NET-ZERO TECHNOLOGIES MADE IN WALLONIA

STRENGTHENING EUROPE'S INDUSTRIAL RESILIENCE

BY POLE MECATECH

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"For the future, it is not a matter of foreseeing it, but of making it possible."

Antoine de Saint-Exupéry

Europe must cut fossil dependence and emissions, without trading one dependency for another.

Our goal is to catalyse Wallonia's reindustrialization across Net-Zero technology value chains, including nuclear.

Cross Referenced View

In response to the climate emergency, Europe has embarked on an ambitious path towards industrial decarbonization. This challenge, often seen as a constraint, is also a unique opportunity to strengthen competitiveness and industrial sovereignty through innovation. From fundamental research to technologies deployed by companies, and through collaborative ecosystems, every link in the chain matters to turn the transition into a strategic advantage. Rich in talent, Wallonia has a major role to play, driven by its industrial players and sectors of excellence. The road to Net-Zero will be built collectively, through action and cooperation.

Jean Jouet, Chief Technology Officer, Rely – President of Pôle MecaTech

The future of European industry rests on an inseparable combination: mastery of critical materials and resources, digitalisation of industrial systems, and the achievement of Net-Zero Energy. In line with European orientations and the MAKE 2025–2030 vision, the MecaTech Cluster supports industrial companies in this strategic transformation. By combining material sovereignty, digital performance and the energy transition, Wallonia can maintain a strong, competitive and value-creating industry on its territory.

Anthony Van Putte, Managing Director, Pôle MecaTech

At AGC, we are convinced that the decarbonization of the glass industry will rely on concrete technological breakthroughs. Together with Saint-Gobain, we have developed the VOLTA hybrid furnace, combining electricity and oxy-gas, capable of reducing CO_2 emissions by up to 70% while ensuring high industrial quality. Building on these results, we are now exploring its deployment at larger scale. In parallel, within the Walloon HECO2 consortium, we are advancing cryogenic CO_2 capture solutions at Moustier, with the ambition of achieving up to a 95% reduction in emissions. These projects illustrate our commitment to making low-carbon glass an industrial reality in Wallonia and in Europe.

Daniel Decroupet, European IP Manager & Fabrice Fasilow, Sustainability Manager, AGC

At Aperam, we are convinced that the decarbonization of heavy industry is both a strategic challenge and a major opportunity to strengthen European competitiveness. The HECO2 initiative has successfully brought together key research and industrial players in Wallonia to anticipate essential technologies: electrification of heating processes, CO_2 capture and cost-effective hydrogen production. However, the decisive step from R&D to industrial deployment will only be possible under two conditions: the rapid rollout of the necessary infrastructure - electricity, CO_2 and hydrogen networks - and access to these networks at an economically viable cost. Only then can a true Net Zero industry take shape.

Carlo Morettin, Global Head of Decarbonization and Energy Roadmaps, Aperam

At Belga Solar, the reindustrialization of Wallonia is embedded in our DNA. We firmly believe in a sovereign and resilient European value chain. Our mission goes beyond production: it is about mastering key technologies, creating local jobs and generating sustainable prosperity. But to succeed, industrial excellence must be matched by political commitment. Aligning public procurement criteria with the NZIA is not a technical detail—it is an essential lever to concretely support the European photovoltaic industry and its manufacturers.

Sébastien Mahieu, Managing Director, Belga Solar

Achieving Net Zero requires a profound rethink of how we produce, store and secure energy. CE+T Group develops essential technologies for more efficient, resilient and sustainable energy systems. By strengthening a robust industrial base in Wallonia, we contribute to a credible energy transition built on concrete industrial solutions and reinforced European technological sovereignty.

Ben Hayen, CEO, CE+T Group

Net Zero is not a brake on industry, but a powerful driver of transformation. At Comet, we believe that the low-carbon transition relies on mastering metals, which are essential for electrification and energy technologies. By securing and upgrading high-quality scrap, we enable competitive low-carbon steel production. In parallel, we invest in advanced technologies to recover strategic metals essential for the digital economy. Deployed in Wallonia, these solutions demonstrate that a high-performing, circular and sustainable industry can lie at the heart of Europe's reindustrialization.

Pierre-François Bareel, CEO, Comet Traitements

At JEMA, the transformation of industry towards Net Zero is taking an increasingly central role. In this context, our mission goes beyond production alone: it is about mastering key technologies and expertise, creating local jobs, and generating long-term sustainable prosperity with partners, as we have done for decades. However, to turn ambition into reality, create opportunities and showcase Wallonia's industrial excellence, political commitment is also essential. Launching ambitious technological projects locally, while supporting companies in managing risk, is a key lever to concretely support reindustrialization through European decarbonization.

Nicolas Bronchart, CEO, JEMA

At Memoco, we are convinced that the Net Zero transition also relies on smarter and more efficient energy infrastructures. Building on our expertise in metering for transmission system operators ELIA and RTE, we are developing new high-voltage digital metering solutions to support more resilient and better-managed networks. Supported by a strong consortium and the MecaTech Cluster, we deliver precise digital technologies that help industries visualise consumption in order to consume less and better. Sustainable reindustrialization also means accelerating electrification and decarbonization through concrete, deployable solutions.

Jérôme Kervyn de Meerendré,
Co-Founder, Head of Growth & Partnerships, Memoco

I / Introduction

1. A World in Transition : The Challenge of Decarbonization

Decarbonization stands as one of the defining challenges of the 21st century.

Beyond climate change mitigation, it represents a profound economic and geopolitical shift. Nations must now face a dual imperative: **reduce their greenhouse gas emissions while decreasing their dependence on fossil fuels and raw materials**.

Yet, over 80% of the energy used in transport, industry, and buildings still comes from fossil sources. Achieving carbon neutrality requires decisive action :

- **drastically reducing fossil fuel consumption;**
- **deploying low-carbon technologies on a large scale;**
- **securing access to critical raw materials and equipment.**

This transformation is both inevitable and far-reaching. According to the European Commission, by 2030 the global Net-Zero technology market will exceed **€600 billion per year**, with production expected to **triple**.

By 2050, renewable energy capacity will need to **quadruple**, heat pump deployment to **increase sixfold**, and electric vehicle production to **grow fifteenfold — a true industrial revolution in motion.**

2. Europe's Response: The Net-Zero Industry Act

To meet this challenge, the European Union has launched the Net-Zero Industry Act (NZIA) — a bold strategy to secure Europe's industrial and energy sovereignty.

Its goals are to :

- **produce 40% of key Net-Zero technologies within Europe by 2030;**
- **boost industrial competitiveness;**
- **reduce dependence on external value chains, particularly in Asia and the Americas.**

While Europe remains strong in sectors such as nuclear power, offshore wind, and electrical networks, others — like photovoltaics and batteries — have largely shifted abroad.

The NZIA seeks to **reindustrialize Europe sustainably**, strengthening local ecosystems and accelerating the production of key technologies: solar, wind, hydrogen, carbon capture, batteries, heat pumps, geothermal, biogas, lighting efficiency, and modular nuclear reactors.

Its vision: to **make Europe a sovereign region in the production of low-carbon technologies.**

3. Pôle MecaTech: Driving Wallonia's Reindustrialization

Manufacturing industries are a central pillar of the Walloon economy. In 2023, they accounted for approximately 61,700 jobs and generated a total added value of €6.61 billion.

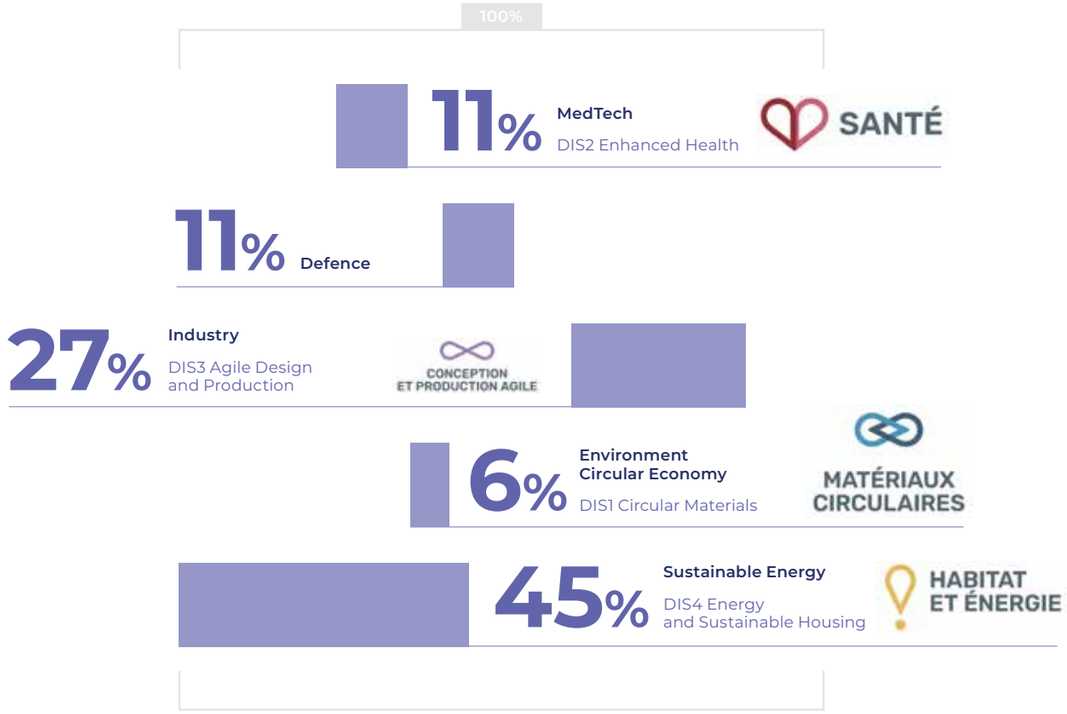
Within this group, the Walloon players in Net-Zero Industry Manufacturing listed in this brochure form a technology-intensive industrial sub-group. In 2023, these activities accounted for approximately 6,240 full-time equivalents (FTEs) and generated €685 million in added value.

These figures highlight the already significant economic weight of industrial activities contributing to the strategic value chains of the climate transition, in line with the priorities of the Net-Zero Industry Act.

