

2024/11/15 Shizen Connect Inc.

## Shizen Connect provides EMS for on-site PPA with battery storage at Nishi-Nippon Railroad's large-scale distribution base - Contributing to effective use of RE and electricity cost reduction -

Shizen Connect Inc. (Shizen Connect), a VPP<sup>\*1</sup> platform developer, is pleased to announce that its proprietary and self-operated energy management system "Shizen Connect" has been adopted for an on-site PPA<sup>\*2</sup> utilizing solar power generation equipment and an industrial storage battery at the Narita Logistics Center of Nishi-Nippon Railroad Co., Ltd. (Nishitetsu), as announced by NNR Shizen Energy G.K. (Nishitetsu Shizen Energy) on November 15, 2024<sup>\*3</sup>. This initiative is part of a collaborative effort under the business alliance agreement announced on July 9, 2024<sup>\*4</sup>.

Nishitetsu Shizen Energy is striving toward carbon neutrality by 2050, focusing on decarbonization and regional resilience in the Kyushu region by installing solar power generation systems and supplying renewable energy power to facilities owned by the Nishitetsu Group and municipalities.

Shizen Connect offers energy management systems for the control and monitoring of a wide range of energy resources, including grid-scale and industrial storage batteries. In the large-scale battery sector, this system has been adopted for multiple projects, including the Nishitetsu Shizen Energy Battery Hub Umi with Nishitetsu Shizen Energy<sup>\*5, \*6, \*7</sup>, which is already in operation for grid storage batteries. "Shizen Connect" is also in operation for microgrid projects<sup>\*8, \*9, \*10</sup> with industrial storage batteries.

In this project, "Shizen Connect" is used to control the storage battery, store surplus power generated by the solar equipment installed on the roof of Nishitetsu's Narita Logistics Center, and perform peak shaving control<sup>\*11</sup> and reverse power flow prevention control<sup>\*12</sup>. This contributes to improving the self-consumption rate of renewable energy at the Narita Logistics Center and reducing electricity costs (See Figure 1).

Shizen Connect remains dedicated to contributing to the realization of a decarbonized society, continuing collaborations with leading companies in various fields.





Figure 2 Nishitestsu's Narita Logistics Center



Figure 3 Industrial storage battery that will be controlled in this project



 Table 1: Overview of the solar power generation system and industrial storage batteries to

 be installed at the Narita Logistics Center

Location	1340-48 Iwayama, Shibayama-machi, Sambu-gun, Chiba
Solar power generation capacity	117kWp(DC)
Estimated solar power generation	149,559 kWh /year
Industrial storage battery manufacturer	Sungrow Japan (Model: ST159KWH-50HV)
Battery storage capacity	159kWh

\*1 **Virtual Power Plant (VPP)**: digital technology that remotely integrates and controls distributed energy resources (power generation facilities, storage batteries, EVs, etc.) and demand-side facilities as if they were a single power plant

\*2 **PPA (Power Purchase Agreement)**: a contractual scheme whereby a power producer installs, owns, and manages power generation facilities at its own expense, and provides and sells the power generated by those facilities to consumers on a long-term basis.

\*3 NNR Shizen Energy GK installs solar power generation equipment and storage batteries at two facilities of Nishitetsu Group (Published by Nishitetsu Group on PR TIMES on November 15, 2024 )

https://prtimes.jp/main/html/rd/p/000000635.000017692.html (Japanese)

\*4 Shizen Connect enters capital and business alliance agreements with 8 companies, including 3 major electric power companies, to advance VVP's social implementation (Press release July 9, 2024)

https://www.shizenenergy.net/2024/07/09/sc\_capital\_business\_alliance/ (Japanese)

\*5 Nishitetsu and Shizen Energy enter grid storage battery business (Press release July 19, 2023) <u>https://www.shizenenergy.net/2023/07/19/grid\_scale\_battery\_nishitetsu/</u>

\*6 Shizen Connect selected by Tokyu Land Corporation for TENOHA Higashimatsuyama Grid Storage Battery Project (Press release August 3, 2023) <u>https://www.shizenenergy.net/en/2023/08/03/shizen-connect-selected-by-tokyu-land-corporation</u> -for-tenoha-higashimatsuyama-grid-storage-battery-project/

\*7 Energy Management System "Shizen Connect" selected for major city gas company's grid storage battery business (Press release December 8, 2024) <u>https://www.shizenenergy.net/2023/12/08/osaka\_gas\_adopt\_shizen\_connect/</u> (Japanese)

\*8 Shizen Energy Introduced Microgrid for Preventing and Reducing Disaster in Sustainable Farm & Park "KURKKU FIELDS" in Kisarazu, Chiba Prefecture (Press release April 20, 2021) https://www.shizenenergy.net/en/2021/04/20/shizen-energy-introduced-microgrid-for-preventing -and-reducing-disaster-in-sustainable-farm-park-kurkku-fields-in-kisarazu-chiba-prefecture/

\*9 Shizen Energy together with JFE Engineering & Smart Energy Kumamoto Install Large-scale Storage Batteries Totaling 4MWh at Aqua Dome Kumamoto & Hitsuyukan Senior High School in Kumamoto (Press release September 26, 2022) https://www.shizenenergy.net/en/2022/09/26/smartenergykumamoto\_storagebatteries/

\*10 Disaster prevention and risk reduction aimed solar generation facilities and storage batteries installed in Karatsu City Purification Center Optimal control systems balancing supply and demand at new and existing power generation facilities (Press release March 15, 2021) <u>https://www.shizenenergy.net/en/2021/03/15/karatsu\_purification\_center/</u>

\*11 **peak shaving control** : a control method designed to reduce the maximum power demand of a facility by utilizing the discharge of storage batteries, thereby avoiding increases in electricity rates

\*12 **reverse power flow prevention control**: when the power demand of the facility is low and the amount of power generated by the solar power generation system is high, this control aims to adjust the amount of power generated by the solar power generation system before the RPR (Reverse Power Relay) is activated, thereby avoiding the shutdown of the solar power generation system due to the activation of the RPR and ensuring that renewable energy is consumed without waste

## EMS "Shizen Connect" https://www.se-digital.net/ (Japanese website)

"Shizen Connect" is an energy management system that uses IoT/AI technology to control energy equipment such as storage batteries, EVs, and EcoCute heat pump water heaters, and enables market trading of the control value. It can reduce electricity bills by cutting peak demand, be used to build microgrids, and create VPPs (virtual power plants) by performing control for various electricity markets. It has been adopted by Tokyo Gas and TEPCO Energy Partner as a VPP platform for residential storage batteries, and by Osaka Gas and Tokyu Land Corporation for controlling storage batteries for power grids.

## Shizen Connect Inc.

Head Office: 2-4-7 Nihonbashi-honcho, Chuo-ku, Tokyo

Founded: October 2, 2023

Shareholder: Shizen Energy Inc. 100%

\* Shizen Connect has concluded a capital and business alliance agreement through the issuance of convertible bonds with stock acquisition rights with JERA Co., Inc., Shikoku Electric Power Co., Inc., Shin Nippon Air Technologies Co., Ltd., Tokyu Land Corporation, Tokyo Gas Co., Ltd., Nishi-Nippon Railroad Co., Ltd., Hokuriku Electric Power Co., Inc., and Hokkaido Electric Power Co., Inc.

Representative Director/CEO: Munekazu Matsumura

Business: VPP platform, energy management service, IoT equipment sales, etc.

URL: <a href="https://se-digital.net">https://se-digital.net</a> (Japanese only)

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