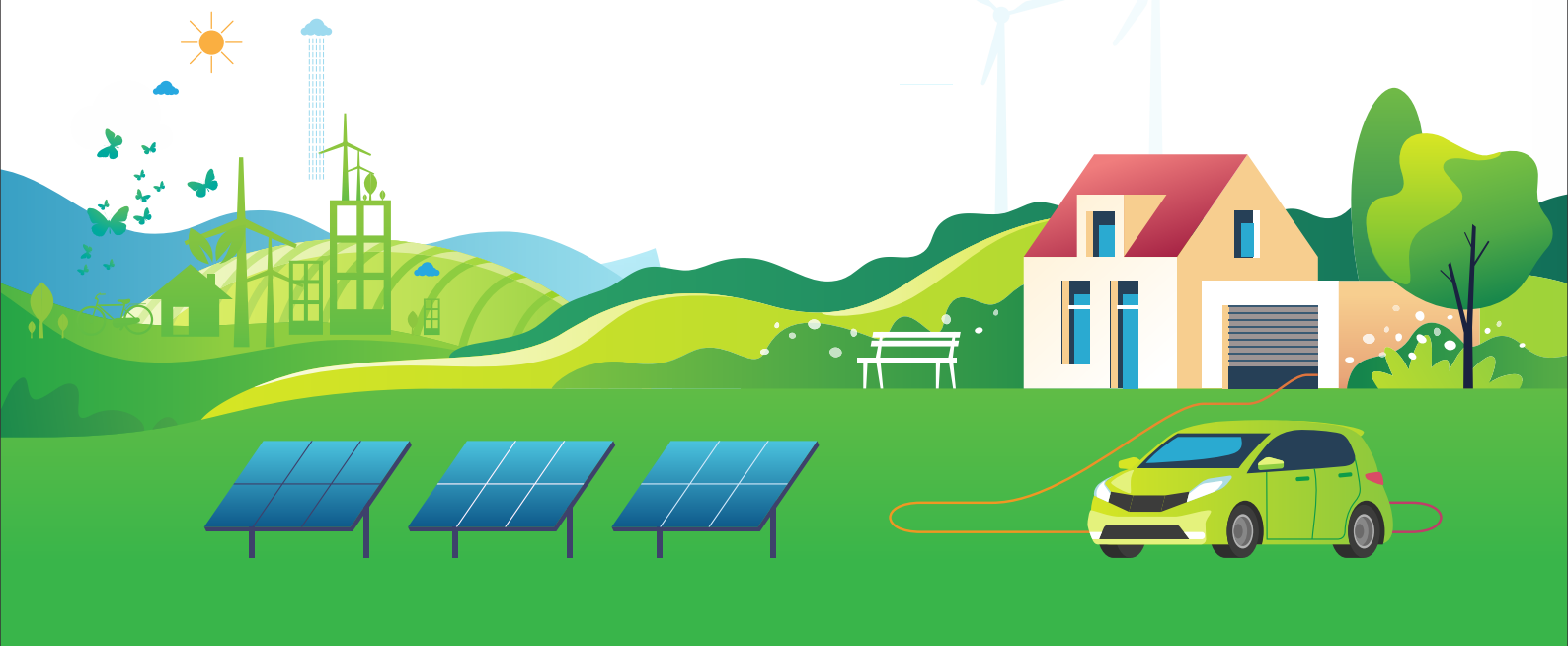
BSES
BSES Rajdhani Power Limited

BSES RAJDHANI POWER LTD.

