Readiness Level Achieved: TRL 8-9

Contact: Shruti Satsangi , EEN India – ssatsangi@globalbusinessinroads.com









# Indian company offers plastic granules (HDPE, LDPE, PET,PP, PVC) made of recycled plastic waste seeks international distributors and customers





#### **Summary (PoD Ref. BOIN20250210005)**

RDRKD, an Indian company collects, sorts and transforms plastic waste into recycled plastic granules using IoT-driven machines and an innovative mobile app that connects waste collectors, and manufacturers. By blending cutting-edge technology with waste management, the company empowers communities and delivers eco-friendly products to a growing market. The granules have wide-ranging applications, including in waste-to-energy plants.



- Combines advanced technology, waste management, and sustainable production in a single, integrated platform.
- Utlisation of IoT-based machines and AI to automate the recycling of waste materials into new raw materials, ensuring a more efficient, scalable, and environmentally friendly production process.



The company seeks wholesale distributors and customers for its recycled plastic granules (HDPE, LDPE, PET, PP, PVC) for a supplier or commercial agreement.

#### Technology Readiness Level Achieved 9

**Contact:** EEN India, Shruti Satsangi – <u>ssatsangi@globalbusinessinroads.com</u>















# Spanish University developed a grid-forming control system to connect DFIG wind power generators to weak electricity grids





#### **Summary** (EEN POD Link)

A Spanish university has developed a control system for doubly fed asynchronous generators (DFIG) in wind turbines. This Grid-Forming system mimics synchronous generator features, enabling inertia emulation, autochthonous start and island operation. It improves efficiency and adapts to electrical network needs. To advance from TRL 4 to market readiness, the university seeks manufacturers of wind turbine or its generating equipment for further development and licencing the technology to them.

#### Advantages & Certification (if any)

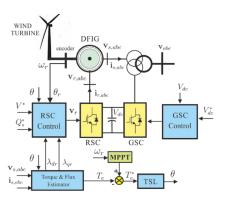
- Wind turbine to work as a true source of voltage to ensure the stability of the electrical system.
- Adaptation of the wind turbine to the characteristics of the electrical network.
- Safer and more reliable connection of the wind turbine to the electrical grid.

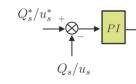
#### **Partners Sought**

Seeking commercial and R&D agreements with wind turbine manufacturing companies & those that manufacture generating equipment for wind turbines

#### Technology Readiness Level Achieved: TRL 4-5

Contact: Reyes Sansegundo Romero, EEN Madrid reyes.sansegundo@madrimasd.org

















# Road energy system converting traffic into clean electricity looking for partners to co-develop and deploy pilot installations





#### **Summary** (TOAT20250818015)

An Austrian startup has developed a patented road energy system – not based on piezoelectricity or dynamo principle - that transforms roads into power plants. The technology generates clean electricity by harvesting otherwise unused energy from vehicles, e.g. where brakes are in effect. It is highly efficient and enables local, grid-independent energy use.

#### Advantages & Certification (if any)

- Harvesting energy that is otherwise unused
- Quick and easy installation and maintenance on existing roads
- Covering up to 22% of highway operator's total energy demand or up to 5% at ports
- Amortization within short time (e.g. within 7 years from a port's perspective)
- 254× higher energy efficiency than dynamo-based converters and 13,000× higher than piezoelectric systems in the field of energy harvesting

Logistic centers, municipalities, industry, civil engineers, road operators, and infrastructure owners to codevelop, test and deploy pilot installations under technical or R&D agreement.

#### **Partners Sought**

Technology Readiness Level Achieved: TRL 7

**Contact:** Viktoria Fink, EEN Austria – viktoria.fink@standort-tirol.at













# Innovative platform for renewable, electrical, and electronic equipment





#### **Summary BOGR20240414001**

A Greek SME has developed an innovative platform that is designed to unite global stakeholders in the energy sector by facilitating the exchange of almost new, used, inactive and refurbished (renewable) energy equipment.

#### **Advantages**

- utilization of cutting-edge technology to create a user-friendly, efficient, and secure online marketplace
- facilitates the second –hand market by exchange, purchase, and sale of renewable, electrical, and electronic equipment.

