Empanelment Number: NREDCAP/EV/CPD/2022-23 Dated: 02.09.2022

Empanelment of Charge Point Developers for Development of electric vehicle charging stations in Andhra Pradesh

Request forProposal

Prepared By

New and Renewable Energy Development Corporation of Andhra Pradesh Ltd.

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1. Definitions:

SNA: State Nodal Agency

NREDCAP: New and Renewable Energy Development Corporation of Andhra Pradesh Ltd.

CPD: Charge Point Developers

CNA: Central Nodal Agency

Electric Vehicle Supply Equipment (EVSE): Electric Vehicle Supply Equipment (EVSE) is equipment or a combination of equipment, which provides dedicated functions of supplying electric energy, from a fixed electrical installation or supply network to an EV for the purpose of charging.

Public Charging Stations (PCS): Consists of EVSE, associated electrical infrastructure, space for parking (with clearance), ingress/egress for vehicles and has open (unrestricted) access for the public. Additionally, PCS must not have any usage restriction for any EV user.

Slow Charger: A slow charger rating will follow the rating as defined in revised guidelines and standards issued by Ministry of Power.

Moderate/Fast Charger:A moderate / fast charger rating will follow the rating as defined in revised guidelines and standards issued by Ministry of Power.

Downtime: Refers to the time duration when EV charger is non-operational due to disruption in power supply or disruption in IT service (server-side error) or both. In this context, the downtime due to disruption in power supply from the DISCOM will not be accounted for penalty. Therefore, here "Downtime" is accounted for only if there is more than 5% user error rate due to disruption in IT service or faulty equipment. Downtime is measured based on server-side error rate.

Monthly Uptime Percentage: means the total number of minutes in a calendar month minus the number of minutes of Downtime suffered in a calendar month, divided by the total number of minutes in a calendar month.

Electricity Tariff: Refers to the cost of electricity including tariff associated charges viz. regulatory surcharges, electricity tax, pension trust charges, Power Purchase Adjustment Charges (PPAC) etc. as charged by the DISCOMs.

Operationalization: Means that EV-Users have unrestricted access to the charging station and are able to charge their vehicles.

Operating Time: Means the period during which charging can be carried out at a charging station

Locations:NREDCAP will allot locations initially to take-up feasibility studies and upon completion of feasibility studies the CPD shall enter tripartite agreement with Land Owner Department and NREDCAP. The locations will be provided on first come first basis in a phased manner.

Revenue Share Amount to Land Owner @ Rs.2.55 per KWh consumed by EV-User.

Service Charge: Service charge is the fee, excluding electricity tariff, time-based penalty, and GST, which the CPDs charges a user for charging an EV at a PCS. Irrespective of the charging criteria (per unit or as per subscription plan).

Time based penalty: Refers to the penalty charged from an EV user for keeping the vehicle plugged beyond 80% State of Charge (SoC) or parking in the space allocated for EV charging while not connected to a charger. The penalty is optional and can be levied by the CPDs to discourage the EV user from occupying the charger for longer periods of time than required and thereby denying the opportunity for other EV users to charge their vehicles.

2. Letter of invitation for Empanelment

New and Renewable Energy Development Corporation of Andhra Pradesh Ltd (NREDCAP) intends to invite CPDs (techno-financial EoI) frominterested and technically qualified agencies under its e-mobility initiative. Brief scope of work and deliverables areat **Section 4.0** and detailed procedure for submission of Interest is at **Section 8.0**. The prescribed format for submission of Empanelment is at ***Annexure-I***and***Annexure-II***.

The EOI must accompany with a refundable Earnest Money Deposit (EMD)of INR 1,00,000(Rupees One Lakh only) and a non-refundable Empanelment processing charge of INR 25,000 (Rupees fifty thousand only) separately in the form of Demand Draft drawn in favor of **VC & Managing Director, New and Renewable Energy Development Corporation of Andhra Pradesh Ltd, (NREDCAP), Tadepalli" payable at Tadepalli**. In case of disqualification the EMD amount will be refunded.
The Interests may be submitted to**Vice chairman and Managing Director,NREDCAP,12-464/5/1, River oaks apartments, CSRKalyanaMandapam road, Tadepalli, Guntur District, Andhra Pradesh-522501ev@nredcap.in &gmtech@nredcap.in.**

Already empanelled for the year 2022-23 with NREDCAP need not apply.

