*For Immediate Release*

**Delta’s Li-ion Energy Storage System Integrated into Mitsubishi Heavy Industries Engine & Turbocharger’s Triple Hybrid Stand-Alone**

**Power Supply System**

*TAIPEI, July 29, 2019*– Delta, a global provider in power management solutions, today announced the integration of its lithium-ion energy storage system into Mitsubishi Heavy Industries Engine & Turbocharger, Ltd. (hereinafter referred to as MHIET)'s innovative triple hybrid stand-alone power supply demonstrated in the Triple Hybrid Station, a demo power plant located in MHIET’s manufacturing site in Sagamihara, Kanagawa Prefecture, Japan.

“The Triple Hybrid stand-alone power supply system combines renewable energy such as solar power with a reciprocating engine generator and an energy storage battery system, to allow for optimal power stabilization control. The system's main advantage is its ability to stabilize the volatile output of renewable energy by combining three types of power sources, ultimately enabling low-cost power supply provided by an environmentally-friendly, multi-purpose distributed generation system,” said MHIET.

Mr. C.H. Ko, executive director of Delta Electronics (Japan), said, “As the demand for decentralized power supply continues to grow, Delta is honored to partner with MHIET to provide energy-efficient solutions and products, such as energy storage systems, power conditioning systems and photovoltaic (PV) inverters, for this unique triple hybrid demo power plant. The plant leverages renewable energy, energy storage systems, and engine generators to provide distributed power supply that can meet the needs of several applications in Japan and abroad”.

The lithium-ion battery system integrated by Delta into MHIET’s system boasts a superior 4C charging and discharging power rate to rapidly smoothen sudden fluctuations from the solar power generation due to diverse weather conditions. Thus, Delta’s energy storage solution enables stable power supply according to power demand in combination with the reciprocating engine. Delta is developing next-generation applications, such as VPP (Virtual Power Plant), self-consumption and grid stabilization by utilizing its lithium-ion battery system and renewable energy technologies to accelerate the decarbonization of our future.

The MHIET triple hybrid demonstration power plant uses Delta’s 331kWh-container-type battery energy storage solution, four 125 kW power conditioning systems, and four 50 kW PV inverters with conversion efficiency up to 98.6%. Other key features of our offering include:

* The **lithium-ion energy storage system** has the function of DC bi-directional charge and discharge, and is designed to ensure functionality, convenience and safety under operating conditions such as high voltage and high current. The main core battery products are from lithium-ion battery technology and production line developed and transferred from Mitsubishi Heavy Industries, Japan, and fully assembled in Taiwan. The high-rate characteristics of 4C-rate are not only conducive to grid regulation, but also suitable to be direct power source for electric vehicles.
* The **power conditioning system** consists of a single 125 kW power output and four parallel supply of 500 kW power output. The DC system connected to the battery storage container and the AC system of the grid are able to charge and discharge the battery and the grid bi-directionally through two-way AC-DC conversion.
* The **container-type energy storage solution** uses a standard refrigerated container as the outer protection foundation. The internal cabinet-based design unit connects multiple battery modules in series to meet high voltage requirements. The cabinet configuration and module design cooperate with the thermal insulation of the refrigerated container and the existing air conditioning host circulation mode to maintain the internal temperature stability and extend the battery service life without consuming too much air conditioning power. The solution not only meets the requirements of highly mobile construction, but also integrate complete battery and power management, cabinet environmental monitoring, power conversion, fire extinguishing and other subsystems into the 20-foot or 40-foot container, giving full play to the advantages of modular design. It also achieves fast and flexible deployment, significant reduction in construction costs, shortened construction period with safety and reliability.

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**About Delta**

Delta, founded in 1971, is a global provider of switching power supplies and thermal management products with a thriving portfolio of smart energy-saving systems and solutions in the fields of industrial automation, building automation, telecom power, data center infrastructure, EV charging, renewable energy, energy storage and display, to nurture the development of smart manufacturing and sustainable cities. As a world-class corporate citizen guided by its mission statement, “To provide innovative, clean and energy-efficient solutions for a better tomorrow,” Delta leverages its core competence in high-efficiency power electronics and its CSR-embedded business model to address key environmental issues, such as climate change.

Delta serves customers through its sales offices, R&D centers and manufacturing facilities spread over close to 200 locations across 5 continents.

Throughout its history, Delta has received various global awards and recognition for its business achievements, innovative technologies and dedication to CSR. Since 2011, Delta has been listed on the DJSI World Index of Dow Jones Sustainability™ Indices for 8 consecutive years. In 2017, Delta was selected by CDP (formerly the Carbon Disclosure Project) for its Climate Change Leadership Level for the 2nd consecutive year.

For further information about Delta, please visit: [www.deltaww.com](http://www.deltaww.com)

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