EV PRIVATE CHARGING INFRASTRUCTURE DEVELOPMENT PROGRAM



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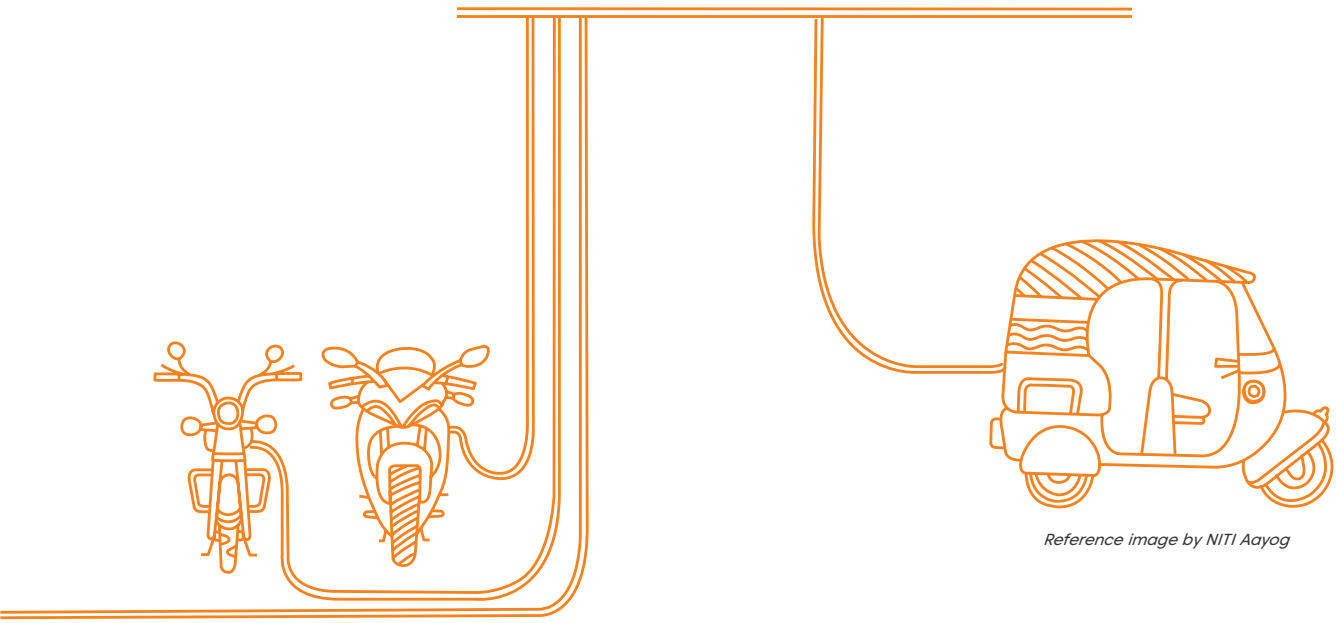


Reference image by NITI Aayog

Forward

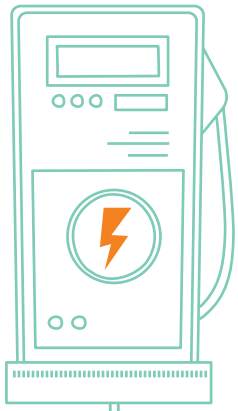
Our climate and planet are in dire straits. According to a recent report by Inter Governmental Panel on Climate Change (IPCC), there is both good news and the bad on the climate-front. The bad news is that we are on the brink of missing the opportunity to avoid catastrophic climate change.

The report states that global emissions must peak by 2025 for the chance to limit temperature increases to the 1.5C goal set out in the Paris Agreement. Global emissions must then fall by 43% by 2030, as well as a reduction in methane emissions of around 33%, from 2019 levels. The good news is that we already have the technology and financial ability globally to slash emissions by 2030. A rapid transition to EVs and clean energy can help us limit climate change.

In India, the transport sectors' contribution to CO2 emissions is in double-digits and that of Green House Gases emissions is around 60 percent. All metro cities in the country face the rising air pollution levels and Delhi is one of the most polluted cities in the world. To get a grip on the alarming situation, Indian policy makers are rigorously pushing for EVs as one of the solutions to achieve net zero by 2070.

India policymakers have an ambitious target to have 30% of all new vehicle sales be electric by 2030, which could potentially allow the country to save on crude oil imports worth over $ 14 billion annually. For expeditious EV adoption, setting-up charging facilities and other infrastructure is essential, which would need substantial investments and innovative approaches.