Furthermore, according to available estimates, the market for the manufacture of technologies and equipment related to Net-Zero Industry Manufacturing is expected to grow rapidly, with its size expected to triple between 2023 and 2030. This development reinforces the prospects for industrial development, productive investment and industrial capacity growth in the region, while highlighting the strategic need to strengthen local production capacities. It calls for an integrated approach linking Net-Zero Industry Manufacturing, the development of value chains linked to critical raw materials, and the digitalisation of industrial production systems, in order to avoid a positioning that is primarily oriented towards the consumption of technologies without sufficient control over their industrial production.

- **collaborative R&D and innovation projects;**
- **development of new local value chains;**
- **strong partnerships between SMEs, large groups, and research institutions.**

Distribution of supported projects between 2007 and 2024:



Project distribution in Net-Zero Technology Manufacturing

Pôle MecaTech structures its action around five main missions:

1 Stimulating industrial innovation

Identifying, structuring, and supporting collaborative projects with strong economic and technological impact.

2 Accelerating transitions

Supporting companies in the digitalisation, decarbonization, and circularity of their activities.

3 Bringing stakeholders together

Creating bridges between industry, research, partner clusters, and public institutions.

4 Strengthening industrial sovereignty

Contributing to the development of strategic value chains for Europe and Wallonia.

5 Representing Wallonia internationally

Integrating Walloon companies into European programmes and networks dedicated to industrial innovation.

Pole Mecatech Supporting Manufacturing SMEs in their green Transition initiative (EU)

GENESIS
Greening economy network for enhancing sustainable industrial systems
* Partner

EUROPEAN CLUSTER ALLIANCE FOR GREEN MANUFACTURING
European cluster alliance for green manufacturing
* Partner

JEWEL
2.000.000€ to fund innovative projects in net zero technologies
* Coordinator

Current european opportunities involving the energy sector

The Parcours Europe+ Batteries program: a proven support method.

Launched in 2022, Parcours Europe+ Batteries aims to increase the participation of Walloon players in European calls for proposals relating to battery technologies. The initiative is based on targeted, individual, and collective support, combining thematic workshops, visits to strategic sites, personalized follow-up, European matchmaking, and project development support.

The result: 24 projects submitted and 4 projects funded between 2022 and 2024. This is a remarkable success rate in the highly competitive context of European calls for proposals.

4. An Industrial Opportunity for Wallonia

The global energy transition is not merely a constraint — it is an **unprecedented opportunity** for Europe and Wallonia.

By developing a robust local offer in Net-Zero technologies, reinforcing energy and industrial sovereignty, and capitalizing on regional expertise, Wallonia can become a **key player in the emerging decarbonized economy**.

Through its vision and commitment, **Pôle MecaTech** acts as a catalyst for cooperation, innovation, and sustainable growth — shaping the future of a resilient and competitive Walloon industry.

Collaborative projects

BIOAFP

Pôle MecaTech

The BIO-AFP project develops a durable biomolecule-based anti-fingerprint coating for glass and metal surfaces.

The **BIO-AFP project** brings together industrial companies and scientific partners to develop an innovative, nature-inspired, biomolecule-based anti-fingerprint coating for glass and metal. The solution aims to provide effective and long-lasting protection against fingerprints while meeting the specific requirements of these materials. Through a unique process, the coating ensures the stable presence of biomolecules on the surface throughout the product's lifetime.

Project partners

AGC · Arceo Engineering · REALCO · DE LEUZE s.a. · ionics · symbiose · CRM Group · UMONS Université de Mons · LIÈGE université

CODIHT

Pôle MecaTech

The CODIHT project creates next-generation high-voltage metering solutions to support the digital transformation of electrical substations.

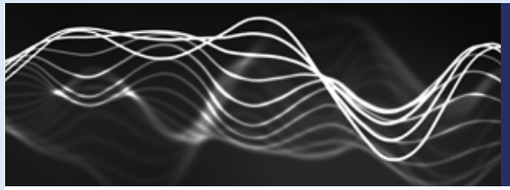
The **CODIHT** project aims to develop the next generation of metering solutions for high-voltage substations, which are undergoing increasing digitalization in their protection and control systems. However, the crucial metering function-essential for accurately measuring energy flows-has not yet fully benefited from this digital transition. With the first digital substations already in testing and deployments expected from 2030 onward, modernizing metering has become a priority. Transmission system operators, the main target users, have already expressed strong interest. This new product line will also help Wallonia maintain its leading position in high-voltage metering technologies.

Project partners

memaco · ELIOSYS · Multitel Innovation Center · ULB

CleanGRID

Pôle MecaTech

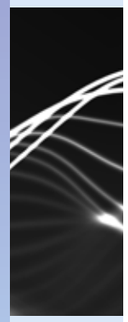


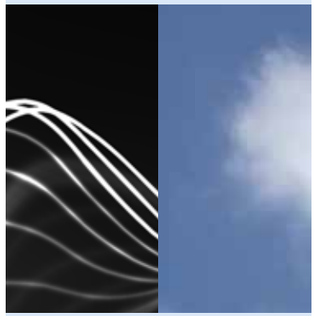
The project develops a new high-power converter topology that enables efficient, low-disturbance electricity conversion for large-scale green hydrogen production.

The **CleanGRID** project addresses the challenges of producing "green" hydrogen, as traditional methods generate significant CO_2 emissions and cleaner options like electrolysis remain limited by high energy costs. With the rise of renewable energy, large-scale hydrogen production requires power converters capable of adapting grid electricity to the specific needs of electrolyzers. Current high-power converter topologies, although efficient and reliable, create electrical pollution that becomes unacceptable when deployed widely. The project therefore aims to develop an innovative high-power converter architecture that maintains high efficiency while eliminating network disturbances, enabling large-scale green hydrogen production that complies with grid operators' standards.

Project partners

JEMA · ENGIE Laborelec · UCLouvain · LIÈGE université





COMP2BLADES

Pôle MecaTech

The COMP2BLADES project enhances Fairwind wind turbines by integrating locally produced composite materials to improve aerodynamic and mechanical performance.

The **COMP2BLADES** project, led by Fairwind, aligns with the broader context of the energy transition and the growing demand for small wind turbine solutions. European targets call for an increasing share of renewable energy—13% of Belgium's energy mix in 2020 and at least 27% across the EU by 2030. In Wallonia, this translates into substantial growth in onshore wind production, estimated at 680 GWh in 2020 and 4,403 GWh in 2030. Within this framework, the project aimed to incorporate locally produced composite materials into the design of Fairwind wind turbines to enhance their aerodynamic performance and mechanical reliability.

Project partners

FairWind · ISOMATEX · AEROFLEET · Cenaero · CENTEXBEL

DESTORE

Pôle MecaTech

The project develops a thermal battery that stores heat in stratified layers to improve heat-pump efficiency and maximize local self-consumption.

The **DESTORE** thermal battery is composed of high–energy-density modules that can store the heat produced by a heat pump during production periods and release it later when needed. The stored heat is arranged in multiple layers, each defined by a specific temperature, enabling the system to meet a range of thermal demands and operate efficiently even at low temperatures. This approach increases the heat pump's flexibility in electricity use while improving its overall performance. The project's goal is to industrialize a competitive and cost-effective product that maximizes locally produced self-consumed energy and helps reduce prosumers' energy bills.

Project partners

Co-labeled with Greenwin

GAC

Pôle MecaTech

The GAC project builds software and hardware tools enabling active consumer participation and optimized self-consumption in renewable energy communities.

The **GAC (Active Consumption Management)** project aims to develop software and hardware tools that connect electricity consumers with supply, system management, and grid operators. Its goal is to make users active participants in energy flow management and the optimization of market operations and infrastructure. More specifically, the project focused on maximizing individual and collective self-consumption and managing a renewable energy community in a residential district of Wavre. Three main components were developed: a management platform, forecasting and planning tools, and a user interface.

Project partners

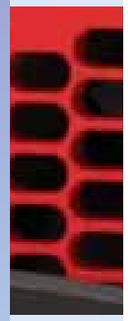
DUNES

Pôle MecaTech

DUnES designs a modular, behind-the-meter energy conversion platform to optimize energy flows for renewable and storage applications.

The **DUnES** project, led by CE+T, addresses the growing battery energy storage market in the context of expanding renewable energy use. It aims to develop a modular, Behind The Meter solution for energy flow conversion and management, offering flexibility and improved consumption efficiency. With a "Lego-like" architecture, the system enhances energy performance while reducing costs. The project relies on partners for modelling, simulation, and software development. Its goal is to commercialize these conversion systems and create long-term jobs in Wallonia.

Project partners



LECAAS

Pôle MecaTech

The LECaaS project creates an interoperable "as a service" digital platform for managing and optimizing renewable energy communities.

The **LECaaS** project aims to create a digital "as a service" solution for managing, simulating, and optimizing renewable energy communities. The platform is designed to be interoperable with existing tools. Consortium partners already possess individual solutions, which will be combined to deliver a unified and efficient service.

Project partners

HECO2

HECO2:

accelerating the decarbonization of heavy industrial processes in Wallonia

Drastically reducing emissions from heavy industry without compromising competitiveness: that is the ambition of HECO2, a flagship programme supported and facilitated by the MecaTech and GreenWin clusters. It brings together 26 industrial stakeholders in Wallonia around a shared strategy: to decarbonise energy-intensive processes and steer industry towards a cleaner, more circular and more resilient model.

With a budget of **€81 millions**, HECO2 targets the most decisive technological levers: process electrification, low-carbon hydrogen, hybrid plasmalyse, as well as CO_2 capture, concentration and utilisation (CCUS). At regional level, the objective is clear: to avoid around 1.1 million tonnes of CO_2 per year in Wallonia (with an estimated potential of around 5 million tonnes per year in Europe), by focusing on highly carbon-intensive sectors.

Concrete demonstrators that change the industrial equation.

Butterfly (Carmeuse) illustrates the power of “process” approaches combined with **CCUS**. The project is developing a lime kiln designed to be capture-ready, using a flue-gas recirculation process to significantly increase CO_2 concentration, making capture more efficient and paving the way for CO_2 reuse in other value chains—particularly to produce lime with a reduced carbon footprint. Work is progressing with the prototype being finalised and commissioning getting underway.

Another major pillar is hybrid **plasmalyse**, notably led by Vanheede and Materia Nova, which aims to convert methane (biomethane or gas from former mining galleries) into hydrogen with no CO_2 emissions, while co-producing a usable solid carbon. The project is moving towards the pilot phase, with a technological roadmap targeting advanced maturity levels.

