

## ENECHANGE and Loop announce investment in Al Badiya, the first solar power plant with storage batteries in Jordan

ENECHANGE Ltd. (Head Office: Chiyoda-ku, Tokyo, Representative Director, CEO: Yohei Kiguchi, President and Representative Director, COO: Ippei Arita) and Loop Inc. (Head Office: Taito-ku, Tokyo, President & CEO: Soichiro Nakamura) have agreed to participate in the joint management of the Al Badiya solar power generation project with storage batteries in the Hashemite Kingdom of Jordan (hereinafter referred to as "Jordan") through investment by Japan Energy Fund (hereinafter referred to as JEF) on December 1, 2021. The investment amount will not be disclosed.



Solar power project with storage batteries in Al Badiya, Jordan

### ■ Background and purpose

We are on the road towards realizing a decarbonized society globally, which includes the implementation of policies set to increase the ratio of renewable energy (renewable energy) power generation, which is indispensable for reducing carbon dioxide (CO<sub>2</sub>) emissions. Jordan is one of the countries that is actively working to spread and expand renewable power generation. The percentage of renewable power production in the country was 2.9% as of 2018, but the government has set a goal of 14%\*<sup>1</sup> by 2030. Renewable assets with storage are increasingly popular, as the balancing of energy supply and demand is key in the renewable energy expansion. In this context, there is an increased emphasis on optimization of the storage operation and data analysis of the power plant. The Al Badiya project is the first solar power generation project with onsite storage batteries in Jordan. We aim to improve the operational efficiency and profitability of the project by providing technologies and knowledge through our ENECHANGE Kiwi service\*<sup>2</sup>, which is related to the operation management of storage batteries, and SMAP\*<sup>3</sup>, which tackles energy data analysis.

\*<sup>1</sup> Source: The International Renewable Energy Agency "THE HASHEMITE KINGDOM OF JORDAN Renewable Readiness Assessment" (February 2021)

\*<sup>2</sup> A service that specializes in resource management for resource aggregators who bundle distributed energy resources such as private power generators and storage batteries.

\*<sup>3</sup> "Smart Meter Analytics Platform," an analysis service for electricity data acquired from smart meters.

### ■ About Al Badiya solar power project in Jordan

Al Badiya is an operational solar power plant in Al Mafraq, Jordan, located about 80km east-northeast of the capital Amman. Power generation capacity is around 23 MW and it has a supply of 42 GWh, equivalent to the annual electricity supply of about 25,000 Jordanian households\*4. This project was approved as one of government-led tenders for renewable energy generation in Jordan, and Tesla storage batteries (capacity 12,600 kWh) are installed on the site. In Jordan, the renewable energy connection capacity to the power system is limited by the grid capacity, meaning high solar opportunities are not fully utilized. On this site, surplus power generated during the day is charged to the storage battery, and this power is discharged to the grid at night. This project has a long-term power purchase agreement with a distribution company in Jordan, and can expect long-term stable income.

\*4 Based on data from WorldData.info "Energy consumption in Jordan", our estimates



Tesla storage batteries installed in the site

Location: Al Mafraq Governorate, Hashemite Kingdom of Jordan

Power generation capacity: 22.982MW (DC)

Start of operation: October 2015 (added storage batteries system in February 2019)

### ■ Comment from Lina Annab, Ambassador of Hashemite Kingdom of Jordan in Japan

Renewable energy installations in Jordan have witnessed an exponential growth over the past few years. This latest investment by Japan Energy Fund in Jordan's Al Badiya solar power project, slated to be managed by ENECHANGE and Loop and encompassing the first solar power plant with storage batteries, is a significant development. It is also in line with Jordan's multi-sector green growth plans for sustainable development, in line with United Nations Sustainable Development Goals (SDG), and its energy strategy to develop renewable energy resources to mitigate Jordan's lack of primary energy resources and its dependence on imports for its energy needs, estimated at over 94% of its total energy demand.

Diversification of Jordan's energy generation mix will enhance Jordan's energy security as well as its effectiveness in fighting climate change by reducing its dependency on imported fossil fuels, while harnessing sustainable, indigenous, and clean renewable energy resources.