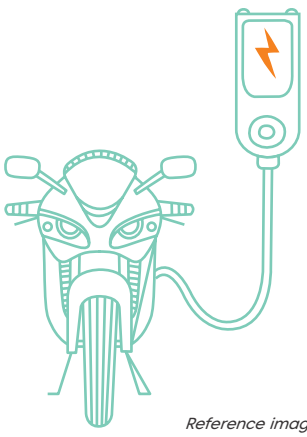
Under the Delhi EV Policy 2020, the Government has been takings steps for creating an enabling environment for an accelerated adoption of EVs in the national capital by facilitating the setting-up of the EV charging station infrastructure. Today, the share of EVs in Delhi has increased to over 9%.



Committed to promoting and mainstreaming the emerging technologies, BSES has been doing its bit to compliment the efforts of the authorities to create an EV charging eco-system in the national capital. BRPL also took the lead and facilitated the installation of the very first EV charging station under the Delhi Government's unique online Single Window Facility for setting-private EV charging points at homes, group housing societies, RWAs offices, commercial shops etc through BRPL empanelled vendors. This concept is expected to address the charging needs of around 70-80% of EV users.

To facilitate the roll-out of the concept, BRPL has come-out with a very informative booklet on the 'EV private charging infrastructure development program'. It provides all the necessary information and answers questions with regards to the Delhi EV Policy and the single window facility for availing private charging points.

This very useful booklet will help consumers make the right choice w.r.t EVs and be part of the EV revolution that is sweeping through the national capital.



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Background

The Government of India's Vision 'EV 30@30' envisages that the sales of Electric Vehicles (EV) should account for 30% of the total vehicular sales in the country by 2030. The same is aligned with the goal of the decarbonisation of the transport sector through electric run wheels. The transport sector, it is pertinent to note, accounts for around 23% of the CO2 emissions in country. These are expected to double by 2030. Additionally, the ICE engine run vehicles emit NOx, which leads to respiratory ailments.

Moreover, keeping in view the climate change commitments made by the Government of India during the COP21 Summit to reduce the emission intensity by 33- 35% by 2030 from the 2005 levels, it is essential to introduce alternative and sustainable technologies in the transport sector. These will compliment India's rapid economic growth, rising urbanization, travel demand and energy security.

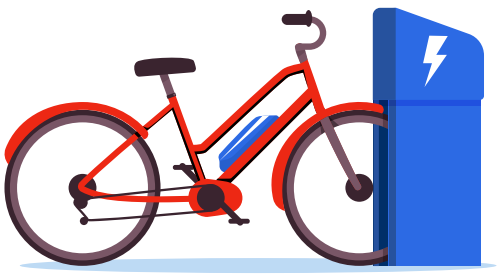
Electric mobility presents a viable alternative in addressing these challenges, when packaged with innovative pricing solutions, appropriate technologies and supporting infrastructure.

Delhi EV Policy

On 7th Aug 2020, the Delhi Government launched the Delhi EV Policy. By 2024, the Policy targets that 25% of all new vehicle registrations in the national capital must be Battery Electric Vehicles (BEV) as also the electric conversion of delivery fleets. It also makes a case for the use of EVs in the government's vehicle fleet and the purchase of new EV Buses in a bid to reduce vehicular emissions in Delhi.

Additionally, the incentives are being provided for scrapping of the old ICE vehicles, purchase of new BEV's and setting up of private charging infrastructure for the consumers. Further, new BEV's will be exempted from the road tax and the registration fees. With efforts of the government agencies, DISCOMS and CPO's, an accessible charging/swapping infrastructure is being developed in the city to promote the adoption of EVs.

A rapid shift to the EV's will play a very important role in reducing pollution in the national capital, which reaches critical levels during the winter months. Infact, the Delhi Electric Vehicle Policy, 2020 aims to establish Delhi as the EV capital of India and accelerate the pace of EV adoption across vehicle segments, including 2 and 4 wheelers.



Private Charging Infrastructure Development Program

The Policy aims to create an enabling environment for the provision of private as well as public charging infrastructure to address the issue of range anxiety of EV users by laying special emphasis on public and private charging infrastructure. Experience in other cities across the globe indicates that availability of charging infrastructure is a key driver for Electric Vehicle adoption.

Electric Vehicle users are increasingly using home and workplace charging points for their core charging needs. However, experience shows that charging points at such locations need to be engineered for safe charging with quality kits, proper electricity load management and meter installation.