In the glass sector, HECO2 also supports the development of flat-glass processes combining **partial electrification and raw-material optimisation**, to reduce the use of fossil energy and emissions while maintaining industrial quality requirements.

A collective drive towards a “Net Zero” industry in Europe

Above all, HECO2 embodies a collaborative approach: companies, research centres and public partners are pooling expertise, infrastructure and investment capacity to bring forward replicable solutions. By structuring a portfolio of demonstrators and preparing their scale-up, Wallonia is positioning itself as a low-carbon industrial centre of excellence—capable of transforming historically high-emitting sectors into engines of the energy transition.

Project portfolio supported by Pôle MecaTech and Greenwin

MIRACCLE

Pôle MecaTech

MIRaCCLE aims to deploy a direct-current microgrid connecting industrial prosumers to reduce losses and improve electrical efficiency.

The **MIRaCCLE** aims to implement and test a direct-current microgrid within an industrial zone. In a DC smart grid, linking multiple producers and consumers enables real-time flow adjustment, reduced energy losses, and improved overall efficiency. Since many systems-solar panels, batteries, lighting, electric vehicles-operate in DC, this setup avoids AC/DC conversions that cause unnecessary losses. The microgrid will connect about ten prosumer companies in the Hauts-Sarts industrial area in Herstal.

Project partners

KLINKENBERG · CET POWER · HEPL · UCLouvain

PCC80

Pôle MecaTech

PCC80 develops a high-performance pellet stove-boiler system and innovative glazing technologies to enable more efficient renewable heating.

The **PCC80** project aims to integrate into buildings an innovative heating system that enables more efficient use of renewable energy. It focuses on developing a high-performance pellet stove-boiler offering optimized combustion and exceptional flame visibility. The project introduces several innovations: a new generation of pellet stove-boilers, renewable energy integration, a production line for coated glazing, low-cost optical glazing prototypes, a thermal comfort monitoring service, a glazing analysis platform, and advanced simulation tools.

Project partners

stüv · ionics · ThingsPlay · Cenaero · MATERIA NOVA · UNIVERSITÉ DE NAMUR

NORA

Pôle MecaTech

The project develops mechanical pretreatment methods to convert used LFP batteries into material suitable for direct recycling.

NORA project aims to develop mechanical pre-treatment methods to efficiently convert used LFP batteries into a waste material suitable for direct recycling. It introduces breakthrough innovations, particularly for low-value batteries, to enhance recycling efficiency and support a more circular approach.

Project partners

BEVOLT · HYDROMETAL · PRAYON · LIÈGE université · ULB

PONIEXPRESS

Pôle MecaTech

PoNiExpRes designs eco-friendly, high-performance alkaline electrolyzer electrodes to accelerate the deployment of green hydrogen production.

The **PoNiExpRess** project supports the development of green hydrogen, which is set to play a key role in Europe's energy transition. Alkaline electrolysis—an area where John Cockerill is a leading Walloon company—relies heavily on high-performance electrodes that significantly impact hydrogen production costs. The project brings together several Walloon partners to design and rapidly commercialize a new generation of high-performance electrodes, developed through an eco-designed and circular approach including a dedicated reconditioning pathway. The objective is to accelerate green hydrogen deployment while reducing production costs.

Project partners

John Cockerill · Belgium Coatings · ROVI-TECH · CRM GROUP · LIÈGE université · ULB

POPE

Pôle MecaTech

The POPE project creates a high-fidelity, low-cost model to predict wind turbine performance based on site-specific weather and terrain data.

The **POPE** project aims to develop a high-fidelity operational model capable of predicting the power output and blade loads of a wind turbine based on a site's weather and topographic data, including surrounding obstacles. Designed for large and small turbines as well as unconventional designs, the model will rely on advanced numerical simulations and experimental data for calibration and validation. The goal is to deliver an accurate yet computationally efficient prediction tool suitable for a wide range of wind turbine configurations.

Project partners

WaPT · FairWind · 3E · UCLouvain · UMONS Université de Mons

SMARTACC

Pôle MecaTech

SmartACC combines hardware and software to monitor loads and optimize self-consumption in energy communities across diverse environments.

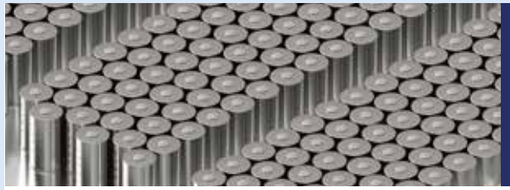
The **SmartACC** project develops a combined hardware–software solution to facilitate the integration of local renewable energy into electrical grids. It provides load monitoring and control, while optimizing self-consumption and tariff management within energy communities. The project explores scenarios ranging from residential areas to industrial zones, aiming to reduce installation and operating costs to make the solution more accessible.

Project partners

GreenWatch · haulogy · Arewal · Cenaero · Ocetic · ULB

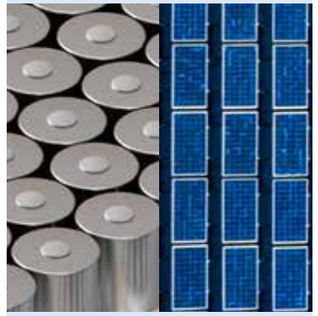
REDSHINE

Pôle MecaTech



RedShine develops high-voltage SiC power modules and converters to build highly efficient multi-megawatt renewable and storage systems.

The **RedShine** project focuses on developing high-voltage (>1500 V) power modules based on silicon carbide (SiC) technology, along with 200 kW DC-AC and DC-DC converters. Led by CISSOID and CE+T in collaboration with ULiège and UMONS, the project aims to produce modular multi-megawatt systems for renewable energy and battery storage applications. It prioritizes very high energy efficiency (>99%) and reducing the carbon footprint.



Project partners

CISSOID · CE+T · LIÈGE université · UMONS Université de Mons

SOLARGNEXT

Pôle MecaTech

The project enhances CSP plants by developing materials and fluids capable of withstanding extreme temperatures to extend energy storage and improve efficiency.

SolarGNext project aims to enhance concentrated solar power (CSP) plants by increasing the temperature of the heat-transfer fluid to extend thermal storage and enable continuous electricity production for up to 17 hours without sunlight. To remain competitive with photovoltaic systems combined with batteries, CSP plants must improve efficiency. However, higher fluid temperatures create significant technical challenges, especially for the solar receiver. The project therefore focuses on identifying materials and fluids capable of withstanding these extreme conditions while ensuring long-term plant performance.

Project partners

John Cockerill · LITHCOTE · CRM GROUP · LIÈGE université

Co-labeled with Greenwin

GREEN WIN

SOLHEATAIR

Pôle MecaTech

SolHeatAir produces, stores, and valorizes renewable hot air for industrial and energy-network applications to support carbon-neutrality goals.

The **SolHeatAir** project aims to develop a solution for producing, storing, and utilizing hot air generated from renewable energy sources for industrial processes—such as lime and steel production—and for use in electrical and heating networks. Its goal is to reduce CO_2 emissions and support progress toward carbon neutrality. The project aligns with Belgium's renewable energy ambitions and with IRENA's 2050 vision.

Project partners

John Cockerill · PRAYON · B-SENS Creative Sensing Solutions · INISMa · UMONS Université de Mons · masen

Co-labeled with Greenwin

GREEN WIN

SOLAR PERFORM

Pôle MecaTech

Solar Perform improves the durability and performance of high-temperature absorber tubes used in solar power towers.

The **Solar Perform** project addresses a key challenge in high-temperature solar power plants: the thermomechanical resistance of absorber tubes. Operating above 700 °C, these systems require absorbers that can withstand extreme thermal gradients and daily cycling for over 25 years while maintaining optimal efficiency. The project aims to improve their durability to limit costly maintenance and explores mechanical design strategies to meet stringent optical specifications.

Project partners

John Cockerill · LITHCOTE · CRM GROUP · LIÈGE université

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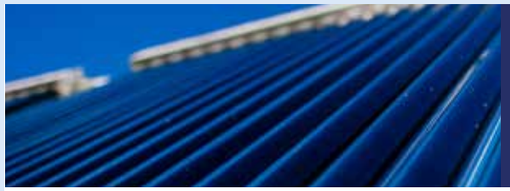
GREEN WIN

SOLINOX

Pôle MecaTech



Solinox aimed to create an innovative stainless-steel solar thermal absorber combining low cost, corrosion resistance, and high aesthetic quality.

The **Solinox** project aimed to develop an innovative thermal solar collector using a stainless-steel absorber inspired by domestic radiator design. The absorber was intended to stand out thanks to its thin stainless-steel construction, pre-welding before PVD selective coating, radiator-style pneumoforming, and compatibility with standard collector housings. Despite these promising features, the project was stopped before completion.

Project partners

Arceo ENGINEERING · BE-SOL · MALEX · CRM GROUP · UMONS Université de Mons

Walloon Actors

- Renewable Energy
- Smart Grids, Batteries & System Efficiency
- Low-Carbon Heat
- Other Decarbonization Technologies

From skills to production, from technologies to services:

Wallonia’s driving forces to strengthen European net-zero technology manufacturing capacities.

AGC Glass Europe

SECTORS

AGC Glass Europe: Driving innovation and decarbonization in the heart of Wallonia

A long-standing industrial player in Wallonia and a global leader in flat glass, AGC Glass Europe supports the region’s economic development and sustainable transition. The Group aims for carbon neutrality by 2050 and a 30% reduction in greenhouse gas emissions by 2030. To meet these climate and competitiveness challenges, AGC has placed innovation and decarbonization at the core of its strategy, backed by concrete investments that strengthen the local ecosystem and accelerate the shift to a greener industry.

An innovation hub serving the Walloon economy

AGC’s innovation heart is in Wallonia, at its Technovation Centre in Gosselies, bringing together nearly 300 researchers, engineers and technicians. The centre operates as a collaborative platform, working closely with Walloon universities, research centres and regional start-ups.

Innovative products for the energy transition

High value-added glazing solutions are developed in Gosselies to improve building performance: advanced thermal insulation glazing, FINEO vacuum glazing, and active glass that helps control solar gain—each contributing to greater energy efficiency.

