

Japan Energy Fund has Invested in Ambri, a spinout of MIT developing stationary batteries for renewable energy generation

ENECHANGE Ltd. (Head Office: Chiyoda-ku, Tokyo; Representative Director & CEO: Yohei Kiguchi; Representative Director & COO: Ippei Arita) is pleased to announce that it has invested in Ambri, Inc., through an overseas-focused decarbonization energy fund managed by the Japan Energy Fund (JEF). Ambri is a US company engaged in the research, development and commercialization of stationary liquid metal™ batteries for renewable energy power plants and large energy users.

Ambri has raised USD 144M (approximately JPY 15.8 B) in the Series E round, which includes funding from Bill Gates, Reliance Industries, and Paulson & Co. (US hedge fund).

* USD 1 = JPY 110



(Source : Ambri)

■Background

Amid growing demand for renewable energy, the Japanese domestic market for stationary storage batteries is expected to grow by 8.5 times to over 120 GWh by 2025 compared to 2019, mainly for use in power generation*. One of the problems with installing storage batteries is that they tend to be relatively expensive. By utilizing cheaper materials, simplifying assembly, and reducing the requirement for cooling and temperature control hardware, Ambri's products are highly cost competitive and have the potential to expand its business rapidly due to its proprietary technology. Furthermore, the cells are also highly tolerant of over-charging or over-discharging, and are not subject to thermal runaway, electrolyte decomposition, or electrolyte off-gassing, each of which has led to significant safety events - such as fires - that are inherent with other cell chemistries.

We have decided to invest in Ambri because we believe that the company has the technology to make a significant contribution to the decarbonization of Japan.

*Source: Yano Research Institute Press Release: "Survey on Global Market Size of Stationary Storage Batteries (ESS) in

2020” (Published on 13 October 2020)

■ About Ambri's liquid metal™ batteries

Ambri's long-duration systems, which are based on its patented technology, are designed to break through the cost, longevity and safety barriers associated with lithium-ion batteries—enabling a critically necessary energy storage solution as increasing amounts of renewable energy are integrated into the grid. Partnering with developers of renewable projects, Ambri is now able to scale for projects from 10 MWh to over 2 GWh around the globe.

The company will manufacture calcium and antimony electrode-based cells and containerized systems that are more economical than lithium-ion batteries, capable of operating safely in any climatic condition without requiring supplemental air conditioning and designed to last for over 20 years with minimal degradation. Ambri systems are particularly suited for high-usage applications, such as shifting energy from daytime solar generation to evening and morning peak load times. The batteries are designed to last for durations ranging from 4 to 24 hours.

■ About Ambri

Ambri Inc. has developed and is commercializing a new, long-duration battery technology that will enable widespread use of renewable energy sources, reduce electricity costs, and enable power systems to operate more reliably and efficiently. The liquid metal™ battery project began at MIT in the lab of Professor Donald Sadoway, and the company was formed in 2010 when the project achieved significant technical breakthroughs. The company has already delivered demonstration cells & systems to a number of customers and plans to begin large scale production in 2023.

Ambri has previously raised funds from Bill Gates, Khosla Ventures, TOTAL SE, and others, and the new investors include Reliance Industries, an Indian conglomerate, and Paulson & Co, a US hedge fund and the largest shareholder in Perpetua Resources, an Idaho-based natural resources company. Reliance Industries and Ambri are in discussions towards a partnership to develop and manufacture Ambri's batteries in India that will support Ambri's growth. Through Paulson & Co, Ambri has signed a long-term supply agreement with Perpetua Resources for antimony, securing a source of supply in the US.

For more information visit: www.ambri.com

■ Comments

Yohei Kiguchi, Founder and CEO of JAPAN ENERGY Fund and ENECHANGE Ltd.

We are excited to join this investment round with Bill Gates and other global investors in Ambri, which is researching and developing stationary liquid metal™ batteries for renewable energy power plants, a market that is expected to grow rapidly in the future.

As commercialization is expected in the near future, we anticipate opportunities to expand our business by supporting Ambri's business development in the Japanese market through the establishment of a collaborative relationship, beginning with this investment.

Dan Leff, Ambri Executive Chairman

“This financing supports the commercial growth of our company and technology. Further, these funds are instrumental to driving our efforts to scale the company's operations and establish our manufacturing infrastructure to meet rapidly expanding customer demand. We are delighted that our newest shareholders, who are world class investors and strategic partners, are joining Ambri's journey”

■ JAPAN ENERGY FUND - Objectives and Investment Policy

Backed by prominent Japanese companies, the Fund aims to build a sustainable society through investment in innovative international companies with technologies related to decarbonization. There are two main axes in the Fund's initiative: JEF Renewables and JEF Ventures. The former invests in renewable energy businesses in emerging countries, and the latter invests in energy-based start-ups with advanced technologies in European and North American countries with advanced energy markets. Through these investments, the Fund aims to build a sustainable society focusing on five SDG goals. The Fund makes “Renewable Energy Investments” based on the following strategy:

- **Specializing in renewable energy power plants operating in emerging countries**

Institutional investors are committed to divestment in fossil fuels equivalent to 6 trillion USD around the world. The investment in renewable energy was 280 billion USD as of 2017 (up 2% from the previous year), and is being led by emerging countries. Characterized by low energy self-sufficiency and a high need for infrastructure

development utilizing renewable energy, the Fund will support sustainable development in these emerging countries through investment in energy infrastructure in close cooperation with the Japanese government, governments of the target countries, and local businesses.

The Fund makes “Venture Investments” based on the following strategy:

- **Collaboration with the ENECHANGE Insight Ventures operated by the ENECHANGE Group**
In collaboration with the “ENECHANGE Insight Ventures,” an energy venture development program run by ENECHANGE group, we will proactively develop commercial relationships with venture companies with advanced technologies in Europe and North America. By investing in decarbonization technologies, we will promote innovation to contribute to Japan's achievement of decarbonization goals.

■JAPAN ENERGY FUND - Summary

Fund Name	Japan Energy Capital 1 L.P. ("Japan Energy Fund (JEF)")
Date of establishment	December 6, 2019
Investment method	Capital call method
Investment target	<ul style="list-style-type: none"> ● Renewable energy business in Turkey and Jordan ● Energy tech ventures in Western countries
Fund size	100 million US dollar scale
Operation period	Until December 2029
General Partner	Japan Energy Capital limited liability company
Limited Partners *As of 24 August 2021	ENECHANGE Ltd. Loop Inc. Daiwa Energy & Infrastructure Co. Ltd. Hokuriku Electric Power Business Investment G.K. EnBio Holdings, Inc.

■About ENECHANGE Ltd.

ENECHANGE is an energy technology company that promotes a carbon-free society through digital technology with the mission of CHANGING ENERGY FOR A BETTER WORLD. We offer services based on data utilization in the field of the 4 Ds of Energy: Deregulation, Digitalization, Decarbonization, and Decentralization. Our company's roots come from an energy data lab at the University of Cambridge, UK, a country where liberalization is well advanced. ENECHANGE has a British subsidiary, SMAP Energy Limited, as well as a global network and analytical technology for energy data.

URL: <https://enechange.co.jp/en/>

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