The development of the private charging facilities in the private space for captive use or semi-public sites such as commercial buildings, institutional buildings, workplaces and on private property sites such as bungalows, apartments (properties with no/restricted access to common public) in Delhi is a key objective of the Delhi EV policy.

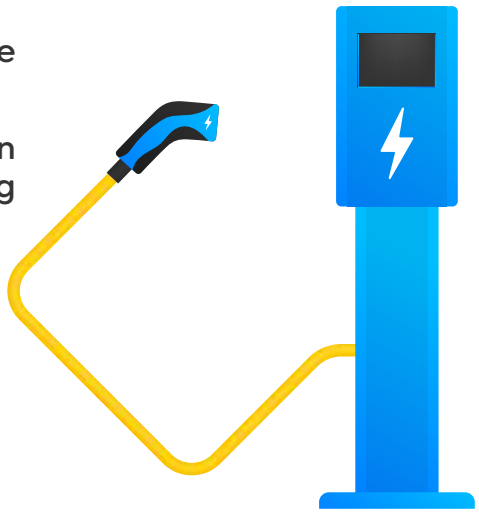
For promotion of the private charging program, the government is providing a one-time subsidy of Rs 6000 for the first 30,000 charging points. Complimenting these are the changes made in the building bye-laws to make all the new homes and workplaces 'EV ready' - with 20 % of the vehicle parking to be EV ready (i.e., with conduits and power supply infrastructure in place for EV chargers).

Majority of EV Users avail charging at Home and Workplaces, hence the program focuses on:

- Private Installation for Captive Use
- Departmental stores/ kirana stores/cafés/bars for space monetization
- RWA offices/ housing societies /malls/hospitals/cinema halls/restaurant and any other facilities with parking space for semi private use

Subsidy Eligibility for Charging Equipment:

1) Consumers installing EVSE for captive/private use are eligible for subsidy on one charging point only
2) Consumers installing EVSE for semi-private use can avail subsidy on a maximum of 20% of the parking capacity or 20 charging points, whichever is lower.



Empanelment of Vendors

On behalf of the GNCTD, Delhi DISCOMs invited E-bids from eligible bidders under 'Request for Selection' (RFS) for empanelment of vendors for the deployment of Private Charging Stations (PCS)/ chargers in the Delhi NCR region under the capex and the subscription models. This is ensuring quality EV chargers at lowest prices.

Delhi Discoms - BSES Rajdhani Power Limited (BRPL), BSES Yamuna Power Limited (BYPL) and Tata Power Delhi Distribution Limited (TPDDL) - empanelled the successful charging equipment providers or energy operators under a common tender for the entire city of Delhi. The Delhi discoms are empanelling the vendors on a rotation basis. On behalf of all the discoms, the first tender to invite interested parties for empanelment of vendors / charger OEM's was floated by BRPL.

Program Rollout

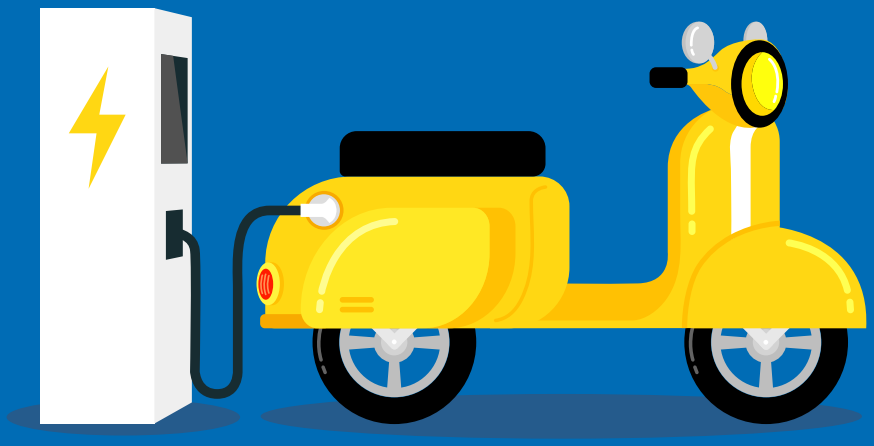
On 8th Nov 2021, Empanelment Finalization done by Hon Govt.

