

March 15, 2021

Shizen Energy Inc.

**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**

Shizen Energy Inc. (“Shizen Energy”) is announcing its completion of the implementation of solar power generation facilities and storage batteries which serve for the purpose of disaster prevention and disaster risk reduction at Karatsu City Purification Center on March 10, 2021 in collaboration with NTT Data Institute of Management Consulting, Inc., Kyushu Densetsu K.K. and YBM Co.,Ltd.

Surrounding the Karatsu City Purification Center are public facilities of Saga prefecture including Karatsu City fire department and Karatsu City indoor pool (“The area.”) “Operation: Karatsu Smart Resilience Framework Building” is underway, by installing renewable energy facilities in the whole area aiming to build a place that can supply electricity not only in normal times but also during emergencies such as large-scale blackouts.

For the installation of the facilities, Shizen Energy took part as the representative of the coalition for this project and provided the overall conceptual design and project management. With the cooperation of Kyushu Densetsu K.K., Shizen Energy supervised the design, procurement and construction of the solar power generation facilities and storage batteries on the grounds of Karatsu City Purification Center. NTT Data Institute of Management Consulting, Inc., YBM Co.,Ltd and Shizen Energy conducted a feasibility study to evaluate the renewable energy potential in The area and investigated the scalability of solar power generation as well as the possibility of introducing MW-sized large storage batteries and microgrids using transmission lines, etc. connecting several buildings.

The purpose of installation is to supply electricity partially to the Karatsu City Purification Center in an emergency, to ensure the power supply capacity as an independent energy base even in the event of a power outage, and to maintain its function as a disaster prevention base. In a power outage, the optimal control system developed by Shizen Energy Inc. will control the balance of power supply from each facility by coordinating storage batteries and multiple power generation facilities within The area (including newly built solar power generation

facilities as well as existing private power generators, solar and wind power generators on the premises.)

Even in normal conditions, electricity from solar and storage batteries is used efficiently during times when electricity bills and power consumption are high, contributing to the reduction of electricity bills and CO2 emissions.

The shift from fossil fuels to renewable energy is expected not only to make effective use of local resources, but also to create new economic flows within the region through energy. However, the realization of a plan that encompasses the entire region requires expertise and experience in a broader range of areas, from the development, construction, and maintenance of power sources to IT-based supply and demand control, power sales, and procurement. Shizen Energy has cultivated corporate knowledge on the entire process of producing and storing electricity from renewable energy sources. Hereafter, we will strengthen our proposals for the introduction of power sources that make the most of local resources, and for schemes that allow the economy to circulate within the local community through the electricity generated.

Shizen Energy, embracing “we take action for the blue planet” as its PURPOSE, aims to build renewable power plants around the world to expand the use of reasonable, safe and stable energy so that more people can continue to live happily on our planet.

#### 【Project Overview】

Rated output of solar power generation equipment	102kWp
Storage battery output/capacity	58kW / 232kWh (Powerpack by Tesla: storage battery for industrial uses) * Shizen Energy is a Tesla Powerpack certified construction company.
Name and location of customer facility	Karatsu City Purification Center (Futago, Karatsu city, Saga prefecture)
Completed	March 10, 2021

### 【Facility Map】



### 【Solar Panel Area】





**【Storage Battery】**



**【Reference】**

For further information on each company, please refer to their respected homepages below.

- NTT DATA Institute of Management Consulting, Inc. : <https://www.nttdata-strategy.com/>
- Kyushu Densetsu K.K. : <https://www.kec43.co.jp/>
- YBM Co.,Ltd : <https://www.ybm.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/](http://www.shizenenergy.net/en/)

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