

ENECHANGE invests in Energy Dome, an Italian company developing a Long Duration Energy Storage (LDES) system using CO2

ENECHANGE Ltd. (Head Office: Chuo-ku, Tokyo; Representative Director & CEO: Yohei Kiguchi) is pleased to announce that it has invested in Energy Dome, through Japan Energy Fund's (JEF) Decarbonized Tech Fund managed by Japan Energy Capital.

Based in Italy, Energy Dome has developed an innovative large-scale, long-duration energy storage solution, which manipulates and stores CO2 under different conditions and is able to absorb from and discharge to the grid. This Series B funding round includes investment from ENI Next and Barclays, among other new and current investors.



Image: Energy Dome

■Background

With the Japanese government's commitment to net zero through its Green Growth Strategy, managing renewables and other volatile energy sources and consumption will be taking an ever-more prominent role. The natural instability of renewable energy sources means that the grid needs solutions to help keep it balanced. To successfully do this, energy storage will play a key role, as they can store the energy until there is demand for it. Energy Dome's CO2 battery helps enable this balance, as it enables long-duration energy storage.

■About Energy Dome's technology

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Energy Dome has developed the CO2 battery, which manipulates and stores CO2 under different conditions and is able to absorb from and discharge to the grid. The technology relies on manipulating CO2 between its gaseous and liquid phases. When energy is needed, the CO2 warms up, evaporates and expands, turning a turbine and generating electricity. As CO2 is one of the few gases that can be condensed and stored as a liquid under pressure at ambient temperature, it allows for high-density energy storage without the need for extreme cryogenic temperatures. Throughout this process, no CO2 is emitted into the atmosphere, making it an ideal clean solution.

■About Energy Dome

Energy Dome is revolutionizing energy storage and enabling grid decarbonization by making solar and wind power dispatchable 24/7. The company invented and developed the CO2 Battery™, a long-duration energy storage system that makes long-duration energy storage viable globally today. The properties of carbon dioxide allow the system to store energy efficiently and cost-effectively, with a modular and site-independent footprint. CO2 Batteries™ use readily available, off-the-shelf components from reliable, existing supply chains, providing a pathway to store massive amounts of intermittent renewable energy and accelerate the energy transition.

URL: <http://www.energydome.com>

■Comment from Claudio Spadacini, CEO of Energy Dome

It is my pleasure to welcome ENECHANGE and Japan Energy Fund as investors in Energy Dome. This marks an important milestone as we scale our commercially ready technology into key storage markets such as Japan. It is through strategic partnerships like this where we can together make renewable energy fully dispatchable today with affordable, reliable and flexible long-duration energy storage. We look forward to working together so that we can soon see CO2 Batteries deployed in Japan.

■Comment from Yohei Kiguchi, CEO of ENECHANGE Ltd.

We are excited to invest in Energy Dome. After first meeting with them through our ENECHANGE Insight Ventures program, it is clear that they have developed a technology that offers a realistic solution to long-duration energy storage that can already be implemented by using off-the-rack components. The CO2 Battery can help accelerate the energy transition both in Japan and abroad, and we are keen to help support Energy Dome make this a greater success.

■Japan Energy Fund - Summary

Fund name	Japan Energy Capital 2 L.P. ("Decarbonized Tech Fund")
Date of establishment	September 30, 2021
Investment method	Capital call method
Investment target	Energy tech ventures from overseas
Fund target size	50 million US dollar
Operation period	Until September 2031
General partner	Japan Energy Capital limited liability company
Limited partners *As of December 1, 2022	ENECHANGE Ltd. BIPROGY Inc. (formerly Nihon Unisys Limited) Toshiba Energy Systems & Solutions Corporation Sumitomo Mitsui Trust Bank, Limited

■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

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the 4Ds of Energy: Deregulation, Digitalization, Decarbonization, and Decentralization. Our company's roots come from an energy data lab at the University of Cambridge, U.K., a country where liberalization is mature. 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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