Common Empanelment

All three Discoms agreed for common empanelment of EVSE Providers. Control Period of each will be for three years on rotation basis

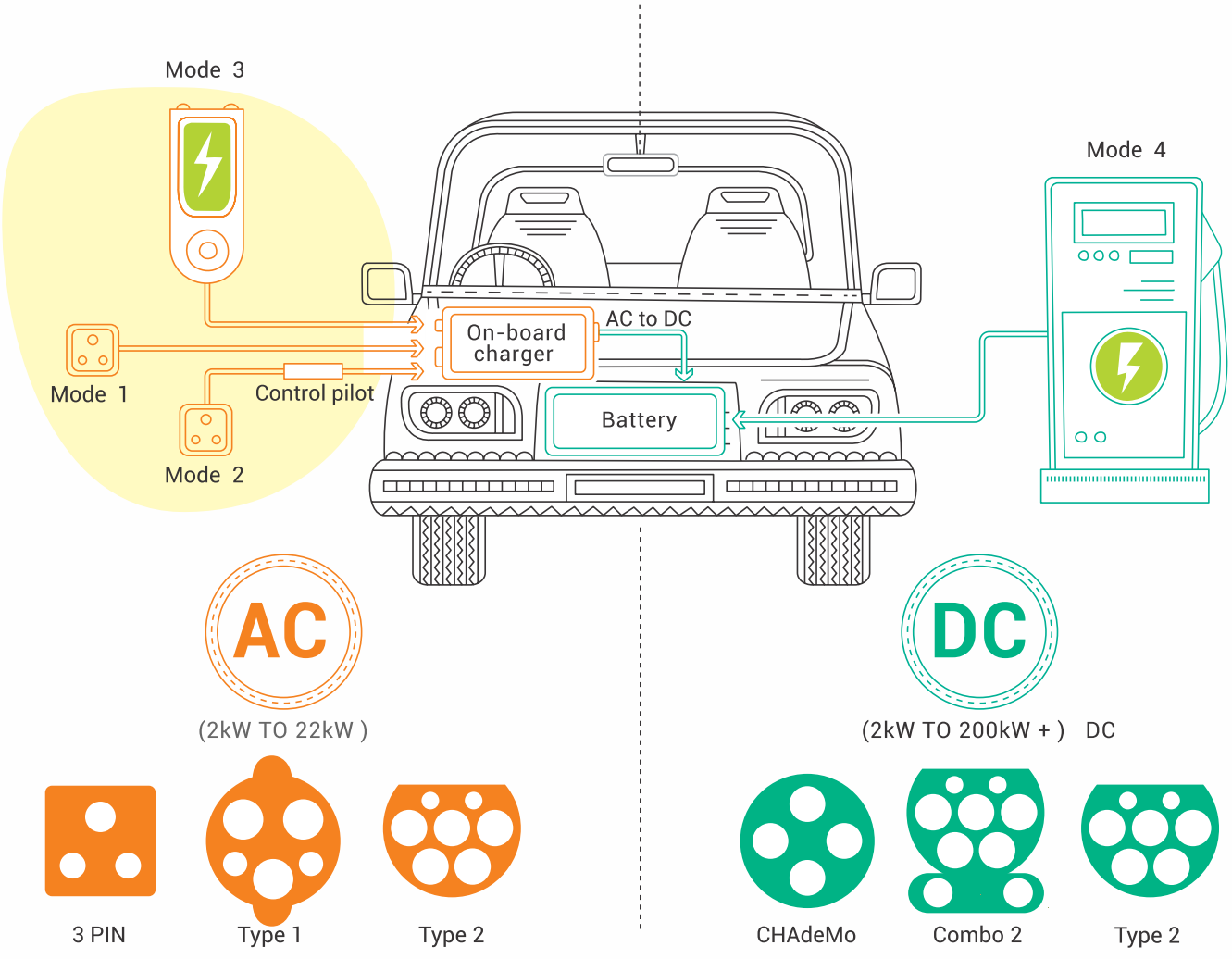
Tendering

Taking Lead BRPL Floated Tender of behalf of all three DISCOMS



Types of EV Chargers

EV charging involves supply of direct current (DC) to the battery pack. As electricity distribution systems supply alternate current (AC) power, a converter is required to provide DC power to the battery. Conductive charging can be AC or DC. In the case of an AC EVSE, the AC power is delivered to the onboard charger of the EV, which converts it to DC. A DC EVSE converts the power externally and supplies DC power directly to the battery, bypassing the onboard charger.