A pragmatic decarbonization roadmap

Recognising that glassmaking is energy-intensive, AGC is deploying major pilot projects at its Walloon sites. Since 2022, and as a world first at Moustier-sur-Sambre, AGC has produced low-carbon glass. The reconstruction of a production furnace will integrate advanced technologies to significantly cut CO_2 emissions. Key levers under study include hybrid electrification of melting, flue-gas CO_2 capture, increased glass recycling, and cleaner energy sources such as green hydrogen or biofuels—supported by AGC’s involvement in the Walloon HECO2 consortium.

Circularity and renewable energy

AGC is also a pioneer in end-of-life flat glass recycling. Increasing the share of cullet reduces raw-material demand and lowers melting energy needs; each tonne of cullet saves around 1.2 tonnes of raw materials. In parallel, on-site renewable energy investments (solar panels and wind power) help meet part of electricity demand and reduce the overall footprint.

By combining cutting-edge innovation with the transformation of its industrial assets, AGC positions itself as a strategic partner for Wallonia’s resilience, competitiveness and ambition to lead Europe’s sustainable transition.

LC

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Alpha Innovations

SECTORS

Alpha Innovations designs advanced systems for intelligent energy management, control, and storage to improve efficiency and support carbon reduction goals.

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Ampacimon

SECTORS

Ampacimon is a pioneer in Dynamic Line Rating, an innovative technology that enables electricity transmission and distribution operators to know, in real time and with precision, the capacity status of their power grid.

Thanks to, among other things, a patented calculation system and sensors, Ampacimon allows for the optimization of grid usage with the highest degree of certainty. Dynamic Line Rating notably facilitates the integration of renewable energy sources and reduces the risks of line congestion and the associated costs.

SME

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Alteris Technologies

SECTORS

Altéris Technologies is an electronics design office, from product conception to industrialization.

Backed by a solid network of European partners, Altéris can support its customers right through to the final production phase. Specialzing in ultra-low-power electronics and energy recovery, Altéris develops sensors capable of withstanding extreme environmental conditions (temperature, vibration, shock, radiation, etc.).
In addition to measuring a wide range of parameters, our sensors can incorporate sufficient computing capacity to perform complex operations (edge AI), thus reducing the need for remote communications. These sensors can also incorporate a wired or wireless communication layer compatiblewith the system's ultra-low power requirements (Bluetooth, ZigBee, Thread, LORA, SigFox, etc.). In addition to sensors, we are also developing microactuators that enable local action

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AnyShape

SECTORS

Additive manufacturing plays a vital role in the transition toward Net-Zero technologies by enabling the production of lighter, more efficient, and less energy-intensive components while reducing waste and the carbon footprint of industrial processes.

In practical terms, it drives major advancements across the energy sector:
- In hydrogen, it allows the production of complex components for electrolyzers, fuel cells, and high-pressure tanks, optimizing performance and durability.
- For energy storage, it supports the design of lightweight and conductive structures for batteries and supercapacitors.
- In the nuclear field, it enables the manufacturing of high-temperature and corrosion-resistant parts, suitable for small modular reactors (SMRs).
- In solar and wind energy, it enhances cost efficiency and maintenance through the production of custom parts and the rapid replacement of critical elements.
- Finally, 3D-printed heat exchangers, with optimized internal geometries, provide greater thermal efficiency, essential for energy recovery and smart energy management. Thus, additive manufacturing stands as a key industrial driver of decarbonization and energy optimization at the core of Net-Zero technologies.

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Aperam

SECTORS

Aperam Chatelet is a key stainless-steel production site within the Aperam Group, with an Electric Arc Furnace and the Group's only European hot rolling mill.

The site has a production capacity of 2.8 Mt/year of stainless steel, relies largely on recycled scrap, and employs more than 700 people. As an electro- intensive facility, it has set clear decarbonization targets: –15% CO2 intensity by 2030 (vs. 2021) and Net Zero by 2050. Key projects include large-scale waste heat recovery from our processes, partial electrification of heating, oxygen injection optimisation, burner modernisation and energy-efficiency measures. Aperam Chatelet is also studying CO2 capture solutions and on-site renewable electricity generation to further reduce the carbon footprint of its industrial processes.

LC

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Armstrong International

SECTORS

Armstrong develops a complete range of equipment for industrial thermal systems: steam and condensate, hot water, humidification, control valves, flow measurement, waste heat recovery and high-temperature industrial heat pumps.

Our services help reduce primary energy consumption, enabling partial or full decarbonization:
1. Quick savings by improving the efficiency of your steam and condensate systems.
2. Major impact (energy use reduced by >50%): recover waste heat from heating and cooling loops and reinject it into industrial processes. We deploy our Circular Thermal® solution through a Pinch study, identifying direct heat recovery opportunities and upgrading low-grade heat using industrial heat pumps.
3. Optimizations
4. Project implementation

LC

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ARK Capture Solutions

SECTORS

ARK Capture Solutions is a Belgian Cleantech company specialized in capturing CO_2 from industrial flue gases.

Its unique technology is designed for low-concentration emissions (4–15% CO_2 in flue gases), a market where no viable solution currently exists despite representing over 50% of global emissions. Fully electric, ARK's solution combines record-low energy consumption, modular design, minimal footprint, and fully autonomous operation, without chemicals or hazardous materials. It redefines carbon capture at the source.

Our mission: To make point-source carbon capture accessible and sustainable to decarbonize our future - a proven and essential technology that will reduce global emissions by more than 15% and help achieve Net Zero.

SME

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Asdaex S.A.

SECTORS

At the heart of these systems you need to have solutions adapted to the specificities of this sector, in automation, computerized industrial systems and analytics. This is what we do.

SME

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Azimut Energy

SECTORS

Azimut Energy designs, manufactures, and operates smart home batteries made in Belgium and compatible with all photovoltaic systems.

Each battery maximizes self-consumption, ensures backup power during outages, and supports grid stability. Connected through a digital platform, these batteries form a Virtual Power Plant (VPP) that aggregates residential energy flexibility. The VPP predicts and coordinates charging and discharging cycles based on market signals and grid needs, while maintaining user comfort. Azimut Energy thus transforms households into active players in the energy system, contributing to grid balance, decarbonization, and local energy sovereignty.

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B-SENS SRL

SECTORS

B-SENS is revolutionizing temperature and strain measurement with cutting-edge technology derived from the telecommunications industry: optical fiber.

A single fiber, only 250 µm in diameter, can host up to 40 intelligent sensors, providing precise, real-time, and completely passive monitoring.
Robust and reliable, our solutions integrate seamlessly into the most demanding environments, from heavy industry to geothermal applications, without interfering with the monitored process. They can even be embedded directly into systems such as batteries.
With an extended operating range from –50 °C to 750 °C, our sensors replace multiple traditional devices, reducing cable clutter and simplifying installation.
B-SENS: optical innovation for a cleaner, safer, and more sustainable industry.

SME

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Belga Solar

SECTORS

Belga Solar is the sole Belgian manufacturer and installer of standard photovoltaic panels, offering complete «made in Belgium» energy solutions for private individuals, professionals, and public authorities.

Its activity, which also includes the installation of batteries and charging stations for electric vehicles, directly contributes to local green electricity production and carbon footprint reduction.
Belga Solar actively participates in the innovation ecosystem by developing specific photovoltaic solutions (BIPV, walkable PV, anti-reflective panels for airports, agri-voltaics, etc.) and positions itself as a partner of choice, offering clear, reliable, and secure processes.
The company thus directly works towards achieving Net-Zero targets by promoting its clients' energy independence and aims to strengthen the European photovoltaic sector. It contributes to European energy sovereignty and is the only PV manufacturer in the world to have obtained B Corp certification, a testament to its commitment to a business model that benefits society as a whole and the environment.

SME

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Be-Sol

SECTORS

Be-Sol is a Walloon engineering and prototyping firm specializing in thermochemical thermal storage for Net-Zero technologies.

With over twelve years of R&D experience in Wallonia and across Europe, Be-Sol designs and assesses innovative solutions to decarbonize heat in industry and buildings. Its expertise spans thermodynamic analysis, reactive material selection, modeling, prototyping, and techno-economic evaluation. Be-Sol helps position Wallonia as a key player in sustainable thermal energy storage.

SME

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CAPAUL AG

SECTORS

CAPAUL is a company specialising in high-precision machining for the aerospace, rail and medical industries, industrial applications and various energy sectors.

Innovation is at the heart of our business: we develop new, robust and reliable manufacturing processes with the aim of improving the performance of our customers' products. In the energy sector, too, many customers already place their trust in us. Why? Because we are not satisfied until you are. Of course, the name Capaul also refers to components related to renewable energies, whose elements are naturally exposed to a wide range of stresses, whether it be wind energy, bioenergy, hydrogen energy or hydroelectric energy. A successful mission: our components already provide reliable drive systems for various wind turbines. But our energy mission doesn't stop there! We are currently embarking on ISO 14001 certification. This project is part of a continuous improvement process with the main objective of reducing our ecological footprint and therefore that of our customers.

SME

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Cenaero

SECTORS

Cenaero, a research organization combining numerical simulation and AI, supports companies in the development of innovative products, services, and manufacturing processes.

Active in key areas such as Aerospace, Manufacturing, Energy, and the Built environment, Cenaero leverages its expertise in the development of 1/Cleantech (decarbonized energy production, conversion, and storage systems, air quality and CO2 capture, water remediation, bio-based materials), 2/tools for climate change adaptation and mitigation (dimensioning of mixed energy communities, impact of urban microclimates, technical and economic optimization of building renovation scenarios), 3/digital twins (for diagnosing the performance of energy installations, predicting consumption and raising use awareness, predictive maintenance, and flexible control of energy assets). Cenaero also operates the Walloon high-performance computer (HPC), LUCIA, and is part of regional, national, and European innovation networks focused on HPC and AI.

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CE+T Power

SECTORS

CE+T Power is a Belgian company designing innovative power converters that accelerate the transition toward a Net-Zero world.

Our modular and bidirectional energy conversion systems ensure optimal management of electricity between various sources (renewable, storage, and grids) and loads (AC and/or DC). Thanks to their flexibility and high efficiency, they enable better integration of green energy, reduce losses, and strengthen the resilience of critical infrastructures. CE+T Power supports industrial, energy, and tertiary players in their journey toward sustainable energy management.

