Next-generation energy storage - german company is seeking development and investment partners for cost-efficient, modular saline flow batteries

Summary

Profile type	Company's country	POD reference
Technology offer	**Germany**	**TODE20250827017**
Profile status	**Type of partnership**	**Targeted countries**
PUBLISHED	**Research and development cooperation agreement** **Investment agreement**	**• World**
Contact Person	**Term of validity**	**Last update**
Enrico FRANZIN	**27 Aug 2025** **27 Aug 2026**	**27 Aug 2025**

General Information

Short summary

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

Full description

The project aims to develop affordable, next-generation energy storage systems tailored for broad deployment in cost-sensitive markets. These solutions will facilitate the integration of renewable energy sources and establish new benchmarks through the use of advanced materials, energy-efficient control systems, and intelligent communication technologies.

Key focus areas include cost optimization without compromising reliability or safety, modular and scalable system architectures suitable for diverse applications (ranging from kilowatt to megawatt scale), and digital networking for smart control, monitoring, and maintenance. Sustainability is a core principle, achieved through resource-saving materials such as saline-based electrolytes and non-toxic components, alongside strong recyclability.

By fostering collaboration between academic institutions, start-ups, and established industry players, the project will create a dynamic technology ecosystem that accelerates access to powerful, affordable, and environmentally friendly energy storage solutions.

Advantages and innovations

Advantages and innovations:

Use of saline-based redox-flow chemistry (non-flammable, non-toxic, based on abundant raw materials like iron and manganese)

Substantially lower costs compared to vanadium or lithium systems

Long cycle life (>10,000 cycles)

Full scalability: energy capacity via tank size, power output via stack size

IPR status: Existing know-how; intellectual property rights are currently under development.

Technical specification or expertise sought

The company is seeking

Research institutes / universities: Material development (membranes, electrodes, electrolytes), testing protocols

Industry partners: System integration, plant engineering, pilot and large-scale deployment

Start-ups & SMEs: IoT, sensor technology, energy management software, recycling concepts

Investors: Co-financing and support for market entry

Stage of development

Under development

Sustainable Development goals

- **Goal 7: Affordable and Clean Energy**

IPR Status

Secret know-how

IPR Notes

Partner Sought

Expected role of the partner

Research Institutes / Universities Contribution to advanced material development, including membranes, electrodes,

and electrolytes, as well as the establishment and validation of testing protocols.

Industry Partners Support in system integration, engineering of demonstration and production plants, and facilitation of pilot-scale and large-scale implementation.

Start-ups & SMEs Provision of innovative solutions in IoT, sensor technologies, energy management software, and circular economy approaches such as recycling concepts.

Investors Engagement in co-financing activities and strategic support for successful market entry and scale-up.

Type of partnership

Research and development cooperation agreement

Investment agreement

Type and size of the partner

- **R&D Institution**
- **SME 11-49**
- **SME 50 - 249**
- **Big company**
- **University**
- **Other**

Dissemination

Technology keywords

- **04002013 - Smart grids**
- **04002005 - Generators, electric engines and power converters**
- **04002012 - Other energy related machinery**

Market keywords

- **03002 - Batteries**

Targeted countries

- **World**

Sector groups involved

- **Renewable Energy**
- **Electronics**