അനർട്ട്
ANERT
Agency for New and renewable Energy Research and Technology
നവീനവും പുനരുപയോഗയോഗ്യവുമായ ഊർജ്ജ ഗവേഷണങ്ങൾക്കും സാങ്കേതിക വിദ്യകൾക്കുമുള്ള ഏജൻസി
DEPARTMENT OF POWER, GOVERNMENT OF KERALA
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PROCEEDINGS OF THE Chief Executive Officer
(Present: Narendra Nath Veluri I F S)

Abstract

ANERT – Guidelines for the release of state subsidy for solarization of Public Electric Vehicle Charging Stations – order issued.

File no.: ANERT-TECH/126/2020-PJC1

A.O. No. 100/2021/ANERT 13/10/2021

Read: 1. G.O(Rt)No.91/2021/POWER dt.12.07.2021

ORDER

As per the Administrative Sanction of ANERT 2021-22 order read above, Dept of Power, Govt. of Kerala have sanctioned capital subsidy for solarization of Public EV Charging Stations E-cars in Hotels, Malls, Hospitals and other locations with refreshment, washroom and waiting room facility. Lack of fast charging infrastructure is one of the main constrains behind the poor adoption of Electric cars in Kerala. In Order to accelerate the adoption of electric vehicle in India, Ministry of Power, Government of India had released guidelines and Standards for charging infrastructure for electric vehicles on 14.12.2018 and later reversed on 01.10.2019 by adapting certain valuable suggestions from Stakeholders. In order to address the range issues of Electric cars and thereby reduce the anxiety among the potential customers regarding the same, ANERT under Department of Power, Government of Kerala, encourage the installation of Public Electric Vehicle Charging Stations by providing subsidy for solarization of Public EV Charging Station installed under private sector through ANERT..

Following are the Guidelines, terms and conditions for release of state subsidy for Solarization of Public EV Charging Station Project.

1. Any owner having land nearer to National Highway, MC Road/State Highway/ other major roads with Refreshment facility Wash room facility, waiting rooms are eligible for applying for this project. Preference shall be given to malls, office complex, Restaurant, Hospitals and Hotels.

2. Beneficiary can apply to this project by filling the Application form available in ANERT website. Land owner shall submit the detailed civil sketch of the proposed site along with the feasibility from concerned KSEB section office. District office will hand hold the applicant for filling the application.
3. The filled application for Solar Powered EV Charging Station should be submitted to concerned district ANERT office and collect receipt in the enclosed format.
4. After scrutiny of application, ANERT will conduct feasibility study for the proposed land. Provision may be make for 2-3 cars simultaneously charged at a time. Only feasible locations for solarization (5kW to 50kW) will be selected for this Project. 50 Sqm to 500 Sqm shade free area is required for installation of 5 to 50 KW Solar Power Plants. ANERT reserves the right to reject any application without assigning any reason whatsoever.
5. After conducting feasibility study, Application number for all beneficiaries will be issued directly by E-mobility cell, ANERT HQ as per the request of District ANERT office on first come first basis.
6. After the receipt of application number, beneficiary may select an EPC contractor from the list published in ANERT website. Selection of EPC contractor and selection of charging machine will be the sole responsibility of beneficiary. ANERT will not be responsible for any of the financial transaction between beneficiary and EPC contractor.
7. Upon selecting a technically empanelled EPC contractor from ANERT website for the installation of Public EVCI, beneficiary may execute agreement with contractor and issue work order to EPC contractor. Format of Agreement to be executed between the Agency and beneficiary , Format of work order and Format of Agreement between ANERT and Beneficiary(original need to be submitted)is attached as enclosure. These documents need to be submitted to concerned ANERT District office.
8. The registration number for the solarization of Public EVCI will be issued from ANERT HQ.
9. Registration number will be issued after submitting the copy of work order , copy of agreement between Agency and Beneficiary, Original agreement exucuted between Beneficiary and ANERT. The last date for receipt of work order and submission of agreement is 30.12.2021. Subsidy will be released first cum first serve basis. Subsidy is eligible for the beneficiaries who have submitted the completion report before 28.02.2022.
10. KSEB(Distribution Company licensee) feasibility is required for Service Connection of EVCI and Solarization of Charging Station.

11. Solar Power Plant of minimum capacity of 5kWp need to be installed for each EV Charging Station under this project. Subsidy will be eligible up to 50kWp Solar Power Plant depending up on available shade free area and feasibility from KSEB.
12. Selected beneficiaries are eligible for a capital subsidy of 50% of the value of on grid / hybrid solar power plant maximum @ Rs.20,000/kW for on grid solar power plant and Rs.30,000/kWp for off grid solar power plant and hybrid solar power plant whichever is less up to 50KW Solar plant.
13. If any capital subsidy/Financial incentive for EV charging machine/Equipment is available , that subsidy will also be applicable for all E car charging machines installed under Solar powered Public EV charging station Project of ANERT.
14. The completion report should be submitted to District ANERT office immediately after the commissioning the project.
15. Subsidy shall be released to beneficiary after receiving completion report and site inspection report from District ANERT office.
16. Beneficiary is also provide necessary permission for collecting datas of EVCI machines and also give permission to ANERT for real time dash board access of EVCI.

Public Charging Infrastructure (PCI)-Requirements_

Every Public EV Charging Station shall have the following infrastructure:

1. Adequate space for Charging and entry/exit of vehicles.
2. Solar EV Charging Station must have one CCS of minimum 50kW with single gun and may have more chargers or any Combination of chargers from the table 1.
3. Tie up with at least one online Network Service Providers (NSPs) to enable advance remote /online booking of charging slots by EV owners. Such online information to EV owners should also include information regarding location, types and number of chargers installed/available, service charges for EV charging etc. (EPC contractor will assist for this process) Real time dash board access should be provided for ANERT at all times.
4. Appropriate civil works, appropriate cabling & electrical works ensuring safety.
5. If feasibility for required connected load not given by KSEB, an exclusive transformer with all related substation equipment including safety appliance is required in each station.
6. All the EVCI machines and Solar Power Plant should have minimum 5 year warranty or 1 year warranty + 4 year A M C.

