Jakarta energy storage for microgrids

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Hitachi Energy has successfully deployed a microgrid in Nusa Penida, Klungkung, Bali. This microgrid helped meet the ~20% surge in electricity demand during the recent G20 Summit in Bali and will continue to support demand from local customers.

"Ahead of the G20 Summit, the microgrid supplied Bali with clean electricity. This demonstrates Indonesia"s real commitment to supporting the energy transition which was an important discussion point in the G20 Summit," said Darmawan Prasodjo, President Director PT PLN (Persero) "The project shows PLN"s readiness to oversee Indonesia"s energy transition to achieve the energy mix target and net zero emissions in 2060, as well as a form of the company"s commitment to the principles of Environmental, Social and Governance (ESG) in creating sustainable economic development," he added.

Deployed on an area of 4.5 hectares, the project development was carried out by PT Indonesia Power, subsidiary for Power Generation of PLN, to increase the reliability and sustainability of electricity supply in Nusa Penida, an adjacent island to Bali which is also becoming an increasingly popular tourist destination.

This 4MWp/3MW/3MWh microgrid is also part of PLN"s de-dieselization program to reduce carbon emissions and accelerate the shift to greener energy by replacing 5,200 diesel power plants (PLTD), which are currently still operating all over the country

"As a global technology leader, we take pride in this project and are delighted to support PLN in its commitment to secure additional reliable and sustainable power supply during G20 Summit in Bali," said Predrag Grupkovic, Country Managing Director, Hitachi Energy in Indonesia.

Working in a consortium with PT Surya Energi Indotama (SEI), Hitachi Energy supplied the solution including: 3MW/3MWh e-meshTM PowerStoreTMBattery Energy Storage System (BESS) and advanced e-mesh automation, which is expected to produce 6779 MWh annually, and reduce carbon emissions by 3,200 tons of CO2per year.

The advanced control system within e-mesh also helps to maximize Nusa Penida"s hybrid solar power plant system performance. The combined solution delivers stable, coordinated operation of the BESS and solar PV with an existing diesel power plant. During the day, the BESS smooths out fluctuations from the renewable generation and enables load sharing to ensure efficient operation of the gensets. The e-mesh control layer also constantly monitors power operations for anomalies, and quickly dispatches the energy from the BESS to protect the island network.

Jakarta, Indonesia, 9 February 2021 - PT ABB Power Grids Indonesia, has successfully deployed the first microgrid solution in Indonesia to ensure a continuous power supply for off-grid mining operations at Indo

Tambangraya Megah"s (ITM) facility called Indominco Mandiri (IMM) in Bontang, East Kalimantan. The largest of its kind in Indonesia, this microgrid harnesses solar power to help reduce ITM"s carbon footprint - a key milestone in their commitment to reduce carbon emission, while reducing operational cost.

In operation since 2019, the project has successfully integrated solar generation into the network, stabilizing and improving energy efficiency for the customer with e-meshTM grid edge solutions portfolio, including the PowerStoreTM Battery Energy Storage System (BESS) and advanced controls. The system is expected to produce 230 MWh from solar PV annually, resulting in 192 tonnes of CO2 reduction.

IMM is a large-scale mining operation in Bontang, East Kalimantan with more than 600 employees and produces approximately 12.5 MT of coal each year. For energy-intensive industries like mining, declining costs for renewable generation and energy storage are attractive options, but secure and reliable power is critical to operations. Grid edge solutions unlock the potential to improve the environmental footprint, reduce energy costs and improve power quality.

"Making manifest our long-term business diversification plan for a sustainable business, in 2019, we initiated the 3 MWp, 2MW/2MWh solar hybrid plant project for own use in Bontang," said Kirana Limpaphayom, Chief Executive Officer of Banpu Power plc (BPP), listed company in Thailand, and in the same Banpu Group with ITM.

Additionally, Mulianto the current ITM"s President Director said, "We are excited to see it operating fully in 2020, and should it achieve the expected performance, we are looking forward to replicating such project in our other locations."