

Energising the future with renewable sources

—By—
Kathya de Silva Senarath



Sri Lanka is a country with renewable energy sources which need to be harnessed to meet energy demands. With the rising cost of fuel and foreign exchange challenges, Sri Lanka's energy generation needs to focus more on renewable sources within the country.

The Ceylon Electricity Board (CEB) has promoted the generation of electricity using renewable energy resources since the early nineties by giving the required assistance to the private sector, which includes training and capacity building, pre-feasibility studies and resource assessments.

The procedure for electricity purchases from small renewable energy producers by the CEB was regularised beginning 1997 with the publication of a standardised power purchase agreement which included a scheme for calculating the purchase price based on the avoided cost principle. This was offered to all sources of power plants of capacity less than 10 MW.

Diversifying

The Government has identified the importance of developing and supporting renewable energy projects as a matter of policy to diversify the electricity sector from high cost thermal power generation. The CEB states that therefore, required incentives and assistance were provided for the renewable energy resource development (mini hydro, bio mass, wind, and so on).

The National Energy Policy 2006 has identified fuel diversify and energy security in electricity generation as a strategic objective and development of renewable energy projects was identified as a part of this strategy.

President Gotabaya Rajapaksa's Vistas of Prosperity and Splendour gives much emphasis on renew-



able energy and identified that it is needed as part of the overall energy mix of a country, ensuring that the country has access to low cost energy needed for rapid economic acceleration.

The national policy framework articulates that by 2030, the Government expects the country's renewable energy mix to be 40 percent of the total portfolio. It also anticipates that hydro and renewable energy together would account for 80 percent of the overall energy mix by 2030.

It adds that achieving energy security and self-sufficiency will be one of the Government's primary policy and strategic objectives and "we will put our best effort to ensure that the country has adequate capacity to meet the future demand."

Sri Lanka being a country near the equator has much potential to harness solar energy. Therefore, to transform towards solar energy, the Government encourages roof top solar systems so that households and small businesses would have access to low cost energy. The total cost of such investments is made available through bank loans with low/concessional interest rates.

The Government assures: "We will remove all impediments and incentivise the private sector and entrepreneurs interested in setting up renewable energy projects i.e. solar and wind, and to this end, the Government will provide assistance."

The *Soorya Bala Sangramaya* (Battle for Solar Energy) launched

by the Ministry of Power and Renewable Energy in 2016 continues as community-based power generation in collaboration with Sri Lanka Sustainable Energy Authority (SLSEA), Ceylon Electricity Board (CEB) and Lanka Electricity Company (Private) Limited (LECO) to promote the setting up of small solar power plants on the rooftops of households, religious places, hotels, commercial establishments and industries.

The aim was to add 1,000 MW to the national grid by 2025. Under this program, consumers have the option to generate and use electricity in their premises. In case of electricity in excess of their requirements, they can sell the excess to the national grid or bank it for later use.

Phase II

DPS Energy was one such company that made use of phase II of this program to establish a solar power plant on build, own and operate basis through a competitive bidding process. It began generating one megawatt per day from April 2021, connecting it to the Anuradhapura grid substation. Sixty such solar PV power plants were established island wide which generate one megawatt per day.

"There were three projects offered for Anuradhapura and we got one. First, we looked for land on the Mihintale-Galenbindunuwewa Road. The project is located at Nekatunuwewa. We bought nearly 10

2,250 solar power panels are fixed on an aluminum structure. A modified container was set up to fix the machinery and equipment inside.

"We got the other two transformers from the Lanka Transformers Ltd., a subsidiary of the CEB. So, they fixed the transformers. We paid the Electricity Board to give the grid connection to the Anuradhapura grid," Rajapakse said.

Dewruk Rajapakse, an engineer, and Sahan Rajapakse are Directors while their mother is the Chairperson of the company. "DPS Energy is our family company. We had challenges when implementing the project. There was a petition against us initially stating that there was a waterway at the centre of the land. So, we had to stop everything for three months while a full-scale investigation was conducted by the Govijana Seva Director General. After clearing all that, we started work. By April last year, we were in a position to supply electricity to the main grid," Rajapakse said.

He said in Sri Lanka, we need about 2,850 megawatts of electricity in the evening and that he was happy that they were able to generate at least one per day.

The entire project cost was Rs. 160 million. They hope to expand in the future, maybe improve it to two or three megawatts per day or set up another plant elsewhere. Rajapakse said the Electricity Board and Sustainable Energy Authority gave all the support and that they continuously monitor and advise them.

As the world gives emphasis on renewable energy and sustainable development, it is a blessing to see

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the success of such renewable energy projects in Sri Lanka. It is the hope of all that the future carries better prospects with regard to Sri Lanka's energy demands and sees the fruition of more such endeavours that harness the gift of light.