Reference image by NITI Aayog

AC and DC charging are further classified into four charging modes, with Modes 1-3 pertaining to AC charging and Mode 4 pertaining to DC charging. Modes 1 and 2 are applicable for connecting an EV to a standard socket outlet, utilizing a cable and a plug.

Mode 1, also known as dumb charging, permits no communication between the EV and EVSE and its use is not recommended. The portable cable used in Mode 2 has an inbuilt protection and control capability and is typically used for home charging. Modes 3 and 4, which provide a separate charger device to supply power to the EV, have improved control systems and are used for commercial or public charging.

EV charging requirements depend on the specifications of the EV batteries, as power must be supplied to the battery at the right voltage and current levels to permit charging. Hence choice of EV Charger best suitable for a consumer's needs depends on vehicle battery capacity, daily usage, charging time and location of the charging equipment.

Following chargers of Vendors has been empanelled under the Private Charging Program

LEVAC	Ac001	Dc001
Subsidized Charger	Subsidized Charger	Non Subsidized Charger
3.3 kW Single Gun	3.3 kW, 3 Gun	15 kW Single Gun

Technical Specifications of EV Chargers

DISCOM empanelled vendors offer EV chargers of the following specifications

*For LEV AC Chargers, the empanelment process shall be applicable post notification of the standards/specifications by BIS/DST.

1. AC001

Sl. No.	Parameter	Specifications
General Requirements		
1.	EVSE Type	AC
2.	Energy Transfer Mode	Conductive
Input Requirements		
3.	AC Supply System	Three-Phase, 5 Wire AC System (3Ph.+N+PE)
4.	Nominal Input Voltage	415V (+6% and -10%) as per Is12360
5.	Input Frequency	50Hz, +/-1.5Hz
6.	Input Supply Failure Backup	Battery backup for minimum 1 hour for the control system and billing unit. Data logs should be synchronized with CMS during the back up time, in case the battery drains out.

Sl. No.	Parameter	Specifications
Environmental Requirements		
7.	Ambient Temperature Range	0 °C to +55 °C
8.	Ambient Humidity	5 to 95%
9.	Ambient Pressure	86kpa to 106kpa
10.	Storage Temperature	0 °C to +60 °C
Mechanical Requirements		
11.	Suggested cable Security	Public metered AC outlet (PMAO) and the vehicle connector outlet to have provision for the locking mechanism during charging to ensure the safety of the cable
12.	Mechanical Stability	Shall not be damaged by the mechanical impact energy: 20J (5kg at 0.4m)
13.	IP Rating	IP 54
14.	Cooling	Air cooled or forced air cooled to protect the equipment against temperature variations
Output Requirements		
15.	Number of outputs	3
16.	Type of each outputs	230V (+6% and -10%) single phase, 15A as per IS12360 A.C
17.	Output Details	3 Independent charging sockets
18.	Output Current	Charging of three simultaneously, each at 15A current
19.	Output Connector Compatibility	IEC 60309
20.	Limiting output current	Circuit breaker for each outlet limited to 16A current output. Breaker should be reset to resume operation.
21.	Connector Mounting	Angled connector mounted looking downwards for outdoor use

