

Press Release

April 20, 2021

Shizen Energy Inc.

Shizen Energy Introduced Microgrid for Preventing and Reducing Disaster in Sustainable Farm & Park "KURKKU FIELDS" in Kisarazu, Chiba Prefecture

Shizen Energy Inc. ("Shizen Energy") introduced microgrid facilities which combines solar power generation system, storage batteries and Energy Management System in KURKKU FIELDS (the "Facility") in Kisarazu-shi, Chiba Prefecture with the aim of disaster prevention (the "Project"). Handover was completed on February 22, 2021 and the operation was started on the same day.

The Project was implemented by KURKKU FIELDS Inc. who is the operator of the Facility while NDS Co., Ltd. conducted the detailed design/construction as well as construction management. Shizen Energy designed and installed in-house development of EMS (Energy Management System), and manages and maintains the system. Also, as a certified installer of Tesla Powerpack, Shizen Energy introduced and installed the storage batteries.

The Facility experienced power failure for 11 days caused by Typhoon No.15 in September 2019. From this experience, the Facility had considered securing the capacity that enables stable and constant power supply to the site facilities such as cattle barns in case of long-term power failure as well as self-sufficient power supply to a shelter for local residents in case of emergency.

The Project is adopted under FY2019 subsidies for carbon reduction business (Project to promote the resilience of facilities for disaster relief activities and support the construction of energy self-sufficient areas to cope with severe disasters).

The Project introduced solar power generation facilities (294kW), 3 units of the industrial use storage batteries, Tesla Powerpack, (total output 333kW/capacity 669kWh) and proprietary EMS in one batch. Also, private distribution lines are installed for approximately 1km at the site which connects several facilities with new/existing solar power generation systems with storage batteries. With this, it enables the Facility to be self-sufficient on sunny days, providing electricity to the Facility for its own needs. Even

when the power supply from the grid is lost due to, for example, natural disaster, sufficient power will be supplied by solar power generation system, storage batteries and private distribution lines, and KURKKU FIELDS will provide some of the Facility as a shelter for local residents.

[Feature of the Project]

On normal time

- Utilize the power in grids and stored electricity in storage batteries on cloudy days and aim for self-sufficient power supply including nighttime electricity as much as possible on sunny days. Assume that annual in-house consumption rate will be approximately 80%.
- By utilizing the electricity from solar power and storage batteries effectively during the timing of high electricity cost and peak usage of power consumption, assume that approximately 9M yen of electricity cost and 191.1t (convert only newly installed solar power generation) of CO₂ emission will be reduced annually.

On disaster time

- Within the site where solar power generation facilities, storage batteries and premises are connected with self-owned cables, it supplies the designated electricity for approximately 1 to 2 days by disconnecting the power from the grid and enabling the storage batteries to be autonomous operation.
- In addition to utilizing the power from the storage batteries, it enables to utilize the power from solar power generation facilities when the sun is up in the daytime.

Shizen Energy defines “We take action for the blue planet” as its Purpose, aiming to facilitate the use of safe and sustainable energy through the establishment of renewable energy power plants worldwide, which serves its goal to allow more people around the world to enjoy happy lives. Through the development, construction, operations, and maintenance of renewable energy power plants that are both high in quality as well as rooted in the local community, Shizen Energy will continue to accelerate towards the realization of a “100% renewable-powered planet.”

【Project Overview】

Rated output of solar power generation facility	656.6kW (Of this, 294kW from newly installed solar power plant)
Storage battery output/capacity	333kW / 669kWh (3 units of industrial use storage battery, Tesla Powerpack) Shizen Energy is Tesla Powerpack certified installer.
Name and location of customer facility	KURKKU FIELDS (Yana, Kisarazu-shi, Chiba Prefecture)
Start of operation	February 22, 2021

【Storage batteries and solar panels (Newly installed)】



【Reference】

For more information on each company, please refer to the official website as below.
(Alphabetical order)

KURKKU FIELDS Inc.: <https://kurkkufields.jp/>

NDS Co., Ltd. : <https://www.nds-g.co.jp/>

【About Shizen Energy Inc.】

Founded in June 2011 with the mission of “We take action for the blue planet.”, Shizen Energy Group has contributed to the development of approximately 1 gigawatt (as of the end of Sep. 2020) worth of renewable energy across Japan. It is engaged in all services required for the installation and operation of solar, wind, small hydroelectric, and other renewable energy power plants, such as development, EPC (engineering, procurement, construction), O&M (operation and maintenance), retail electricity market, and asset management. The company intends to construct photovoltaic power plants in countries around the world, beginning with the regions of Asia and South America. More specifically, in 2018, it launched the construction of such plants in Indonesia and Brazil. € URL: www.shizenenergy.net/en/

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