

## **Mitoyo City and Shizen Energy sign agreement on community bus decarbonization using EV buses -To establish a subscription business model for bus electrification -**

Mitoyo City, Kagawa Prefecture and Shizen Energy Inc. (Shizen Energy) have signed an agreement for a project to decarbonize community buses in Mitoyo City using electric buses, and agreed to jointly promote demonstration experiments to decarbonize local transportation systems.

Mitoyo City and Shizen Energy signed a collaboration agreement for the realization of a decarbonized society on November 30, 2023, and this EV bus demonstration for the Mitoyo City community is part of this recent agreement. Based on the knowledge gained from this demonstration, Shizen Energy aims to establish a subscription business model for the future electrification of public transit bus routes.

### **Project background**

The annual CO<sub>2</sub> emissions of the domestic transportation sector is the third largest after the energy and industrial sectors, and there is a need to shift to green transportation by electrifying public transportation buses in order to transition to a decarbonized society.

To make the operation of EV vehicles on public transit bus routes practical, it is necessary to incorporate various factors such as EV bus battery charging times and charging locations into existing bus operation schedules, and to optimize fleet management with more complex operation schedules. On the other hand, with the 2024 problem\*<sup>1</sup> and expected labor shortage in fleet companies due to the aging of the population, it is necessary to simultaneously address the next-generation infrastructure transformation in line with the current trends, such as labor-saving and automation through digital transformation (DX), in parallel with addressing the declining and aging population.

In anticipation of the future conversion of public transit buses to EVs, Shizen Energy aims to establish a comprehensive subscription business model that offers an energy management system, an AI-based fleet management system (operation plan optimization), and EV bus equipment leasing all in one package to meet the EV conversion needs of large bus route operators providing public transit services in urban areas.

### **Agreement background**

As the first step in establishing the business model, on June 30, 2023, Mitoyo City and Shizen Energy concluded an agreement on the decarbonization project through electrification of Mitoyo City's community buses and began developing the concept for a demonstration experiment.

Mitoyo City operates 12 community bus routes to provide transportation for many elderly people and children. While the buses are used by a total of 230,000 people annually, Mitoyo city, like many rural areas in Japan, is struggling to maintain its transportation infrastructure in the face of a declining population.

In early October 2023, Shizen Energy conducted a test drive of an EV bus of the same model that will be used in the demonstration for nine contractors of community bus routes in Mitoyo City to deepen their understanding of the operation of EV buses. Beginning in January 2024, an EV bus will first operate on one route in the city and collect data on the actual route while confirming that the existing level of service can be maintained. Then, based on the data and operational results, the possibility of further expansion to other routes, the use of renewable energy, the introduction of storage batteries, and other aspects for the green transformation of Mitoyo City will be considered.

### **Test drive with EV bus (October 4, 2023)**





\*1 **2024 problem:** a new regulation in Japan which will impose an annual work time cap for truck/bus drivers starting in April 2024 which is expected to cause logistical delays

**【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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