Jordan's stable energy regulatory framework, coupled with the incentives and tax exemptions for private renewable energy companies, makes it ideal for investment opportunities in a sector that offers an abundance of untapped capacity, promising growth and healthy returns on investments.

We are delighted to see Japanese companies and investment funds actively investing in one of Jordan's most promising sectors. We are also very happy to see this project take off and we wish all the stakeholders involved all the best in reaching this milestone of implementing this first of its kind project in Jordan.

### ■ Comments from Eyad Araft, CFO of Philadelphia Solar Company

The Al Badiya solar power project is the first operating utility scale project in Jordan and the first battery storage project in the region. The Project was developed by Philadelphia Solar Company (PS), the first factory in the region to produce PV panels. PS currently has a production capacity of 500MWp per year using the most advanced automated production machinery.

PS is proud of the partnership with ENECHANGE and Loop through the Japan Energy Fund in the Al Badiya solar power project. PS hope that this will not be the only partnership and hopes for further relationships in the future.

### ■ Comment from Yohei Kiguchi, CEO, Representative Director of ENECHANGE Ltd.

This overseas renewable energy power plant project is part of our aim to grow our Data business, which includes being involved in data analysis (SMAP) and the operation of demand response through storage batteries (ENECHANGE Kiwi). In Japan, there are still few solar energy projects with storage batteries, but we look forward to seeing their number increase. We will contribute to improving the operational efficiency and profitability of the power plant by providing our knowledge and expertise in power data analysis and technology.

### ■ Comment from Soichiro Nakamura, CEO of Loop Inc.

I would like to express my gratitude to all the people involved for their persistent efforts in dealing with the many restrictions, including the lockdown measures and severe travel restrictions in Jordan due to the COVID-19 disaster. As the movement toward decarbonization accelerates around the world, the use of storage batteries for the stable introduction of renewable energy is advancing. We have been constructing solar power plants with storage batteries, including the Loop Nakashibetsu Solar Power Plant. We plan to further accumulate knowledge in Jordan, where we are investing this time, and aim to promote the spread of renewable energy in all regions of the world through technology.

### ■ 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 ENECHANGE Insight Ventures, an energy venture development program run by the 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"><li>• Renewable energy business in Turkey and Jordan</li><li>• Energy tech ventures in Western countries</li></ul>
Fund size	100 million US dollar
Operation period	Until December 2029
General Partner	Japan Energy Capital limited liability company
Limited Partners *As of 2 December 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 with the mission of Changing Energy For A Better World, and promotes a carbon-free society through digital technology. Founded in 2015 and listed on the Tokyo Stock Exchange Mothers in 2020 (securities code: 4169), ENECHANGE works in the 4Ds of Energy: Deregulation, Digitalization, Decarbonization, and Decentralization. We offer a range of SaaS solutions for energy companies and are experiencing rapid growth. 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 U.K. subsidiary, SMAP Energy Limited, which has developed analytical technology for energy data and provides us with links to a global network.

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

### ■ About Loop Inc.

Loop is a renewable energy company founded in April 2011 after volunteering to install solar panels in areas affected by the Great East Japan Earthquake. We aim to achieve our vision of "realizing an energy-free society" through the maximum expansion of renewable energy. With the strength of its integrated services that cover the creation, delivery, and control of renewable energy, We have promoted the introduction of renewable energy in Japan and overseas, including Thailand, Malaysia, and Lebanon, and also has more than 330,000 contracts for its electricity retail business "Loop Denki" (low voltage, as of September 30, 2021).

URL : <https://loop.co.jp>

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Note: The purpose of this press release is not to provide investment management services or to solicit specific investment products from ENECHANGE, Loop, Daiwa Energy & Infrastructure Co. Ltd., Hokuriku Electric Power Company Group, or EnBio Holdings, Inc.

This press release does not constitute a solicitation by ENECHANGE, Loop, Daiwa Energy & Infrastructure Co. Ltd., Hokuriku Electric Power Company Group, or EnBio Holdings, Inc. for any of the aforementioned funds.