3. Objective

India is among the fastest growing countries in transportation sector with one of the lowest motorization rates in the world (22 cars per 1,000 people). From 2011 to 2020, India's domestic vehicle sale (2W, 3W, Passenger Vehicle, Commercial Vehicle) has grown at ~4% CAGR[1].

Road transportation industry is among the highest consumers of natural gas and high-speed diesel in India. During FY19, only 12% of overall crude oil demand and 64% of natural gas demand was met from domestic production and balance was met through imports. The import dependency of India on crude oil has been increased from 84% in FY13 to 88% in FY19[2].. International crude oil prices have had significant impact on India's current account balance because of imports. To avoid import dependency, India needs to move away from conventional vehicle technology.

Transportation, however, has contributed significantly to India's overall GHG emission also. During year 2016, transport sector contributed to 270.6 MT CO_2 of GHG emissions, third highest, only after power industry and industrial manufacturing. Within transportation, road transport has been the highest contributor to the GHG emission.India was ranked 5th in World's most polluted countries in 2019. 6 of the World's 10 most polluted cities were in India in 2019. Thus, adopting sustainable mode of transportation like use of Electric Vehicles (EVs) will be very much beneficial for India for a healthier environment and also saving import bills.

To promote and encourage people to adopt zero emission EVs, Central Government have launched several schemes to achieve sustainable transportation goals. Ministry of Power, Government of India, launched "GO ELECTRIC" Campaign with the objective of creating awareness among masses on benefits of adopting Electric Vehicles (EVs). This initiative is intended to encourage consumers to switch over to EVs thereby, reducing dependency of our country on imported fuel.

Department of Heavy Industries (DHI), Ministry of Heavy Industries& Public Enterprises under its Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME-India) Scheme, has sanctioned 2,877 public EV charging stations across 68 cities and is also in the process of sanctioning public EV charging stations across 25 major highways / expressways in India to enhance the outlook of EVs among masses and accelerate their adoption in the country. Apart from this, several government/private agencies are also installing Public EV Charging Stations on their own. With large scale adoption of EVs, the number of charging stations is certainly going to increase to address the perception of range anxiety among the consumers.

In the above context, for large scale EV adoptionenhancing the charging infrastructure network is necessary. Thus, it is proposed to empanel the agencies for installation of public charging stations across Andhra Pradesh.

[1] https://niti.gov.in/sites/default/files/2021-04/FullReport_Status_quo_analysis_of_various_segments_of_electric_mobility-compressed.pdf
[2] https://niti.gov.in/sites/default/files/2021-04/FullReport_Status_quo_analysis_of_various_segments_of_electric_mobility-compressed.pdf

4. Scope of Work

The purpose is toempanel CPDsforinstallation, commissioning, and operation of EV charging stations at provided locations as per the description of work stated below:

a) Successful CPDs shall be responsible for installation, commissioning, operation& maintenance of EV charging station (Slow/ Fast) at locations provided by Andhra Pradesh. The maximum time for completion of the installation and commissioning of all charging stations shall be 6 months (including rainy season).
b) Successful CPDs shall procure, install, and commission the EV chargers.

c) The agency shall also be responsible for Operations, Maintenance, Security &Insurance of all charging stations allotted to them

d) Electricity connection will be provided by state DISCOMs (as per its licensee area)within the stipulated timeline defined in Final Consolidated EV Charging Infrastructure Guidelines dated 14th January 2022. NREDCAP will facilitate the selected agency in providing electricity connection for the public charging stations.

e) Paying of electricity bills of all charging stations will be the responsibility of successful CPDs

f) For the entire contract period, essential services are to be provided by the successful CPDs. The CPD shall provide essential services like toilets, drinking water, dustbins, etc. as per the guidelines of related departments from time to time.

g) CPD shall also be responsible for maintaining the concrete paving or providing paver blocks including the beautification including marking etc. at charging stations

h) The safety and security of the vehicles that are utilizing the charging facility will be the responsibility of the successful CPD/s

i) The CPD shall coordinate with NREDCAPthat no other related infrastructure shall be placed within 100mdistance of a charging station. - it is to ensure that other related (charging station or similar activity) placed near (100m radius) of the charging station, shall minimize the usage of a particular charging stations

j) No additional commercial activity at the premises will be allowed. If required, writtenpermission for the same would need to be sought from NREDCAP after settling the commercialterms.

k) Successful CPD/s shall not be allowed to sale the rights to any other person or entity.

