

Toshiba Energy Systems & Solutions Corporation
October 10, 2019

## Toshiba and PLN Sign Memorandum of Understanding on the Promotion of Autonomous Hydrogen Energy Supply System "H2One<sup>TM</sup>" in Indonesia

Jakarta, Indonesia — Toshiba Energy Systems & Solutions Corporation (hereinafter, "Toshiba ESS") today announced that the company has inked a memorandum of understanding (MoU) with state-owned electric company, Perusahaan Listrik Negara (hereinafter, "PLN"), on an accelerated adoption of the independent hydrogen-based energy supply system, H2One<sup>TM</sup>, in the country. A signing ceremony was held at the 6<sup>th</sup> Indonesia-Japan Energy Forum, an event organized by Ministry of Economy, Trade and Industry(hereinafter, "METI"). Based on this MoU, Toshiba ESS and PLN will evaluate viable technologies and policies necessary for an advanced adoption of the commercial H2One<sup>TM</sup> in the archipelago of Indonesia by 2023.

H2One<sup>TM</sup> is an integrated system that uses a renewable energy source to electrolyze hydrogen from water, and stores and uses the hydrogen in fuel cells to provide a stable delivery of CO<sub>2</sub>-free, environmentally-friendly electricity and hot water. One of the applications of H2One<sup>TM</sup> is an "off-grid solution," which can help realize a sustainable society.

Indonesia's Electricity Power Supply Business Plan (RUPTL) is a plan to increase the ratio of the country's capacity of renewal energy facility from 12.52% in 2017 to 23% by 2025. Moreover, in Indonesia, many people live on isolated islands, so a stable and economical electric power source on each island is necessary. This need calls for an increasing demand for a distributed generation system, which can adapt to the environmental conditions on the isolated island.

Under these circumstances, Toshiba ESS and BPPT signed a MoU on the survey for the accelerated adoption of H2One<sup>TM</sup> in August 2018 and have conducted the survey together. On the other hand, Toshiba ESS validated the adaptability of H2One<sup>TM</sup> in Indonesia in the public offering business by METI. "The development and survey of H2One<sup>TM</sup> adopted project, the autonomous hydrogen-based energy supply system", was entrusted by Toshiba ESS in September 2018. Toshiba ESS has subsequently identified areas where H2One<sup>TM</sup> could be adopted by February 2019 and are now working for the implementation of the demonstration system.

Yoshihisa Sanagi, General Manager of the Hydrogen Energy Business Division at Toshiba ESS, said, "We're very honored to cooperate with PLN for the promotion of the H2One<sup>TM</sup>. We will accelerate adoption of the commercial system in Indonesia, taking into account the regulations and rules of Indonesia's power network and power system interconnection."

Toshiba ESS will expand hydrogen-based energy technology and products, including the H2One<sup>TM</sup>, into the global market, and we will contribute to the realization of a hydrogen-based energy society.



Picture of Signing Ceremony



Syofvi Felienty Roekman, Director of Corporate Planning of Perusahaan Listrik Negara (second from the right) and Hiroyuki Ota, Marketing Executive of Hydrogen Energy Business Div. Toshiba Energy Systems (right end), celebrate the signing of the MoU
###