SME

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CETIC

SECTORS

CETIC offers two main services to support your transition towards Net-Zero:

Technology Consulting and Support: A specialized service in IoT, AI, Cybersecurity, and Operational Optimization. We help you to adopt, master, and exploit the potential of these technologies for a smooth and optimal transition towards Net-Zero.

Digital Technologies: Configurable and adaptable digital components to:

- Create a bridge between operational technology (OT) and information technology (IT) systems to accelerate data feedback and decision activation.
- Optimize the resolution of operational research problems in the manufacturing sector (CleanTech for Net Zero).

Research center

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Certech

SECTORS

Certech offers companies highly diversified expertise, with chemistry at the heart of the major energy challenges our society must face. Certech contributes to the renewable energy (RE) sector by working on:

- high-performance materials (eco-efficient, lightweight, bio-based, circular)
- means of production and storage (low-carbon economy)
- sustainable and innovative processes (clean technologies)
- access to affordable energy.

Certech's strategy aligns with the EU's plan for competitiveness and decarbonization, the «»European Clean Industry Deal 2025»» (https://commission.europa.eu/topics/eu-competitiveness/clean-industrial-deal_en)

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Comet Traitements SA

SECTORS

Comet Traitements has decided to focus part of its R&D and development on the energy transition and associated technologies.

We have thus developed recycling/recovery tools to improve the circularity of metals supporting the energy transition (copper, rare earths, aluminum, precious metals, silicon, etc.) The most relevant examples are the Biolix copper recovery plant and the Multipick smart metal sorting plant.

SME

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Coceptio srl

SECTORS

Coceptio is an engineering and project management company that designs, delivers, and maintains sustainable industrial facilities in the pharma, biotech, energy, and agri-food sectors.

Committed to Net-Zero Manufacturing, Coceptio integrates innovative heating-cooling production, energy recovery and saving systems, and a real-time energy optimization platform enabling proactive maintenance. Combining performance, compliance, and sustainability, Coceptio supports industries toward more efficient and decarbonized production.

SME

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COVERS TM S.A.

SECTORS

COVERS TM S.A. manufactures heat pumps for residential use. The heat pumps are connected to 4th or 5th generation district heating networks.

SME

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CRM Group

SECTORS

CRM Group drives Europe's Net-Zero Industry transformation through advanced R&D, pilot-scale innovation, and industrial partnerships.

Its expertise spans materials, metallurgy, energy systems, and digital manufacturing, enabling decarbonised, circular, and efficient production. Key activities include renewable energy materials (PV, CSP, wind), battery and metal recycling, hydrogen and CCUS technologies, electrification of heavy industry, and additive manufacturing. With digital platforms like DILAPRO and DILACERT, and pilot projects such as PUREZINC, ZHYRON, and HURRICANE, CRM Group provides concrete solutions supporting the EU Green Deal and Net-Zero Industry Act, advancing Europe's industrial sustainability and competitiveness.

Research center

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Eliosys

SECTORS

Eliosys is an independent SME with over 15 years of experience in renewable energy and environmental testing. Its laboratory offers world-unique equipment capable of reproducing most terrestrial climates (sun, humidity, heat, cold, wind, hail), supporting the development and validation of innovative technologies.

Specialised in photovoltaics, heat pumps, solar thermal and hybrid systems, Eliosys is ISO 17025 accredited and delivers conformity certificates (ELIOCERT). The company also deploys advanced tools such as drones and on-site measurement systems, and supports industrial players in energy optimisation and self-sufficiency. Driven by innovation, Eliosys is preparing the opening of a new highly energy- and water-autonomous building in the Liège Science Park.

SME

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Destore

SECTORS

Destore designs and develops thermal energy storage solutions based on phase change materials (PCM).

These thermal batteries store heat from renewable or recovered sources and release it on demand for buildings or industrial processes. By combining energy efficiency, material circularity, and energy flexibility, Destore contributes to the decarbonization of heating and cooling systems and supports the balancing of energy networks, fully aligned with Net-Zero objectives.

SME

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Fabot Engineering

SECTORS

Fabot Engineering is a Walloon engineering company specialized in the design, rapid manufacturing and refurbishment of industrial equipment.

We develop and produce technical components, tooling and prototypes for sustainable-energy sectors such as hydrogen, carbon capture and utilization, electrification and energy efficiency. Our expertise combines parametric design, multi-technology additive manufacturing (SLS, resin, silicone, engineering polymers) and mechatronic integration.
Fabot operates as a Tier 3 supplier, providing custom solutions for assembly, maintenance and retrofit of Net-Zero systems. Our goal is to accelerate industrial transition by making production more agile, local and circular.

SME

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Filame SA

SECTORS

Filame is a subcontractor specialising in the manufacture of high-precision metal parts from wire or flat stock, with a specialisation in spring material.

We manufacture all types of wire springs (compression, tension, torsion) and formed wire from 0.1 mm to 20 mm in all kinds of materials (steel - stainless steel 302, 316, 316L, 17/7/ph, duplex - inconel 600, 718, X750 - Nioinc 90, Elgiloy, Hastelloy, bronze, CuBe).

We also manufacture various types of metal parts, spring blades and clips from sheet metal or coil using mechanical presses, automatic presses with progressive dies, slide machines, or laser, forming, stamping and welding equipment. The thickness of the materials processed ranges from 0.1 mm to 10 mm.

We also produce sub-assemblies in all types of materials, whether spring or non-spring. Our Engineering department can assist you in the conception and design for manufacturing of all your parts. Within this department, we also have a prototyping department. We work for many industrial sectors, including all types of energy industries.

SME

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Global Design Technology

SECTORS

As an engineering and consulting firm, GDTech supports industries in their energy transition and decarbonization efforts.

Leveraging our expertise in mechanical design, multiphysics calculations (structural, thermal, fluid), high-performance simulations, and system modeling, we optimize products and processes to reduce carbon footprints. Our solutions include eco-efficient tooling design, production line improvements, predictive maintenance, and the development of digital twins for sustainable manufacturing. With over 200 experts, GDTech helps you achieve your Net-Zero goals by combining innovation, performance, and responsibility.

SME

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FOCQUET SA

SECTORS

Focquet is a specialized supplier of high-efficiency IE3, IE4, and IE5 electric motors, available from stock to ensure fast delivery and production continuity.

Through these high-performance technologies, Focquet supports industrial companies in optimizing their energy efficiency while reducing operating costs. With reliable, durable, and future-proof solutions, Focquet assists its customers in continuously improving efficiency and transitioning toward more responsible industrial systems.

SME

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Graux

SECTORS

Manufacturer and integrator of special machines and custom-made equipment based on customer plans. 100% in-house production:

- metalwork
- qualified ISO 3834-2 welding
- machining up to 8m long
- surface treatment
- mechanical
- hydraulic
- pneumatic
- electrical assembly

SME

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Group IPS

SECTORS

Group IPS is a company specialized in consulting, engineering, and industrial project management.

Active for more than 30 years in Wallonia and internationally, we build the future of industry alongside our clients — supporting them from the strategic definition of their investments through to execution and commissioning.

Committed for many years to driving the transition toward a more sustainable industry, we help our clients achieve their decarbonization goals through various initiatives, including CO_2 capture, utilization and storage, enhanced process circularity, implementation of Best Available Technologies (BAT), and improved energy performance of industrial facilities.

SME

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i-Care

SECTORS

i-Care is a global leader in predictive maintenance technologies that support the Net-Zero industrial transition since 2004.

By combining wireless IoT sensors, AI-driven analytics, and deep engineering expertise, i-Care enables early detection of failures in critical rotating equipment such as motors, alternators, pumps, and wind turbine components.

Its solutions shift industry from reactive maintenance to predictive, condition-based strategies, reducing unplanned downtime and energy losses.

By improving reliability, extending asset lifetime, and optimising operational efficiency, i-Care directly contributes to lower emissions, reduced resource consumption, and more resilient Net-Zero energy and industrial systems.

LC

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Höganäs Belgium S.A.

SECTORS

As a global supplier of Nickel and Cobalt based metallic powder for the energy production and energy storage fields of application, our ambition is to be a leader in our industrial sector to have a major impact for our customers and the environment.

Already using almost 50% of secondary raw materials in our production, we target to increase further this share, to secure within Europe our material supply and our environmental footprint, in agreement to the Net-zero European politics. Thanks to our products, we empower our customers to shift towards more sustainable powder materials and technologies.

LC

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ICS - Innovative Coating Solutions S.A.

SECTORS

ICS develops innovative PVD coatings that directly support energy technologies and the Net-Zero transition.

Our solutions enhance energy efficiency, durability, and performance of components used in batteries, hydrogen systems, solar technologies, and thermal management devices. By tailoring surface properties — such as conductivity, corrosion resistance, reflectivity, and adhesion — ICS reduces energy losses and extends component lifetimes. Through a unique combination of R&D, simulation, and customized production, ICS contributes to a more efficient and sustainable industry.

SME

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Indao

SECTORS

Industrial operations can no longer rely on fragmented dashboards and intuition alone.

Indao is an industrial-grade SaaS platform, continuously developed and improved to deliver scalable deployment, faster time to value, and ongoing innovation.

Indao turns complex industrial data into clear, contextualized, and actionable insights. It detects process and energy deviations early, highlights the levers that matter, and supports teams in arbitrating real-time trade-offs between reliability, throughput, quality, and energy performance.
By embedding operational intelligence into everyday routines, Indao helps industrial sites strengthen asset reliability, improve operational and energy performance, reduce resource consumption, and lower carbon emissions.
The result is a more resilient, sustainable, and competitive industry - accelerating the transition toward low-carbon performance while strengthening Europe's industrial competitiveness and sovereignty.

SME

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JEMA

SECTORS

Innovative solutions to meet your DC, HV and RF needs !

JEMA combines more than 80 years of experience in power electronics and magnetic products, to meet specific, precise and high performance needs, for solutions in fields such as particle accelerators, and industrial processes requiring electrification in the scope of the energy transition. JEMA converters can be found in medical applications (imagery, cancer therapy), research (large lab accelerators everywhere in the world), electrification of industrial processes (thermal, plasma furnaces, plasm torches, industrial production previously carbon intensive, industrial battery chargers, high power energy storage, etc.), highly specialized test benches (in the railroad and space sectors), DC microgrids,... JEMA solutiuons, tailor made in order to meet constraints and specifications, can be provided as fully containerized solutions, if the industrial / operational process can benefit from it, and include as well service and maintenance all along the life of the systems (several dozens of years in general), with remote monitoring and management systems. Industrial applications of JEMA customers include for example metallurgy production, bio-sourced insulation material production, permanent magnets production, rare metals recycling, e-SAF production, etc.