4.1 Project Site

- NREDCAP hereby undertakes to handover to the CPD physical possession of the Project Site (charging station) free from encumbrance together with the necessary rights of way leaves for the purpose of implementing the Project but subject to the rights of NREDCAP and the land-owning agency.
- The project shall commence commercial operation within 180 days from the signing of the contract date of Agreement and the handing over of sites shall be linked to agreed construction schedule.

- NREDCAP confirms that upon the project site being handed over pursuant to the preceding para, the CPD shall have the right to enter upon, occupy and use the project site and to make at CPD's costs, charges and expenses such development and improvements in the Project Site as may be necessary or appropriate to implement the Project and to provide the Project Facility subject to and in accordance with the provisions of Drawing/ or as directed by Engineer-in-charge & as per this Agreement. The successful CPD shall not without prior written consent or approval of NREDCAP use the Project Site for any purpose other than for the purposes of the Project / the Project Facility.
- Selected CPDs must share the revenue with the land-owning agency. The CPD shall payRs.2.55/kWh including all charges (used for charging). As per discovered rate the amount is to be paid **to the designated account of the Land-owning agency through payment gateway then and there itself on realization from EV-User and service charges to NREDCAP @ Rs.50 paise including all taxes is to be paid in the similar way.**
- Payment other than revenue sharing will not be liable to charging station operator regarding land like municipality tax etc.

4.2 Public Charging Infrastructure – Mandates

- Each location should have a minimum number of slow charger PCS. Additionally, there may be a minimum number of moderate/fast charger PCS in each Package of sites based on the availability of space and requirement.
- Over and above the mandated slow and moderate/fast PCS, the successful CPD can install any combination of AC or DC chargers which meet the standards defined as per **Ministry of Power (MoP) Notification vide No 12/2/2018-EV dated 14th January 2022 titled "Charging infrastructure for Electric Vehicles - Revised Guidelines and Standards** - subsequent amendments thereof. Additionally, each PCS should adhere to all other standards/conditions defined in any part of this document.
- The CPD can increase the service charge on slow chargers and moderate / fast chargers on a year-on-year basis on account of inflation as per the state level committee constitution, but such an increase should not exceed 5% within the span of 1 year.
- The failure to operationalize themandates will lead to weekly penalty at the rate of INR 15,000/- for each site up to maximum of INR 1,50,000/- per site
- PCS should be made operational only after requisite clearances are obtained as per CEA Regulations 2019, and subsequent amendments
- Tie up with at least one online network service provider to enable advance remote/online booking of charging slots by EV owners

- All charging points/chargers should have beentype tested by an agency / lab accredited by NABL from time to time

4.3 Charging Station Functionalities

The agency must ensure the following:

a) Charging station must support at least the following functionalities for EV users:
   - Location of charging station (Address of the charging station along with the GPS coordinates)
   - Charging station operating hours
   - Type of chargers (Slow / Moderate / Fast)
   - Availability of slots at charging station (Whether the EVSE is connected to an EV or not)
   - Waiting time and option for booking a slot in case of congestion (Whether the charger is available or booked for particular slots)
   - Cost to the consumer for all types of chargers
   - Authentication methods available (at least two methods: app-based and RFID cards)
   - Option to lodge a complaint for non-functioning charging station/charger
   - Payment methods available
   - The EV user must be able to access these services through a mobile application(which will be developed by BEE in due course of time), including the ability to make payment through the mobile application.

