

## Managua energy storage for resilience

The concept of utility-scale energy storage remains fairly uncharted grounds for power utilities, government authorities, and even renewable energy players, and there is a significant lack of knowledge and understanding to combat rising demand challenges. Equip Global recently had the privilege to interview Beni Suryadi, Manager of Power, Fossil Fuel, Alternative Energy and Storage in ASEAN Centre for Energy about his views on common challenges and top innovations in developing a flexible and resilient energy supply and its critical role in global reconstruction.

Equip Global: I understand that you are heavily involved in Power, Fossil Fuels, Alternative Energy and Storage (PFS), could you kindly share what you think are the 3 most common challenges with regards to Energy Storage and how are you tackling it currently?

Beni Suryadi: In the latest regional blueprint on energy cooperation for Southeast Asia, the ASEAN Plan of Action for Energy Cooperation (APAEC) 2016 - 2025 Phase II: 2021 - 2025 that was launched last year (2020), ASEAN sets an aspirational target of a 23% share of renewable energy (RE) in Total Primary Energy Supply (TPES) and a 35% share of RE in total installed capacity by 2025. Based on the 6th ASEAN Energy Outlook (AEO6), ASEAN countries would have to significantly strive to add to RE capacity to achieve these targets compared to the current level. ASEAN countries need to step up their game on energy storage development. However, we see some common challenges hampering the process.

Firstly, there is a misunderstanding of the value of energy storage. There is still a gap of knowledge in learning how storage can improve grid design and operations and the challenges in getting the most value out of an energy storage deployment.

Secondly, in many cases, in the region, the cost of renewable energy is still considered higher on average compared to fossil fuel. Then adding energy storage is perceived as another additional high cost into the system. There is a bias on the perception of this cost of energy storage.

Thirdly, although several ASEAN countries have already begun to implement the development of energy storage at the technical level, specific policies to encourage further adoption of these storage systems lag behind, as per the finding from our Policy Brief: Enabling Policies for Promoting Battery Energy Storage in ASEAN.

Equip Global: Do you personally think that Utility-Scale Energy Storage is crucial especially in this pandemic-led environment?

Beni Suryadi: The renewables-based transformation would need a massive investment in electricity infrastructure to maintain the balance of supply and demand. Hence, a flexible power system is urgently

required to capitalise on the declining costs of solar and wind power. Energy storage would play a central role in avoiding major infrastructure investment and reducing the transmission and distribution network constraints, accommodating greater flexibility. Based on our evaluation in 2020 until now, as released in our Quarterly Insight Covid-19 vs Energy Sector in ASEAN, renewable energy has seen as much more resilience during this Covid-19 pandemic situation compared to fossil fuel. Hence, this also led to the growth of energy storage, particularly Utility Scale Energy Storage.

We learn that in 2019, the Philippines pioneered the adoption of battery energy storage for grid services with a 2 MW capacity in Luzon. Singapore followed this in 2020, which deployed utility-scale battery energy storage equivalent to the capacity of powering 200 typical four-room apartments in a day. And with early RE penetration into the national grid, Cambodia has secured the financing of utility-scale battery energy storage from the Asian Development Bank (ADB) to support 100 MW National Solar Park.

While not immune from the COVID-19 pandemic and other disruptions, the industry grew and recorded major milestones amid these unprecedented times. It was reported that energy storage deployment doubled in 2020 compared to 2019. As it continues to develop, we see battery business models continue to evolve. In the previous years, see solar-utility integration was very much provided by the EPC or general contractor, where asset owners started to procure solar PV modules themselves. Pandemic reportedly reshaped the scheme, attributed to the need for solar EPC to consider in-house battery production for cost-effective production.

Equip Global: What do you think are 3 top trends or innovations to achieve energy security?

Beni Suryadi: There is a broad range of definitions from each country in the Southeast Asia region on energy security. Hence, ASEAN countries may also have various ways to innovate in achieving energy security. But in general, I think there are some trends and innovations in common to achieve it.

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