#### **Partners Sought**

Collaborators sought with expertise in energy sector, renewable energy technologies, circular economy principles, recycling experts and platform development. Expertise in blockchain for transaction transparency, AI for user matching, and robust data security measures are also highly desirable.

Technology Readiness Level Achieved: TRL 6

Contact: S. Magoulas, EEN Greece - stelios.magoulas@gmail.com











# Energy efficient membrane-based separation solution for carbon capture, hydrocarbon separation & olefin/paraffin separation.





#### **Summary TOCH20250926006**

Industrial gas separation is one of the most energy-intensive processes worldwide, consuming up to 15% of global energy use. Conventional methods rely on thermal separation, which is costly, inefficient, and environmentally damaging. Saving up to 90% by this gas separation technology achieves high energy efficiency by changing the physical separation principle from thermal to "sieving" separation. Swiss company's patented technology entails molecular sieving membrane container solutions, for carbon captuand hydrocarbon separation. Company seeks commercial agreement with technical assistance or R&D cooperation agreement with flue gas emitters, polymer plant owners, and chemical process licensors.

#### Advantages:

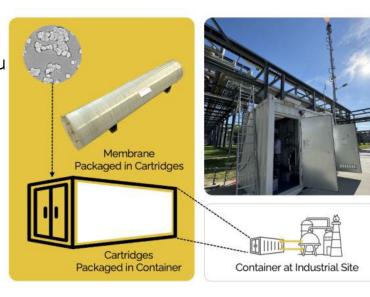
- Plug &play, quick installation
- Highly modular, modular scalable
- Online performance control
- Fully electrified
- Robust, seamless operation at existing factories and no maintenance shutdowns

#### Partners Sought

Polymer producer (Polypropylene); Flue gas emitter (waste to energy, cement, steel, other); Refrigerant manufacturers or providers;

#### Technology Readiness Level Achieved: TRL 6

Contact: Ernst-Jan Van Hattum, EEN Suisse -ernst-jan.vanhattum@innosuisse.ch













### Company offers circular polymer composites for use in diverse sectors & energy applications





#### **Summary TOPT20250319008**

A Portugese company developing fiber reinforced polymer composites would like to demonstrate their circular composite materials for sustainable applications in both terrestrial and space environments.

#### **Advantages**

- Sustainability: reduced carbon footprint through the use of renewable and recycled materials.
- Performance: fibre reinforced polymer composites offer high strength-to-weight ratios and can be tailored to specific application requirements.
- Circularity: designed for end-of-life recyclability or biodegradability, minimizing waste and promoting resource recovery.
- Versatility: applicable across diverse sectors, including aviation and space, automotive, and general engineering.

#### **Partners Sought**

Actively seeking partners (R&D, Industry) to advance the development and demonstration of these materials.

Technology Readiness Level Achieved: TRL 5-6

Contact: Susana Pinto, EEN Portugal – susana.pinto@aeportugal.pt









# Belgian Company offers Circular Geothermal Energy-as-a-Service





#### **Summary** (TOBE20251017009)

A Belgian SME offers turnkey geothermal and distributed energy solutions for residential, commercial, and public buildings. It develops, finances, and operates installations (including geothermal heat pumps, collective energy systems, PV, and EV charging) under an energy-as-a-service model, eliminating upfront investment for clients. Through smart monitoring and lifecycle management, the company reduces carbon emissions, operational costs, and technical complexity while ensuring long-term system performance.

#### **Advantages & Innovation**

- Fully integrated design–finance–operation approach
- Circular business model: company retains ownership, guaranteeing performance over time
- Reduces carbon emissions & operational costs for buildings
- Removes financial and technical barriers for clients

#### Partners Sought

The company is looking for European partners to deploy and scale its energy solutions. Potential partners include project developers, real estate owners and operators, energy utilities, engineering firms, and technology providers. Collaboration can take the form of integration into building projects, joint project development or co-investment, or technology/service partnerships, offering access to proven solutions backed by innovative financing.

**Technology Readiness Level TRL: 8-9** 

Contact: Maaike Van Overmeire, EEN Flanders – maaike.vanovermeire@vlaio.be











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### Thank you!

Sub-Group Sustainable Green Innovation - POD Catalogue Circularity in Renewable Energies

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