b) Communication Requirements:
   - Digital Communication Between the EVSE and the EV-User :
     For AC/DC charging, the digital communication as described in IEC 61851-24 must be provided to allow the EV to control the EV supply equipment
   - Digital Communication between the EVSE and the Charger Management System:
     The communication between any charger and the charger management system of the CPD must mandatorily use the communication protocol Open Charge Point Protocol (OCPP) – version 1.6 or higher, compatible with OCPP 1.6 or IEC 61850-90-8. The interface between the charger and successful CPD/s must be reliable internet connectivity (Ethernet, 3G/4G). Telecommunication network or telecommunication port of the EV supply equipment, connected to the telecommunication network, must comply with the requirements for connection to telecommunication networks according to 6 of IS 13252 (Part 1): 2010.
   - **Digital Communication between the Charger Management System and the DISCOM**- The communication between EVSE and DISCOM shall be Open Smart Charging Protocol (OSCP) 1.0 or (OpenADR + IEEE 2030.5) or IEC 61850-90-8 protocol or higher version of these protocols as and when notified by NREDCAP. The Agency must have provision for the data to be made available for the DISCOM or any agency as and when notified by NREDCAP.
   - **Digital Communication between different Charging Stations**:
     The Agency shall make provision for communication with other Charging Stations if required or as and when notified by NREDCAP/ Related Govt. Department, The communication between the two Charging Stations shall be either Open Charge Point Interface (OCPI) 2.1 protocol or Open Clearing House Protocol (OCHP) direct 0.2 or higher version of these protocols as and when released.

c) The CPD must make provision that the following information would be made available to its respective DISCOM on a regular basis as agreed upon by NREDCAP:
    - Peak hours of EV charging
    - Real-time power consumption from charging from each charge point (using smart meters)
    - Session - Start & Stop for each charger (Timings & Duration)
    - Instantaneous current flow to EV
    - Instantaneous AC RMS supply voltage
    - Instantaneous active power imported by EV (W or kW)
    - Instantaneous reactive power imported by EV (VAR or KVAR)
    - Instantaneous power factor of total energy flow
    - Charger ID
    - Location (GPS coordinates)
    - Emergency Stop (along with reasons), if any
    - Frequency of any voltage fluctuation issue
    - Tariff charged from consumer

4.4 Information to be submitted to open Database:

The licensee must make provision that the following information would be made available to the open database managed by NREDCAP.

Station level data:

- Name of the charging station
- Location (latitude, longitude)
- Operator name and contact details
- Modes of payment accepted
- Advance booking availability with available slots
- Operating hours and days
- Operating status (operational or non-operational)

Charging unit level data

- Charging unit ID
- Type of charging gun along with quantity of each and the capacity of each charging gun
- Operating status (Connected or Available or Out of Service)
- Maintenance alerts
- Usage statistics- timestamps of charging usage
- Power consumption- Separately for each charging point

4.5 Safety Norms

All PCS should be incorporated with suitable protection and monitoring devices for safe and reliable operation of charging stations. All PCS must follow the following safety norms:

- Safety provisions for charging stations, CEA (Technical Standards for Connectivity of Distributed Generation Sources) Regulations, 2019

- CPD shall keep the records to an extent that the PCS installation have been carried out and maintained in accordance with safety norms as per the relevant CEA Regulation & manufacturer's installation and maintenance instructions
- All safety standards must be followed as mentioned in CEA guidelines dated 28 June 2019 and subsequent amendments
- Protection against the overload of the charging supply and incoming supply fittings must be provided
- The CPD must ensure that the licensed space for PCS must not be misused due to actions such as intentional / unintentional blocking of parking space by vehicles which are not being charged

4.6 Billing and payment requirements

a) Metering

- Smart metering as per Indian standards must be ensured for power consumption by EV chargers at the EV charging station.
- Separate metering must be ensured by the CPD for other associated purposes such as office of EV Charging station, public amenities, consumption of other equipment etc.

b) Billing

- Billing must be as per service charge – finalized/approved byNREDCAP.
- The EV user must be provided with a bill stating the cost distribution & electricity consumption with charging time.

c) Payment

- BHIM, UPI, NFC, RFID and mobile wallet/mobile app based compliant mobile application payment.

5. Project timeline

Total duration for the project shall be six(6)months. Project milestones are as under.