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Insens

SECTORS

At Insens, we believe that industrial performance and environmental responsibility can go hand in hand. Our mission is to help manufacturing sites combine reliability, efficiency, and energy sobriety through the power of data.

That's why we created RED — a technology that continuously analyzes the electrical signatures of motors to detect mechanical, electrical, and process faults, while also identifying energy inefficiencies before they become costly. Installed directly inside the electrical cabinet, RED requires no additional sensors on the line and monitors machines seamlessly, even in the most demanding environments.

The result: optimized energy consumption, fewer unplanned shutdowns, and a longer lifetime for critical assets.

With Insens, your electrical data becomes a powerful lever for a more reliable, more sustainable, and truly Net-Zero industry.

SME

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Jetpack.AI

SECTORS

At Jetpack, we develop analytics, forecasting, and optimization solutions to accelerate the energy transition of industrial sites, airports, and DSOs.

Our Strata application simulates demand, generation, and storage to optimize renewables integration, BESS sizing, electrification of end uses (EVs, heating, and industrial processes), and peak-load management. With Strata, you can plan Net-Zero investments, size your grid, and activate flexibility to achieve the optimal scenario, both technically and financially.

SME

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John Cockerill S.A.

SECTORS

John Cockerill designs, manufactures, and maintains in Wallonia technologies at the heart of Net-Zero:

alkaline electrolyzers (green hydrogen), HRSGs and efficiency solutions, H_2-ready modernization, iron-ore electrolysis, high-performance cooling systems (cooling towers, air-cooled condensers/ACC), flue-gas treatment, CO_2 reduction and capture, Power to X, energy storage (thermal and electrical), and solar power plants (CSP/PV). We also provide operation and maintenance of waterways and hydraulic systems, as well as thermal and nuclear power plants. Our teams combine engineering, digitalization, and long-term services to cut energy use, water consumption, and emissions for clients in steel, energy, glass, chemicals, paper, agri-food, logistics, and more. Rooted in Wallonia, we co-develop critical equipment and services and, through the Industrya VC, support the emergence of new industrial players and solutions. Goal: accelerate Europe's decarbonization and contribute to the EU target of 40% Net-Zero technologies produced in Europe by 2030.

LC

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Klinkenberg SA

SECTORS

Don't waste any more energy from your PV system!

Storage batteries offer you the possibility of balancing your energy production and consumption, by significantly increasing your self-consumption and valuing variations in distribution costs. Depending on your needs, our energy storage solutions, including lithium-ion batteries or flow batteries, can be combined with intelligent monitoring and control systems to maximize your self-consumption. These storage units also enable other applications, such as peak-stalking and backup systems.

LC

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Karno

SECTORS

Karno develops decarbonized thermal energy networks.

The company manages network operations, energy performance, and the environmental balance of installations by integrating renewable sources such as geothermal, aquathermal, and solar thermal energy. By ensuring service continuity, energy quality, and infrastructure longevity, Karno actively contributes to the transition toward fossil-free collective heating and cooling systems aligned with Net-Zero objectives.

SME

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Komfor

SECTORS

Komfor was established to contribute to a sustainable and fair energy transition.

The company addresses the challenge of building heating and is reshaping the thermal energy landscape by placing decarbonization and energy equity at the core of its mission. In a world facing growing environmental, social, and economic challenges, Komfor acts as a catalyst for change, turning constraints into opportunities for innovation. By working with communities, businesses, and citizens, Komfor strives for a future where heat is clean, local, and accessible to all, fully aligned with Net-Zero objectives.

SME

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Manetco SRL

SECTORS

Manetco accelerates the transition to sustainable industry by developing innovative fluidic technologies for more efficient, compact, and energy-saving lab processes and equipment.

Facing the complexity of finding tailored solutions, we simplify the development of high-performance, flexible, and scalable systems—even at small scale. Our approach combines agility and precision additive manufacturing to create cleaner, safer chemistry. Through rapid iteration, you validate ideas, optimize resources, and reduce time and costs to market.

Our services:
Consulting: Solving technical challenges, technology selection, and R&D project management. Engineering Office: Design, sizing, and iterative prototyping to de-risk your innovations. Expertise: CAD/simulations, functional prototypes, industrial specifications, and integration.

SME

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Memoco

SECTORS

Memoco, a specialist in high-accuracy industrial metering, automation, and energy data management systems, brings 43 years of experience in designing, building, and operating complete metering, monitoring, and control systems for transmission system operators, industries, property portfolio owners, and manufacturers of industrial equipment.

For over 20 years, Memoco has been the exclusive metering partner of Elia, managing 100% of their metering infrastructure across more than 800 substations, enabling Elia to invoice over one billion euros annually. In France, Memoco has installed one-third of the onshore metering and the entirety of the offshore wind platform metering for RTE. Our metering cabinets are known for their reliability and zero-maintenance design. We leverage this expertise to benefit our other clients.

SME

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Matgenix

SECTORS

Matgenix develops AI-, simulation-, and data-driven solutions to accelerate the discovery and optimization of sustainable materials and processes.

Our technologies enable faster design of innovative materials for energy and industrial applications, including energy storage and conversion, emission reduction, and CO_2 capture. By combining physical modeling, machine learning, and materials expertise, Matgenix contributes to the Net-Zero transition and supports a more resilient, efficient, and circular industry.

SME

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Micromega Dynamics

SECTORS

Micromega designs and markets devices for vibration monitoring and vibration reduction.

We are mainly active in the wind energy sector, where we provide solutions for blade ice detection, blade integrity measurement, offshore platform structural health monitoring (SHM), as well as active and passive tonal noise reduction systems.

SME

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MPP

SECTORS

MPP is a trusted industrial partner for non-destructive testing (NDT) and high-precision finishing of critical components driving the energy transition and Net-Zero technologies.

We work on complex, high-value parts such as additive-manufactured heat exchangers, lightweight composite structures, and energy storage or conversion systems.

With EN9100 and Nadcap accreditations and state-of-the-art capabilities (X-ray, computed tomography, shearography, ultrasonics, thermography, etc.), we ensure the reliability, performance and durability of strategic parts in the energy, space and low-carbon mobility sectors.

Our services span the full lifecycle: development, qualification, production and maintenance.

SME

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Pommee

SECTORS

POMMEE – Design and manufacturing of custom welded equipment for the decarbonized industry.

Specializing in the design and manufacturing of highly technical welded equipment, POMMEE supports industrial players in their transition to more sustainable processes. Our custom solutions address the challenges of energy efficiency and carbon emission reduction.

We are particularly involved in the manufacturing of critical equipment for the green hydrogen sector, heat exchangers (optimization of industrial processes), and pressure systems (storage and transport of fluids). Our expertise in welding and mechanical engineering ensures robust and durable equipment.

SME

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OPTIMAL COMPUTING

SECTORS

OPTIMAL COMPUTING, a Walloon SME specialized in artificial intelligence and software engineering, develops Visualia, an innovative low-code platform that accelerates industrial digitalization by a factor of ten.

With Visualia, we design custom business applications for data analysis and image analysis, including automatic defect detection in photovoltaic panels, contributing to the advancement of Net-Zero technologies. Our low-code approach enables the rapid creation of multi-platform applications (PC, mobile, web) without programming, by assembling modules like building blocks — production monitoring, ERP systems, construction or energy performance site inspections, and automated quality control. Visualia makes digital transformation faster, more accessible, and more sustainable, serving an efficient and decarbonized Industry 4.0.

SME

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Quimesis

SECTORS

We design, prototype, and manufacture printed circuit boards (PCBs) specifically optimized for your project.

- PCB design, including schematics and routing.
- Power electronics (motor control, charging systems, ultra-low power consumption, etc.).

SME

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RESOLIA

SECTORS

Resolia is a consulting firm dedicated to decarbonizing thermal energy for buildings and industry in Western Europe

Leveraging strategic studies, Resolia supports the implementation of concrete renewable heating and cooling network projects. The company integrates low-carbon resources (geothermal, waste heat, aquathermal, biomass, etc.) and uses advanced engineering tools to optimize energy efficiency and reduce CO2 emissions.

Based in Brussels, Resolia operates in Belgium, Luxembourg, and France, assisting public and private stakeholders from design to completion, delivering tailored solutions adapted to each project's technical, economic, and environmental context across the full Net-Zero value chain.

LC

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SAG

SECTORS

Since 1907, SAG Industries has been designing and manufacturing custom heat exchangers and process equipment in Belgium, essential for industrial energy efficiency.

Our solutions enable heat recovery and valorization, directly reducing energy consumption and CO_2 emissions.
Our comprehensive range includes: shell & tube heat exchangers, finned heat exchangers, air-cooled heat exchangers, double-pipe, spiral, bayonet, hairpin exchangers, economizers, industrial evaporators and condensers. These equipment optimize thermal transfers in the most demanding processes.
As a major player in industrial decarbonization, SAG supplies future-oriented technologies: green hydrogen production, cogeneration plants, solar and biomass power stations, CO_2 capture and valorization systems. Our nuclear division provides critical equipment for low-carbon energy production, meeting the strictest standards. As a trusted partner of major industrial, energy and chemical groups, SAG actively contributes to achieving European Net-Zero objectives.

SME

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SCHREDER

SECTORS

Schréder is the leading independent smart outdoor lighting solution provider worldwide. Founded in 1907, we operate in over 70 countries on 5 continents.

Our tradition of engineering means that we have been at the forefront of innovation throughout our history. The latest wave of urbanism means that city centres are becoming more vital than ever: connectivity is crucial. Experts in Lightability™, we propose sustainable lighting infrastructure that plays a pivotal role in building Smart Cities and future communication networks. Our purpose is to deliver an outstanding experience by accompanying our customers along every step of their journey.
Schréder has always been committed to environmentally, economically and socially sustainable lighting, a commitment that is reinforced today by eco-design and circularity principles. We have already helped many cities, industries and sports venues worldwide to reduce their carbon footprint by switching to LED technology. By integrating our control systems, they can better manage their assets and deliver a people-centred experience.

LC

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Soliseco

SECTORS

Soliseco is an innovative solution that converts surplus photovoltaic energy into hot water and heat, actively contributing to the decarbonization of buildings.

