



May 24, 2018 Toshiba Energy Systems & Solutions Corporation Iwatani Corporation

## <u>Toshiba to Start Demonstration Project with Iwatani</u> to Establish Low-Carbon Hydrogen Supply Chain in Hokkaido

- To establish the viability of a locally-based supply chain with hydrogen
- The first project to use hydrogen produced from hydropower for generation in Japan

KAWASAKI, Japan—Toshiba Energy Systems & Solutions Corporation (Toshiba ESS) announced that they have started a demonstration project in partnership with Iwatani Corporation (Iwatani) in Kushiro city, Hokkaido Prefecture at a hydrogen production facility using hydrogen produced from a small hydropower plant for establishing a hydrogen utilization model suitable for the local characteristics of Hokkaido. This project is proceeding as a result of a proposal submitted to the Ministry of the Environment, Japan under the Ministry's "Low-Carbon Hydrogen Supply Chain Demonstration Project." The opening ceremony for the project was held today in Hokkaido.

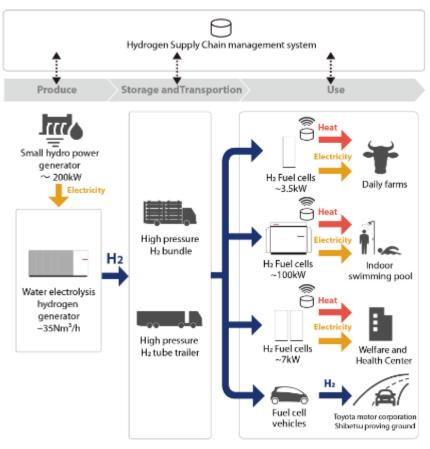
For this project, Toshiba ESS has constructed a small hydropower plant at the Shoro Dam in Shiranuka town on Hokkaido's Pacific coast. Electricity from the dam will be used to electrolyze water and separate hydrogen at the hydrogen production facility made by Toshiba ESS, which produces about 35Nm³ of hydrogen every hour. The hydrogen will be transported by Iwatani to generate electricity with Toshiba ESS's pure hydrogen fuel cell systems which were installed at dairy farms and indoor swimming pools in Shiranuka, welfare and health center in Kushiro, and use as fuel for fuel cell-powered vehicles at Toyota Motor Corporation's Shibetsu proving ground .

"I'm excited that Toshiba will contribute to providing more comprehensive hydrogen solutions, encompassing all processes from the production to utilization of hydrogen in Hokkaido," said Hiroyuki Ota, General Manager of the New Energy Solutions Project Team at Toshiba ESS. "As a leader in developing integrated systems for using hydrogen, I'm sure that our environmentally friendly hydrogen solutions will contribute to a low-carbon future."

Manabu Tsuyoshi, General Manager of Hydrogen Gas department at Iwatani said, "We will play an important role in expanding the use of hydrogen energy based on our technology to transport, store, and supply hydrogen, and our know-how on the construction and operation of hydrogen stations."

Hokkaido enjoys abundant renewable energy resources, including hydro, wind, and photovoltaic power generation, and companies have recognized it as a suitable location for establishing carbon-free hydrogen supply chains. Therefore, Toshiba ESS will promote the establishment of a low-carbon hydrogen supply chain with Iwatani.

## **Outline of the project**



Ministry of the Environment, Japan,

"Low-Carbon Hydrogen Supply Chain Demonstration Project" (from 2015 to 2019)