S. No.	Activity	Timeline
1.	Location occupied by successful CPD/s	Within 2 weeks, after assign the work order
2.	Install and Commission the charging station	Within 16 weeks,after occupying the location
3.	Handover the request letter for completion certificate from NREDCAP.	Within2 weeks, after installing the charging stations
4.	Approval from the NREDCAP.	Within 2 weeks

6. Selection Process

6.1 Pre-Qualification Criteria

TheAgencies interestedinbeingconsideredforthistaskpreferablyshall fulfillthe following criteria:

S. No.	Description	Documents / Proof
1.	Should be a company registered/incorporated in Indiaunder companies Act 1956/2013	Certificate of incorporation issued by the Registrar of companies along with Memorandum of Articles of Association
2.	The agency should be registered with the Service Tax department and carry a valid PAN/TAN (Proof of the same must be submitted)	Copy of Service Tax/GST Registration Copy of PAN Card Copy of TAN Card
3.	Should have a minimum annual turnover of INR 10 cr. in last three (3) Financial Year (FY) i.e. FY 2019-20, 2020-21, 2021-22	A certificate to this effect from CA in original must be submitted
4.	Should have been profitable for at least two (2) of the last three (3) years i.e.,FY2019-20, 2020-21,2021-22.	Copies of Income Tax returns for the last three years (FY 2018-19, 2019-20 and 2020-21)
5.	Should have completed 5 projects related to installation & commissioned of electrical work /operation or maintenance of charging stations/ battery swapping in India for any Central Govt./ State Govt./ PSU or any Private Limited company of repute.	Copies of work orderswithwork completion certificates
6.	An undertaking (self-certificate) that the agency has not been blacklisted by a central / state Government institution and there has been no litigation with any government department.	Self-Declaration that the CPD has not been blacklisted

Note:

- Relaxation will be provided as per the applicable extant Rules of Govt. of India for MSME & Start-ups
- Consortium / Joint Venture will not be allowed for the project

6.2 Preliminary Scrutiny

Preliminaryscrutinyoftheproposalwillbemadetodeterminewhethertheyare complete,whetherrequired empanelment processingfeehasbeenfurnished,whetherthe documentshavebeenproperlysigned,the EoIs areinorder,and the CPD meets all the pre-qualification criteria. Proposals not conforming to these requirements will be rejected.

6.3 Evaluation of Proposals

6.3.1Financial & Technical Evaluation

NREDCAP will evaluate proposals and will give marks to all the successful CPDsfrom preliminary scrutiny on following basis:

S. No.	Criteria	Total Marks = 100			
	Financial and Technical Experience	Level	Score	CPD's Response (Please tick the applicable option/grade yourself)	Max Score
1.	**Financial Experience**				
A.	Annual turnover average of last Five preceding financial years i.e. 2017-2018, 2018-19, 2019-20 , 2020-21&2021-2022	Between 10 to 30 crores	5		10
		More than 30 crores	10		
B.	Annual turnover by charging station business in last 3 financial year (installing, commissioning & operation) 2019-20, 2020-21&2021-22	Up to 5 cr.	3		10
		5-10 cr.	5		
		Above 10 cr.	10		
C.	No. of locations, where charging station have been installed based on revenue sharing with landowner	Up to 10 no.	5		15
		10 – 30 no.	10		
		Above 30 no.	15		
2.	**Technical Experience**				
A.	Experience of electrical work -Class A Contractor or outdoor advertising works along with electrical work installation projects	5 – 10 years	3		10
		10 – 15 years	7		
		Above 15 years	10		
B.	No. of Projectscompleted (mention above) in last 5 years	5-10no.	3		10
		11-20 no.	7		
		More than 20	10		
C.	Experience in installation of charging stations (fast & slow)	2-5 years	5		10
		Above 5 years	10		
D.	No. of Projects completed in last 3 years	1-5 projects	5		15
		6-10 Projects	10		
		More than 10 Projects	15		
E.	Experience in operation & maintenance of charging stations for a minimum period of at least one year (No. of charging stations)	10 – 20 no.	3		10
		20 – 50 no.	7		
		Above 50 no.	10		
F.	Should have know-how ofinformation technology, onlineplatform etc. and should havetrained IT manpowerand ITinfrastructure facilities	5years.	3		10
		6 – 10 years	7		
		Above 10 years	10		
Total Technical Score					**100**

Note: Only CPDs with minimum of 70marks will be qualified for the financial Empanelment.