With its intelligent, connected control system, Soliseco continuously adjusts heating power in real time to maximize solar self-consumption, reduce dependence on fossil fuels and grid electricity, and lower CO_2 emissions. Easy to install and compatible with all configurations (water heaters, gas & oil boilers, heat pumps, etc.), Soliseco optimizes the use of every locally produced kilowatt. A practical, cost-effective, and sustainable solution to achieve net zero carbon in residential buildings, public facilities, and SMEs.

SME

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Soudobeam

SECTORS

Soudobeam designs and manufactures energy recovery devices for the steel industry.

In particular, these components, known as diffusers, are used in steel converters to improve both the thermal balance and the carbon footprint. They work by converting the chemical energy contained in the gas phase produced during steel transformation into thermal energy.

SME

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SUB-ALLIANCE

SECTORS

SUB-ALLIANCE is an industrial interest group established in 1950, specializing in the transformation of advanced materials into complex mechanical systems.

With multi-material expertise (polymers, composites, metals, ceramics, and gears), the group designs and manufactures critical components for Net-Zero technologies: electrolysers, fuel cells, civil nuclear systems, and high-voltage infrastructure. Its "Manufacture Excellence" approach ensures precise material use, energy-efficient processes, and recyclability. Committed to sustainable innovation and high performance, SUB-ALLIANCE is a strategic partner for Net-Zero projects.

SME

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Stas Retro-Engineering

SECTORS

Stas Retro-Engineering specializes in reverse engineering and re-manufacturing of industrial equipment and components.

Our team combines an engineering office with a workshop equipped with advanced technologies: 3D metrology scanners, 3D printers, 4-axis CNC, welding stations, and sheet-metal equipment. We align with the Net-Zero vision by providing practical solutions to reduce the carbon footprint of industries through the repair and re-manufacturing of their parts and equipment. Each component is analyzed within its operational environment by our engineers and rebuilt in 3D following eco-design principles ; selecting more durable materials, optimizing designs, and strengthening areas prone to wear or breakage.

SME

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SynHERA

SECTORS

At SynHERA, we understand that every innovation project is unique and requires personalised attention. That's why we provide you with a team of advisors ready to support you throughout your project.

Thanks to our extensive network of researchers from the 19 universities of applied sciences of the Wallonia-Brussels Federation and their 10 associated research centres, you have access to a multitude of experts in various fields (robotics, energy, modelling, (embedded) electronics, pumps, turbines, renewable energy, sustainability, circular economy, etc.).

Research center

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SYSCADE SA

SECTORS

Engineering and manufacturing of equipment (solutions) intended for the nuclear sector, particularly with a view to reducing the amount of waste produced.

SME

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UCLouvain

SECTORS

With more than 3500 researchers and an annual research budget of 315 M€, the research is a true driving force behind UCLouvain's activities. LouvainTransfer, the knowledge and technology transfer office of UCLouvain, can advise you to find the most appropriate contact especially for expertise that does not appear hereafter.

Founded in 1425, UCLouvain puts its expertise at your disposal through its 23 research institutes and 46 technology platforms.

LouvainTransfer can help you identify the most relevant research experts to meet your needs, whether for: Develop a (tailor-made) collaborative research project; Meet experts and benefit from their advices; Access cutting-edge skills, technologies, infrastructures and equipments.

Don't hesitate to contact us for more details or help!

Univ

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Thermo Power Systems

SECTORS

Thermo Power Systems develops tellurium-free thermoelectric generators that directly convert waste heat from industrial processes into electricity.

The technology minimizes CAPEX through optimization of material, manufacturing, and integration costs, as well as OPEX due to the absence of maintenance.

SME

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ULB

SECTORS

ULB is active in many areas related to Net-Zero technologies. For example, the university is coordinating a European project to promote the transition to green hydrogen in heavy industry.

ULB teams are also working on batteries and energy storage, particularly through new methods of recycling lithium-ion batteries.
In electrical engineering, research focuses on smart grids and the integration of renewables (wind, solar), with expertise in wind power (turbine control) and photovoltaics. Finally, ULB contributes to training and research in nuclear technology, thereby supporting low-carbon energy production.

Univ

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ULiège

SECTORS

We support R&D projects in the area of eco-design, applying the life cycle assessment method.

Following the EU European Footprint method, this involves evaluating 16 indicators, including climate change, using a holistic and systemic approach. It is essential to ensure that aiming for net zero does not lead to transfers of impacts between indicators or between stages of the life cycle. We also support companies in “objective” environmental communication by producing environmental declaration sheets in accordance with current standards. The team has developed specific expertise in CO2 capture, recycling in the construction sector (aggregates, sand, etc.) for the production of “low-carbon” cement and concrete, recycling of metallic materials, etc.

Univ

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UNamur
Département de physique

SECTORS

The Department of Physics at UNamur, through the NISM Institute and the SIAM technology platform, develops advanced expertise in material characterization (IBA, ToF-SIMS, XPS, Raman, etc.) and functional modification using ion beams (IBMM).

These capabilities are essential for evaluating and optimizing materials used in low-carbon technologies. Our work on thin films and surface treatments via plasma processes, particularly within industrial collaborations, is directly aligned with this approach. The Department is also involved in strategic initiatives such as BatFactory, which aims to produce materials for stationary batteries using sustainable and circular processes. Finally, the development of a multi-technique approach to surface and interface analysis strengthens our ability to contribute to the optimization of various functional materials and to the understanding of the underlying physical phenomena.

Univ

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Professeur

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UMONS

SECTORS

Research at UMONS is carried out by 1800 researchers in some 100 departments within 10 research institutes.

Each institute brings together the skills of experienced researchers, postdocs and PhD students from several UMONS faculties. The strength of the UMONS Research Institutes lies in the multidisciplinary nature of their teams and the flexibility of their organisation.
At the same time, UMONS recently launched the label “UMONS Innovation Center” which highlights the close collaboration with its associated research centres : MATERIA NOVA, Multitel, Le CLICK, BCRC and C3E2D. With all the spin-offs created in recent years, UMONS is actively involved in the development of its region.

Univ

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UNamur
BatFactory

SECTORS

The activities of the “BatFactory” portfolio aim, on the one hand, to mobilize R&I skills in the Wallonia-Brussels Federation (FWB) for the benefit of Walloon private actors in the service of economic, environmental and societal development, and on the other hand, to produce as a final deliverable high-performance materials for instrumented storage batteries, using environmentally friendly, intelligent processes that facilitate circularity.

This objective is made of 7 axes: (1) production of eco-responsible active materials, (2) functionalization of active materials in powder form, (3) demonstrator and digital twin, (4) manufacturing of electrodes, (5) manufacturing of pouch cells, (6) battery packs and BMS (Battery Management System) from design to operation, (7) in situ characterization and certified tests. Beyond BatFactory, UNamur is also very active in the production of green hydrogen, the characterization of containers and the use of hydrogen, as well as in the development of new very high-performance materials for photovoltaic cells and électroluminescent diodes.

Univ

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UNamur

Namur Institute of Structured Matter (NISM), Laboratory of Theoretical Chemistry (LCT)

SECTORS

The LCT develops and applies advanced numerical modeling tools (high performance computing) to understand and predict the properties of molecules and materials.

These studies are conducted within a multidisciplinary framework, in collaboration with experimentalists who synthesize and characterize these molecules/materials. The targeted properties include structural, electronic, and optical features. The methods span a wide range, from molecular dynamics (MD) simulations to quantum mechanics and chemistry-based calculations (ab initio, including DFT), and incorporate machine learning (ML) and artificial intelligence (AI) tools to enhance method accuracy and facilitate the design of innovative systems. Recent work includes interpreting the spectroscopic signatures of the solid-electrolyte interfaces in metallic Ca batteries, understanding the catalysis of CO_2 valorization reactions, and designing high-performance photoluminescent materials (TADF phenomenon).

Univ

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WellDoneDrill

SECTORS

WellDoneDrill specializes in drilling and installing geothermal systems for building heating and cooling.

The company designs and executes vertical, horizontal, and open-loop boreholes for residential, commercial, and industrial projects. By harnessing the renewable energy of the subsurface, WellDoneDrill directly contributes to the decarbonization of thermal systems and the reduction of CO_2 emissions. Its expertise in closed- and open-loop geothermal technologies ensures high-performance, durable solutions fully aligned with Net-Zero objectives.

SME

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Wake Prediction Technologies (WaPT) SRL

SECTORS

Engineering consultancy specialized in developing and applying numerical models for aeronautical and wind energy applications. Leveraging its simulation tools and expertise, WaPT provides solutions to challenges related to various aspects of power production optimization.

The simulation results are useful at all stages of the wind farm design and operation - from blade and rotor design to turbine layout optimization, performance assessment and optimization of existing farms, and predictive maintenance. As a spin-off company from UCLouvain, WaPT benefits from state-of-the-art technology and extensive know-how in modeling, analysis and numerical simulation of wind turbine flows developed within the university's research teams.

SME

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WESTINGHOUSE ELECTRIC BELGIUM

Westinghouse Electric Company is shaping the future of carbon-free energy by providing safe, innovative nuclear and other clean power technologies to utilities globally.

Westinghouse supplied the world's first commercial pressurized water reactor in 1957 and the company's technology is the basis for nearly one-half of the world's operating nuclear plants. Over 135 years of innovation makes Westinghouse the preferred partner for advanced technologies covering the complete nuclear energy life cycle.
Since its official establishment in Belgium in 1971, Westinghouse contributed to the design and construction of 18 pressurized water nuclear plants in Europe, including 5 units in Belgium (in Doel and Tihange).

