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Development of Utility Friendly Safe Olivine Based ESS in Esstalion Technologies. (I)

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Development of Utility Friendly Safe Olivine Based ESS in Esstalion Technologies.

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One of the promising approaches for striking a balance of realizing sustainable society and maximizing utility's profit is to apply energy storage system (ESS). There're many use cases proposed (1), such as reserve, regulation, peak shaving, time shift, load following, smoothing, and minimum emission. To answer these demands, the development of a battery with high rate of charging and discharging, a longer cycle life and safe is imperative.

Esstalion Technologies Inc. was established in 2014 as a joint venture company between Sony Corporation and Hydro-Québec.(2) . By September 2017, Sony Corp. has sale of its battery business to electronic parts maker Murata Manufacturing Co.

We are the first corporate joint venture between battery manufacturer and utility.

Since then, we've developed utility friendly ESS based on lithium ion battery technology for grid scale utilization.

Since we put our importance on safety and long-life, our core technology is olivine based material which is patented by Hydro Québec and commercialise by Sony as Fortelion. (3)

We've started in field testing using 1.2 MWh ESS in 2016.

In Esstalion, we try to bring innovation by gathering "multi-wisdom" in ONE ESSTALION team, doing the new material research, BMS/EMS development and ROI calculation etc.

We propose a brief review of our technologies and we will show an example of our efforts to enhance the key properties of the Li-ion battery.

(1) Pacific Northwest National Laboratory, Protocol for Uniformly Measuring and Expressing the Performance of Energy Storage Systems

(2) Press Release, Establishment of Esstalion Technologies, Inc., a joint venture between Hydro-Québec and Sony, 2014

(3) News Release, Sony Launches High-power, Long-life Lithium Ion Secondary Battery Using Olivine-type Lithium Iron Phosphate as the Cathode Material, 2009

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