6.3.2Final evaluation criteria

1. Empanelment will be taken up who scores a minimum of 70 marks
2. Locations allocated on first cum first basis in a phased manner, initially few locations will be allotted to the empaneled CPD and second round allotment will be taken as per the performance.
3. The CPD shall give consent to rentals on revenue sharing basis amount of Rs.2.55/- per KWh power sale to Land owner as discovered by NREDCAP.
4. The CPD also give consent to pay an amount of Rs.0.50 paisa per KWh on power sale as service charges to NREDCAP.
5. The CPD shall give consent to EV-User power charges fixed by committee constituted by State level Committee.

7. PaymentTerms

7.1 Payment Schedule

a) The Agency will sign a Tripartite Agreement with the site owning agency & NREDCAP detailing the payment terms. The revenue sharing shall be done directly between the land-owning agency and the CPD. As per the provisions of tripartite agreement all the disputes regarding land related matters shall be resolved mutually between the land-owning agency and the CPD.

b) The payment terms between the CPD and the land-owning agency shall be **INR 2.55/kWh** of power sold through the public charging stations. As per directions CPD shall be provided by Land Owner agency bank details, the amount at the rate of Rs.2.55/- per KWh power sale and Rs.0.50 paisa per to NREDCAP as service charges shall be transferred digitally through payment gateway immediately after receipt from EV-User.

c) 7.2 Penalty

In case of any delay in the execution of the order beyond the stipulated date of delivery/delivery schedule/completion period including any extension permitted in writing, the purchaser reserves right to recover from the Contractor a penalty at the rate of INR 15,000 for each site per week up to a maximum of INR 1,50,000/-. The amount of penalty can be recovered from any other contract for any amount due to the CPD from Purchaser.

Service Level Agreement:

- The successful CPD/s must ensure a Monthly Uptime Percentage of 98% (excluding forpower failure related downtime and scheduled downtime) which means that charging servicesshould be operational and available to the EV users at least 98% of the time in any calendarmonth
- Faulty charging equipment should be repaired and/or replaced within 24 hours of thecomplaint
- The successful CPD/s should take corrective actions for all discrepancies, violations,or deficiencies within 15 working days
- The successful CPD/s must replace malfunctioning firmware as well as provide any additionalfeature request at no extra cost
- The successful CPD/s should provide system availability and response time report uponrequest by NREDCAP and or any authorized/designated institution

Annexure1: Format for Technical Empanelment

CPD'sOrganization Name……

Name of Contact Person……

Address…….

……...

Phone No……..

Fax No……..

Email…….

Sl.No.	Particulars	Relevant information (with documentary Proof)
1	Ernest Money Deposit (EMD) Details	
2	Empanelment processing Fees	
3	Type of CPD organization (Government/ Semi government / private/ Society etc.) A copy of the organization's registration.	
4	The agency should be registered with the Service Tax department and carry a valid PAN/TAN/GST. Proof of the same must be submitted	
5	The organization's minimum turnover for past three financial years shall be INR10 cr. per year. (A summarized sheet of turnover of last three years certified by registered CA) 2019-20 2020-21 2021-22	
6	CPD should have a positive net worth during the last three financial years (2019-20, 2020-21 and 2021-22)	
7	An undertaking (self-certificate) that the CPD hasn't been blacklisted by a central / state Government institution and there has been no litigation with any government department on account of IT services	

(Signature of the CPD)

With Seal
Date:

Annexure2: Format for Financial Empanelment

S. No	Description	Amount
1	Revenue sharing amount to Land Owner Department	Rs.2.55
2	Service charges to CPD	_____
3	Service charges to NREDCAP	Rs. 0.50

I hereby give consent that the amount towards power cost to EV-User against sale of power will be collected as per committee constituted at state level

(Signature of the CPD)

With Seal

Date: