

August 1, 2025

Press Release

Electric Power Development Co., Ltd.

J-POWER Announces Investments in Hydro-VENUS Co., Ltd., Watasumi Ltd., and Environmental Microbiology Research Institute A Step Toward Decarbonization Through University- and Region-Originated Technologies

Electric Power Development Co., Ltd. (“J-POWER,” headquartered in Chuo-ku, Tokyo; President and CEO: Hitoshi Kanno) has decided to invest in third-party share allotments by three companies: Hydro-VENUS Co., Ltd. (“Hydro Venus,” headquartered in Okayama City, Okayama; Representative Director: Takeji Ueda), Watasumi Ltd. (“Watasumi,” headquartered in Onna Village, Kunigami District, Okinawa; Representative Director: Simpson David), and Environmental Microbiology Research Institute (“EMI,” headquartered in Nonoichi City, Ishikawa; Representative Director: Yasunori Baba).

J-POWER made this decision following the selection of these three companies through the Sustainability Transformation Startup Lab* program, which J-POWER jointly operated with startup studio Spirete, Inc. The program provides funding and business development support to entrepreneurs and researchers working toward a sustainable society.

* Published on Spirete’s website on May 10, 2024 (Japanese Only): <https://www.spirete.com/sxlab>

Hydro-VENUS is a startup launched from Okayama University in January 2015 that develops and markets an innovative hydroelectric power generation system. The system generates electricity by harnessing the vibrations of semi-cylindrical pendulums induced by water flow. Leveraging its unique fluid-induced vibration technology, the company aims to build off-grid energy and communication platforms that provide both power generation and sensing functions.

Watasumi is a startup launched from the Okinawa Institute of Science and Technology, in October 2021. The company develops and markets an organic wastewater treatment system that uses cutting-edge microbial technology to remove organic matter from wastewater produced by food and beverage factories, while simultaneously generating energy. By applying microbial fuel cell technology—in which microorganisms generate electricity as they break down organic matter—the system enables anaerobic treatment in a compact modular form. Compared to conventional aerobic treatment (using aeration tanks), it significantly reduces electricity consumption, sludge disposal costs, required installation space, and CO₂ emissions.

EMI is a startup launched from Ishikawa Prefectural University in August 2022. The company develops and markets a methane fermentation system that efficiently processes plant-based

residues such as weeds and vegetable scraps, using rumen fluid from cattle to generate methane gas and electricity. By reducing the cost of disposing of plant waste and utilizing the resulting biogas, the company contributes to the realization of a circular economy. The use of rumen fluid enables fermentation using only plant matter, making the system a valuable source of heat and electricity in times of disasters.

Through these investments, J-POWER will integrate the advanced technologies, innovative ideas, and new business models of Hydro-VENUS, Watasumi, and EMI with the technical expertise and operational know-how J-POWER has developed in the power generation sector. This integration will lead to the creation of new business opportunities that support the realization of carbon neutrality as outlined in [J-POWER BLUE MISSION 2050](#).



Photo: Hydro-VENUS's hydroelectric generator



Photo: Watasumi's organic wastewater treatment system



Photo: EMI's methane fermentation system

Hydro-VENUS Overview

Company Name: Hydro-VENUS Co., Ltd.

Website: <https://hydrovenus.co.jp/en/>

Representative: Takeji Ueda

Established: January 2015

Business: Development, manufacturing, and sale of hydroelectric power generation systems based on fluid-induced vibration technology, as well as river sensing services

Watasumi Overview

Company Name: Watasumi Ltd.

Website: <https://www.watasumi.com/>

Representative: Simpson David

Established: October 2021

Business: Development, manufacturing, and sale of organic wastewater treatment systems based on microbial fuel cell technology

EMI Overview

Company Name: Environmental Microbiology Research Institute

Website (Japanese Only): <https://ybaba1.wixsite.com/rumen115>

Representative: Yasunori Baba

Established: August 2022

Business: Development, manufacturing, and sale of high-efficiency methane fermentation systems using cattle rumen fluid

Spirete Overview

Company Name: Spirete, Inc.

Website (Japanese Only): <https://www.spirete.com/>

Representative: Yasuharu Watanabe

Established: January 2019

Business: Startup business development support through the integration of cross-disciplinary technologies, expertise, and experience