Sri lanka commercial microgrids

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Lanka Electric Company (Private) Limited (LECO), in collaboration with Asian Development Bank (ADB), aims to replicate microgrid projects in LECO’s electricity distribution area. As an initiation, a renewable energy microgrid pilot project has been commissioned at the University of Moratuwa, Sri Lanka. Micro grid is self-sustained energy system with energy generation sources like solar, wind, energy storage devices, and controllable loads.

LECO is now exploring greater depths to identify potential consumers for renewable energy microgrid project development in its franchised area to strengthen a reliable electricity supply for those who need. LECO is dedicated to achieving the ambitious policy target set by the Government of Sri Lanka in achieving 70% generation of electricity through renewable energy by 2030.

LECO’s potential to implement microgrid projects

Microgrids, an important player in achieving 70% clean energy target

Imported fossil fuel-based power generation and unreliable electricity supply have a major detrimental impact on economic development in the country. LECO has identified smart microgrid concept as a total solution to the issues arising from renewable energy sources such as voltage issues, rapid frequency fluctuations, and power quality disturbances and for improving reliability as well as to minimize fossil fuel consumption.

"ADB has been a long-term partner in Sri Lanka"s energy sector development. Our assistance in the clean energy, includes Sri Lanka"s first large scale100MW wind park in Mannar, 30MW hydropower station in Moragolla and the solar rooftop credit line, among others. ADB has been supporting the strengthening of power evacuation from distributed renewable energy generation at transmission and primary distribution level, in addition to its support for supply side and demand side energy efficiency improvements. ADB is committed to supporting Sri Lanka"s inclusive energy sector development focussing on clean energy with new, innovative technologies and solutions", said Dr Chen Chen, Country Director- Sri Lanka, ADB.

He highlighted the contribution and assistance from ADB and the support from Dr Yongping Zhai, Chief of Energy Sector Group, Dr Priyantha Wijayatunga, Director of South Asia Energy Division, Dr Mukhtor Khamudkhanov, Dr Aiming Zhou, and Ranishka Wimalasena, Dr Tilak Siyambalapitiya as well as Upali Daranagama for creating this concept.

Ranjith Pandithage, Chairman/ Managing Director, DIMO, said, "As a company, which plays a significant role in power sector through transmission and distribution projects and power generation - mainly focusing on renew- able energy, we are privileged to work together on this historic project that will take local power supply to the next level. DIMO"s highly-qualified and ex- perienced team of engineers are assigned to execute

this project while sharing the knowledge with our German partner DHYBRID. We believe that this project will help DIMO to enhance the expertise in developing the Microgrid concept in Sri Lanka. DIMO has also been contrib- uting to the constructing of the utility grid of Sri Lanka for the past 50 years."

Fabian Baretzky, Country Manager, DHYBRID said, "Together with DIMO, we plan to further support the transition of the country towards a more independ- ent and greener energy system." The event was held with the par- ticipation of Dullas Alahapperuma, Minister of Power and Energy, Prof G L Peiris, Minister of Education, Wasantha Perera, Secretary, Ministry of Power and Energy, as well as Prof Kapila Perera, Secretary, Ministry of Education.

"ADB has been a long-term partner in Sri Lanka"s energy sector development. Our assistance in the clean energy, includes Sri Lanka"s first large scale 100MW wind park in Mannar, 30MW hydropower station in Moragolla and the solar rooftop credit line, among others. Similarly, ADB has been supporting the strengthening of power evacuation from distributed renewable energy generation both at transmission and primary distribution level, in addition to its support for both supply side and demand side energy efficiency improvements. ADB is always committed to supporting Sri Lanka"s inclusive energy sector development focussing on clean energy with new and innovative technologies and solutions", said ADB Country Director for Sri Lanka Dr. Chen Chen.

Acting General Manager of LECO Dr. Narendra De Silva said, "LECO is always dedicated to maintaining a safe and hassle free electricity supply to our customers around the clock on their demand. This project, will be developed as a solution for power interruptions consumers face due to breakdowns as well as outages during maintenance activities. During such power failures, solar inverters also withdraw from the system by anti-islanding protection, driving even the customer who has sufficient power to power up their premises through their solar generation, go out of power."

"Microgrids are identified as a solution for these problems where it can increase the hosting capacity of the distribution network and can feed the power to the network when the grid is not available, since the excess power can be stored while storage issues like reverse power flow and subsequent voltage issues are also expected to be mitigated. Through this pilot project, LECO will seek the possibility of replicating the concept for other transformers and similar premises, to improve power supply reliability and the lessons learnt through this project will be shared internationally", he further added.