

Calling EOI for solar-assisted electric vehicle charging stations

Background

Electric vehicles are one of the promising technologies that would reduce fossil fuel-based emissions in the world. In the Sri Lankan context, electric vehicles can present several opportunities to reduce the energy crisis.

1. Currently, one-third of our primary energy is for transport fuels which are all imported. EVs can significantly reduce this dependence
2. Electric vehicles can be charged at off-peak times which is advantageous to utilities
3. EV vehicles can be used to power houses in power outages
4. When there is land availability or sufficient rooftop availability, there is a possibility to charge the vehicles using solar power. Integrating a solar system is also required to offset the energy requirement from the grid.

At present, the country's EV fleet is less than 5,000, mostly Nissan Leaf with a range of less than 200 km. There is a lack of charging stations in remote areas which induce range anxiety so that the mobility of the EVs is curtailed, especially due to the ageing of batteries.

SLSEA, with a mandate to improve the electric mobility, has decided to call for EoIs for the establishment of charging stations satisfying following requirements.

Requirement	Description	Further explanation
Number of charging stations	Minimum of 10 stations per province	
Locations	Strategic locations facing major roads (A grade) which link up main cities of the country, deployed in several phases, based on the demand for services. (Proposed areas/number of charging stations can be changed if the proposals contain acceptable demand analysis)	1.The charging stations shall be located by the side of the "A" grade roads or highways, 2. A demand analysis must be carried out by the proposer 3. Sufficiently cover the areas where there is a deficiency of charging stations

Charging requirement	At least three vehicles at once	
Charging equipment	Applicable charging gear for light vehicles, bikes and three-wheelers.	Follow the guidelines issued by PUSCL from time to time
Tariff system for grid connection and users	As proposed by PUCSL	
Solar plant requirement	100 kW minimum	The solar plants must be connected to the grid according to the presently available tariff structures. Grid availability need to be checked with utilities prior to submission of the proposal.
Charging method	Using the grid supply or direct solar power if feasible.	
Minimum Space required per charging station	40 perch minimum	

The proposer's undertaking

- Proposing a suitable charging network with the requirements specified above
- An analysis of present/future demand based on technological/Social/Policy directions set by the government
- The proposal should contain all the technical details of the charging station including drawings, equipment specifications, resource allocation, timeline, and a financial proposal with an appropriate breakdown.
- The proposer shall demonstrate the financial strength of the company to carry out the project.

SLSEA's Undertaking

- Clearing up the grid connection issues of the developers with the utilities
- Mediating appropriately to obtain locally made charging equipment and liaising with Ministry of finance for reducing the tax for imported equipment related to the projects.

- Wavering application fees for solar plants
- Allowing the successful implementation agencies to use the SLSEA logo in their promotional programmes.

Conditions for EOI

- Identifying the lands and acquiring the land is the responsibility of the organization. SLSEA will assist in the acquisition of the government owned land.
- SLSEA bears no responsibility to entertain the proposals received; acceptance or rejection is at SLSEAs discretion.
- SLSEA may accept several proposals and enter into an agreement over the said undertakings.
- Proposing an environmentally friendly solution which include disposing of the solar panels and acquiring the used vehicle batteries for storage will be advantageous.