LC

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Companies

Comparative Overview

Companies

		Renewable Energy	Smart Grids, Batteries & System Efficiency	Low-Carbon Heat	Other Decarboni-zation Technologies	Hydrogen & Power-to-X	Carbon Capture, Utili-sation & Storage (CCUS)	Energy Storage (Batteries)	Grid technologies (DSO, TSO,..)	Thermal Energy Storage	Nuclear	Power Electronics	Heat Pump	Geothermal Technologies	Solar Thermal	Photovoltaic	Wind (Offshore and Onshore)	Thermoelectricity	Energy Efficiency in Industry	Heat exchanger & ORC	Energy Intensive Industry	Ligthing
AGC Glass Europe	**LC**						●						●			●	●		●	●	●	
Alpha Innovations	**SME**							●			●	●				●	●		●		●	
Alteris Technologies	**SME**																		●			
Ampacimon	**SME**								●													
AnyShape	**SME**					●		●		●	●	●	●				●		●	●		
Aperam	**LC**						●												●		●	
ARK Capture Solutions	**SME**						●												●		●	
Armstrong International	**LC**												●						●	●		
Asdaex S.A.	**SME**						●					●							●			
Azimut Energy	**SME**							●	●				●			●						
Belga Solar	**SME**							●								●			●		●	
Be-Sol srl	**SME**									●					●							
B-SENS SRL	**SME**					●		●		●	●			●			●	●	●	●		
Capaul	**SME**															●	●					
CAPAUL AG	**SME**					●					●	●					●			●	●	
CE+T Power	**SME**					●		●	●	●		●				●			●		●	
Cenaero	**RC**					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
CETIC	**RC**						●	●	●	●		●	●	●		●	●		●	●	●	

SME = Small and Medium-sized Enterprises **LC = Large companies** **RC = Research center**

● Supplier of components or materials
● Manufacturer of systems / equipment
● Collector / Recycler / Refurbisher
● Other services

Companies

		Renewable Energy	Smart Grids, Batteries & System Efficiency	Low-Carbon Heat	Other Decarboni-zation Technologies	Hydrogen & Power-to-X	Carbon Capture, Utili-sation & Storage (CCUS)	Energy Storage (Batteries)	Grid technologies (DSO, TSO,..)	Thermal Energy Storage	Nuclear	Power Electronics	Heat Pump	Geothermal Technologies	Solar Thermal	Photovoltaic	Wind (Offshore and Onshore)	Thermoelectricity	Energy Efficiency in Industry	Heat exchanger & ORC	Energy Intensive Industry	Ligthing
Certech	**RC**					●	●	●								●	●		●	●		
Coceptio srl	**SME**					●	●	●		●	●	●	●	●	●	●			●	●	●	●
Comet Traitements SA	**SME**							●			●	●			●	●	●					●
COVERS TM S.A.	**SME**						●			●			●	●	●	●			●	●		
CRM Group	**RC**					●	●	●		●	●		●		●	●	●		●	●	●	
Destore	**SME**							●		●					●				●		●	
Eliosys	**SME**							●	●	●		●	●	●	●	●		●	●	●	●	●
Fabot Engineering	**SME**					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Filame SA	**SME**					●		●			●		●	●	●	●	●					●
FOCQUET SA	**SME**											●							●			
GDTech	**SME**					●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●
Global Design Technology	**SME**					●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●
Graux	**SME**					●	●			●	●										●	
Group IPS	**SME**					●	●	●		●		●	●			●			●	●	●	
Höganäs Belgium S.A.	**LC**							●			●	●	●			●				●	●	
i-Care	**LC**					●					●		●				●		●		●	
ICS - Innovative Coating Solutions S.A.	**SME**					●		●		●			●		●	●						
Indao	**SME**					●			●	●						●	●		●		●	

SME = Small and Medium-sized Enterprises **LC = Large companies** **RC = Research center**

● Supplier of components or materials
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Companies

		Renewable Energy	Smart Grids, Batteries & System Efficiency	Low-Carbon Heat	Other Decarboni-zation Technologies	Hydrogen & Power-to-X	Carbon Capture, Utili-sation & Storage (CCUS)	Energy Storage (Batteries)	Grid technologies (DSO, TSO...)	Thermal Energy Storage	Nuclear	Power Electronics	Heat Pump	Geothermal Technologies	Solar Thermal	Photovoltaic	Wind (Offshore and Onshore)	Thermoelectricity	Energy Efficiency in Industry	Heat exchanger & ORC	Energy Intensive Industry	Ligthing
Insens	SME											●	●		●			●	●		●	
JEMA	SME					●	●	●	●		●	●	●			●	●	●	●		●	
Jetpack.AI	SME								●										●		●	
John Cockerill S.A.	LC					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Karno	SME						●	●	●	●		●	●	●	●				●	●		
Klinkenberg SA	LC							●	●			●	●			●			●			●
Komfor	SME									●			●	●	●				●	●		
Manetco SRL	SME					●	●	●			●				●				●	●	●	
Matgenix	SME					●	●	●		●						●		●		●		●
Memoco	SME							●	●							●	●		●		●	●
Micromega Dynamics	SME								●		●		●	●	●	●	●					
MPP	SME					●		●		●	●						●		●	●	●	
OPTIMAL COMPUTING	SME															●						
Pommee	SME					●	●			●	●									●		
Quimesis	SME						●	●		●			●		●	●			●	●		●
Resolia	SME					●	●		●	●			●	●	●	●	●	●	●	●	●	●
SAG	SME					●	●			●	●		●	●	●		●	●	●	●	●	
Schréder	LC															●						●

SME = Small and Medium-sized Enterprises **LC = Large companies** **RC = Research center**

● Supplier of components or materials
● Manufacturer of systems / equipment
● Collector / Recycler / Refurbisher
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Companies

		Renewable Energy	Smart Grids, Batteries & System Efficiency	Low-Carbon Heat	Other Decarboni-zation Technologies	Hydrogen & Power-to-X	Carbon Capture, Utili-sation & Storage (CCUS)	Energy Storage (Batteries)	Grid technologies (DSO, TSO...)	Thermal Energy Storage	Nuclear	Power Electronics	Heat Pump	Geothermal Technologies	Solar Thermal	Photovoltaic	Wind (Offshore and Onshore)	Thermoelectricity	Energy Efficiency in Industry	Heat exchanger & ORC	Energy Intensive Industry	Ligthing
Soliseco	SME									●		●						●	●			
Soudobeam	SME																		●			
Stas Retro-Engineering	SME					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SUB-ALLIANCE	SME					●		●			●	●	●				●					
SynHERA	RC						●	●	●	●		●	●	●	●	●	●	●	●	●		●
SYSCADE SA	SME					●		●		●	●								●			
Thermo Power Systems	SME																	●	●	●		
UCLouvain	Univ					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ULiège	Univ					●	●	●								●			●			
UMONS	Univ					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
UNamur / Département de physique	Univ					●	●	●			●					●						
UNamur / BatFactory	Univ					●	●	●			●				●	●		●				●
UNamur, Namur Institute of Structured Matter (NISM), Laboratory of Theoretical Chemistry (LCT)	Univ						●	●								●						●
Université libre de Bruxelles	Univ					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Wake Prediction Technologies (WaPT) SRL	SME																●					
WellDoneDrill	SME													●								
WESTINGHOUSE ELECTRIC BELGIUM	LC									●	●							●	●	●		

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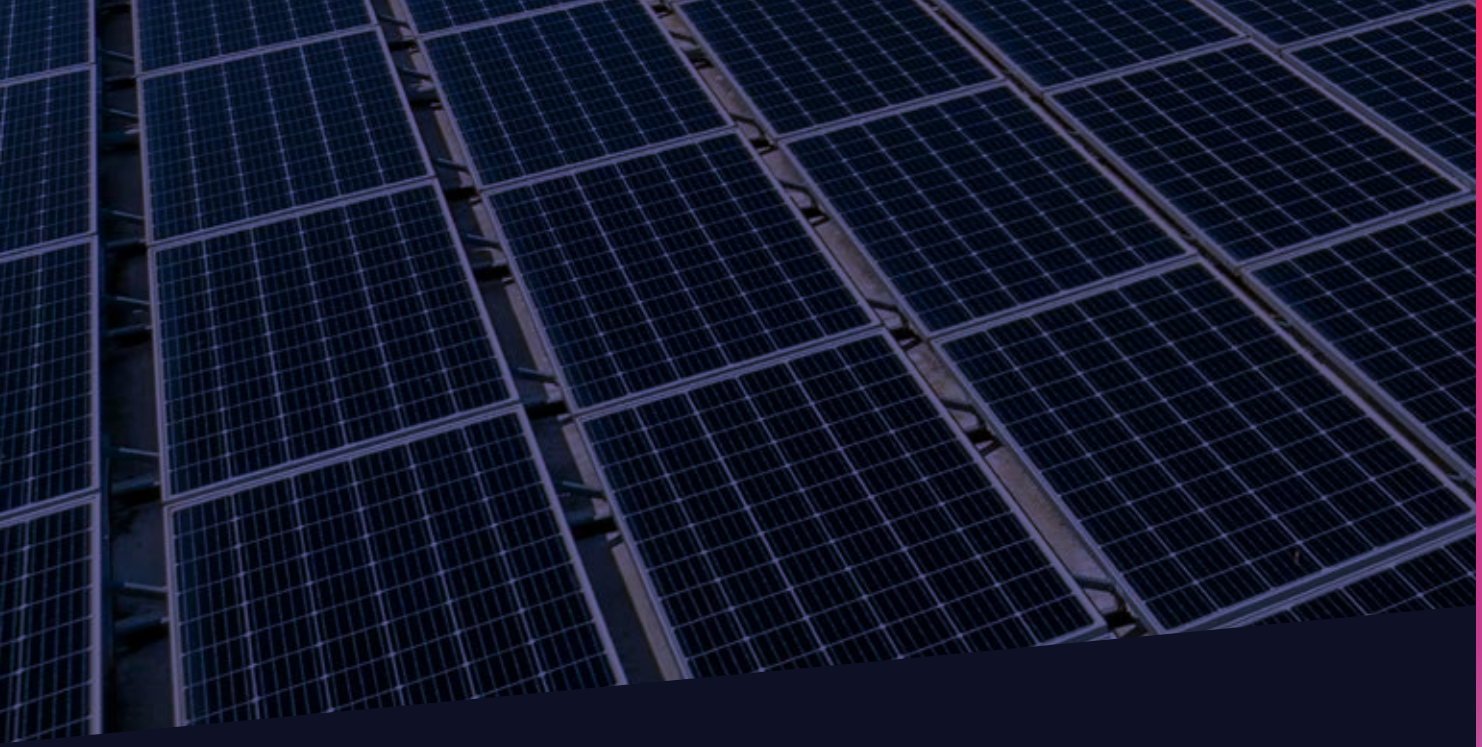

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LES PÔLES de COMPÉTITIVITÉ
AU COEUR DE LA RÉINDUSTRIALISATION DE LA WALLONIE

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