Press Release

June 28, 2023
Shizen Energy Inc.

Shizen Energy selected for the basic design work of microgrid construction in Kamishihoro, Hokkaido

Shizen Energy Inc. (Shizen Energy) and Pacific Consultants Co., Ltd. (Pacific Consultants) have been selected as the contractor for the basic design work for the construction of a microgrid in Kamishihoro, Kato-gun, Hokkaido through a public bidding proposal process.

The town of Kamishihoro declared its "Zero Carbon City Declaration" in December 2021, and plans to systematically implement integrated initiatives that contribute to renewable energy and energy conservation, aiming to "realize a zero carbon Kamishihoro and build a smart town," including global warming countermeasures as one of the "decarbonization leading region" selected by the national government in April 2022.

One of the priority initiatives, the project to construct a micro-grid for public facilities using solar power generation, aims to strengthen resilience by effectively utilizing renewable energy through solar power generation and storage batteries during normal times and supplying electricity to major public facilities such as the town hall building, sports center, transportation terminal, Fureai Plaza, and certified child care centers in the event of a disaster.

This project aims to conduct research and study on the most appropriate business model, construction model, and commissioning model for the construction of a micro-grid for public facilities utilizing solar power generation, as well as to create a basic scheme and basic design.

Shizen Energy and Pacific Consultants will utilize their accumulated experience and track record in microgrid projects to provide support for the construction of a microgrid for public facilities in Kamishihoro through this project.

■Outline of Basic Design Work for Microgrid Construction in Kamishihoro

Project name	Basic design work for micro-grid construction in Kamishihoro
Commission Period	Date of contract - January 31, 2024
Commission Details	(1) Organize the implementation system, business scheme, and maintenance and operation system of the microgrid (2) Examine microgrid facilities and system configuration (3) Verify capacity of solar power generation and storage batteries

	(4) Examine the feasibility of commercialization of microgrid construction (5) Organize emergency operation methods for the microgrid (6) Prepare microgrid construction schedule (7) Hold briefing sessions on the examined contents (8) Prepare a report on the results

■Role of each company

Shizen Energy	- Supervise overall operations - Research and basic design of microgrid construction - Liaison with parties involved - Plan microgrid implementation system, business scheme, and maintenance and operation system - Study emergency operation of microgrid - Prepare microgrid construction schedule
Pacific Consultants	- Assist in overall operations - Assist research and study and basic design for microgrid construction - Research on related laws and regulations - Prior consultation with various government agencies (Bureau of Economy, Trade and Industry, etc.) - Prior consultation with Hokkaido Electric Power Network
Common Role	- Examine microgrid facilities and system configuration - Verify capacity of solar power generation and storage batteries - Examine the feasibility of microgrid construction - Organize briefing sessions - Prepare a report on the results

【Microgrid Achievements】
■Shizen Energy (large storage batteries and installation of private transmission lines)
●Aqua Dome Kumamoto(2,580kWh)
●Hitsuyukan Sr High School(1,505kWh)
※Collaboration with a new regional electric power company established by JFE Engineering Corporation.
※Utilization of surplus electricity from incinerator power generation facilities (Local production for local consumption)


Aqua Dome Kumamoto


KURKKUFIELDS

●KURKKUFIEDLS(669kWh)
*Tourist facility in Chiba Prefecture with an area of approx. 30Ha (approx. 6 times the size of Tokyo Dome)
*Connecting 16 buildings that used to receive power individually with 1 km of private transmission lines.
*The economics of high-voltage bulk power receiving and peak shaving

■ Pacific Consultants Co., Ltd.
●Soma City Regenerative Smart Community

Registered specific power transmission and distribution utility using a combination of solar power generation, storage batteries, thermal storage, hydrogen with private transmission lines (Group company also invests in the developer of the regional utility company)

●**Mutsuzawa Smart Wellness Town**
Specified supply using a locally produced and locally consumed energy system that combines solar power generation, gas cogeneration (using local natural gas) with private transmission lines (Group company also invests in the developer of the regional utility company)

再エネ最大活用を目指すしかおい自営線ネットワーク

●**Shikaoi City Private Transmission Line Network**
Businesse that uses locally produced and locally consumed energy systems that combine solar power generation, storage batteries and geothermal HP with private transmission lines

● **Ishikari City Atsuta Microgrid**
Business that uses locally produced and locally consumed energy systems that combine solar power generation, storage batteries and hydrogen with private transmission lines
Providing support for conceptual design, planning, engineering, consultation with related organizations, commissioning, and other activities related to microgrid projects in the pre-implementation stage, including regional microgrids

*__Microgrid:__ an energy system that uses IT-related technologies to effectively operate and control multiple small distributed power sources and power storage devices in an energy supply area to improve economy and supply reliability

【About Shizen Energy Inc.】
Founded in June, 2011. With the company purpose of “We take action for the blue planet,” the company’s business includes development, financing, and asset management of renewable energy power plants using solar power, wind power, small-scale hydroelectric power, and biomass. Since 2016, the company has also been focusing on its international operations, expanding its development and power generation projects in areas such as Southeast Asia and Brazil. In 2019, the company also entered the energy tech business, offering micro-grid and VPP construction, smart charging and discharging services for EVs, and other services through its self-developed EMS (energy management system). Shizen Energy Group has been involved in more than 1 GW of renewable energy generation internationally.

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【Shizen Connect】
Shizen Connect is an aggregation energy management system that collectively controls energy resources such as renewable energy power generation, storage batteries, EVs, and

EcoCutes. Shizen Connect can control residential solar power generation with storage batteries and V2H equipment, as well as operation of microgrids connecting multiple buildings with transmission lines, and VVP construction of several thousand units of energy resources. Individual control and VVP control tended to be separate, but Shizen Connect provides a one stop service allowing energy resources to be utilized with multi-purpose which also improves economic efficiency. The system can be adapted with any equipment supplier, allowing energy resources to be chosen freely without relying on a certain manufacturer.

【About Pacific Consultants Co., Ltd.】
Founded in 1951 as a U.S. corporation with the goal of contributing to the postwar reconstruction of Japan through technology. As a pioneer of social infrastructure services, the company has been providing solutions that contribute to the betterment of society for over 70 years. In the "Social Infrastructure Services Business," over 1,200 professional engineers and other professionals with advanced and diverse technical skills hone their skills as consultants and continue to provide new value to society in the areas of infrastructure, urban planning, mobility, resilience, energy, and more.

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