TABLE 1

Charger Type	Sl. No.	Charge Connector*	Rated Output Voltage(V)	No. of Connector Guns(CG)	Charging vehicle type
Fast	1.	combined charging system (CCS) Min (50kw)	200-750 or higher	1CG	4W
	2.	CHArge de MOve (CHAdeMO) (min 50 kW)	200-500 or higher	1CG	4W
	3.	Type-2 AC (min 22kW)	380-415	1CG	4W,3W,2W
Slow/ Moderate	4.	Bharat DC-001(15kW)	48	1CG	4W,3W,2W
	5.	Bharat DC-001(15kW)	72 or higher	1CG	4W
	6.	Bharat-AC001(10kW)	230	3CG of 3.3 kW each	4W,3W,2W
*In addition, any other fast/slow/moderate charger as per approved DST/BIS standards whenever notified. Note: Type -2 AC (min 22 kW) is capable of charging e-2W/3W with the provision of an adapter					

- Electric vehicle supply Equipment (EVSE) machine Should be approved by ANERT. List of ANERT approved EVCI machines are published in ANERT website for reference.
- Charging Station may also be installed by Housing societies, Malls, Office Complexes, Restaurants, Hotels, etc. with a provision to allow visitor's vehicles which are permitted to come in its premises.
- All the Electrical work should be completed as per the guidelines of KSEB and Electrical Inspectorate.

Present Tariff for LT connection to EV Public Charging Stations

Cost of Electricity - Rs.5/kWh (LT 10)

Fixed charge: Rs.75/kW(LT connection)

The tariff for supply of electricity to EV Public Charging Station shall be determined by the appropriate commission in accordance with the Tariff Policy issued under section 3 of Electricity Act 2003 as amended from time to time.

Details of Cost of Electricity, Capital Expenditure and Operational Expenditure:

Cost of electricity charge mainly depends on three components such as:

i. Cost of electricity as approved by KSEBL.

ii. Cost of power losses in transforming AC power to DC power.

iii. Taxes, Duties or Surcharge of power.

Following are the capital expenditure for setting up Public EV Charging Infrastructure:

i. Electric Vehicle Charging Infrastructure unit.(Charging station and Panel Board)

ii. Civil work for preparing land for EV parking and installation of Public Electric Vehicle Charging Stations.

iii. Proper Earthing is required for safe operation of charger unit.

iv. Auxiliary Equipment such as panel board barricades, cameras and Canopy etc.

v. Service connection cost and Fixed Charge to KSEB.

vi. Capital cost for Central Management System and Mobile Applications.

vii. Cost of 100 KVA transformer, with line extension work if applicable

Following are the Operational expenditure for setting up Public EV Charging Infrastructure

i. Annual Maintenance Cost after warranty period .

ii. Operating cost for Central Management System (CMS) and mobile application including cost related to data connectivity of charger with central server.

iii. Cost of Insurance of Public EV Charging Station.

iv. Gateway charges.

v. Cost of marketing and awareness.

vi. Cost for facility management services.

vii. Car parking surface painting design.

Proposed design and suggested machines for a solar powered charging Hub.

Sl. No	Model	Description
1.	BEVC-AC001	Bharat Charger BEVC- AC001, 10 KW (3.3 kW AC X 3 gun) Output Socket Based on IEC 60309 Total No. of Charging Socket: 3
2.	Combined Charging System.	1. 50 kW CCS Type II Single Gun or 2. 60 kW CCS Type II Single Gun or 3. 82kW (60kW CCS Type II + Type II AC 22kW) or 4. 100 KW CCS Type II (Two Gun) or 120 KW CCS Type II (Two Gun) or 5. 142 kW (60 kW CCS Type II + 60 kW CHAdeMO + 22 kW Type II AC)
3.	Type II AC	Charger Output- 22 KW AC -Type-2 Charger

Technical Specification of Solar Power Plant.

1. Technical compliance of the system of the components should comply the

technical compliance required by Ministry of New and Renewable Energy, Govt. of India (MNRE) , Ministry of Power and Agency for New and Renewable Energy Research and Technology (ANERT).

2. The installation & commissioning of the system will be done in compliance with installation practices and guidelines issued by Kerala State Electrical Inspectorate. The installation will be done under the supervision of Electrical supervisor/ contractor with required license (Minimum)
3. Only ANERT approved components should be used in the installation of Solar Power Plants.If the Solar Panels or PCU is not ANERT Approved one, Beneficiary should submit the necessary test certificate to ensure the quality of components. Solar modules should be selected from ALMM(Approved List of Modules and Manufactures) of MNRE.

How to apply for setting up of Public Electric Vehicle Charging station.

Land Owners /Investors interest in setting up of Solar Powered Public Electric Vehicle Charging Station shall visit ANERT website and download application form **www.anert.gov.in**

for further details please contact

email **emobility@anert.in**

Toll free No. 1800 425 1803 or concerned District ANERT office.

Chief Executive Officer

Enclosure,

1. Format of Work Order (Annexure I)
2. Format of Agreement between Agency and Beneficiary. (Annexure II)
3. Format of Completion Report. (Annexure III)
4. Application Form (Annexure IV)
5. Format for Agreement between ANERT and Beneficiary. (Annexure V)
6. List of Empanelled Agencies for installation of Public E Car Charging Station.
7. List of EVCI machines approved for installation of Public E Car Charging Stations.