Sl. No.	Parameter	Specifications
22.	Isolation	Class 1 and Class 2 insulation as per AIS 138 (3.3.1 and 3.3.2)
User Interface & Display Requirements		
23.	ON-OFF (Start-Stop) switches	Mandatory
24.	Emergency stop switch	Mushroom headed Push Button Type (Red Colour), visible and easily accessible
25.	Visual Indicators	Error indication, presence of input supply indication, charge process indication and other relevant information
26.	Display Size	Minimum 3.5” inches with 720x480 pixels, user interface through touch screen/keypad
27.	Display Messages	EVSE should display appropriate messages for the user during the various charging states like: • Vehicle plugged in/vehicle plugged out • Fault conditions, metering, unit consumption, duration since start of charge, time to charge, kWh
28.	User Authentication	Using mobile application or User Interface (OCPP gives only a field mandate, media to be used is open)
29.	Metering Information	Consumption Units
Billing & Payment Requirements		
30.	Metering	Metering as per units' consumption for charging each vehicle
31.	Billing	Grid responsive billing
32.	Payment	BHIM/ Bharat QR or UPI compliant mobile application payment

Sl. No.	Parameter	Specifications
Communication Requirements		
33.	Communication between EVSE and Central Server	Open Charge Point Protocol (OCPP), 1.5 protocol or higher version compatible to OCPP 1.5
34.	Metering	Grid responsive metering as per units' consumption of each vehicle
35.	Interface between charger and central management system (CMS)	Reliable internet connectivity
Communication Requirements		
36.	Safety parameters	Safety and protection to be ensured for India specific environment (as per AIS 138 part 1)
37.	Start of Charging	• The outlet will be locked and covered; the connector will be exposed to charging only after user authentication, using user interface or mobile application. • Only when the lock opens and the connector is properly connected, the switch/relay will turn ON to feed power to the EV. The lock will be opened only after full charging and authentication by user or the operator. Once disconnected, the charging session terminates.
38.	Power failure	If there is a power failure, the user is indicated about this. The charging resumes when the power comes on. If the user wants to terminate the session during power failure, the user can shut-off the switch and remove the plug.

Sl. No.	Parameter	Specifications
39.	Interruption of Charging	• Connector terminals to be mounted with temperature sensors to avoid burning of the connectors. Safety mechanism to trigger switching off the charging at temperature > 80oC for a duration <10s. In such a situation, an appropriate signal will be sent to turn the switch/relay OFF to stop the charging. Once disconnected, the charging session terminates. • If the above locking mechanism is mandated, then the following point won't be required: If the plug is taken out (for more than 2 seconds) and then reinserted for charging, the charging session will disconnect. A new session will be required to continue charging to ensure that no one can remove a vehicle being charged and insert their own cable and use the infrastructure without paying or at someone else's account.

2. LEV AC

Sl. No.	Parameter	Specifications
	General Requirements	
1.	Charger Type	AC
2.	Energy Transfer Mode	Conductive
3.	Number of Output Ports	One
4.	Input Supply	Single Phase, 50 Hz, 230 V AC +10%
5.	Charging Outlet	Single Phase, 50 Hz Rated Voltage: 230V AC Maximum Current: 15A
6.	EV AC Charge Point Socket – Outlet and Plug	As per IS/IEC 60309-1:2002
7.	Energy Measurement	Required, with 2% accuracy
8.	Mounting Arrangement	Pole or wall mounted
9.	Operating Temperature	-5 °C to +55 °C

Sl. No.	Parameter	Specifications
Communication & Protocol		
10.	Communication	With Mobile App using Bluetooth Low Energy (BLE) 4.0
11.	Protocol	Shall be compatible to standardize Mobile Application protocol
User Interface Requirements		
12.	User Authentication	Through Mobile Phone Application
13.	Charging Start/Stop Operation	Through Mobile Phone Application
14.	Visual Indicators	Presence of input supply & that of earth, charge process indication, authentication status, back-up power enabled, etc. at least through LED indicators with appropriate colour coding.
15.	Trigger for pairing through BLE in case of Power Failure	Mobile phone pairing using push button type of a switch or any other suitable means to complete the charging session with actual energy consumed feedback with backup power in case of a power failure.
16.	Energy Measurement Information	Through Mobile Phone Application
Protections		
17.	Protections	Residual Leakage current detection, Trip time: Nominal 30ms Trip current: Nominal 30mA
18.	Short-Circuit Protection function	Required
19.	Overhead Protection function	Required
20.	Type Testing Requirements	As per approved BIS standards whenever notified

3. DC001

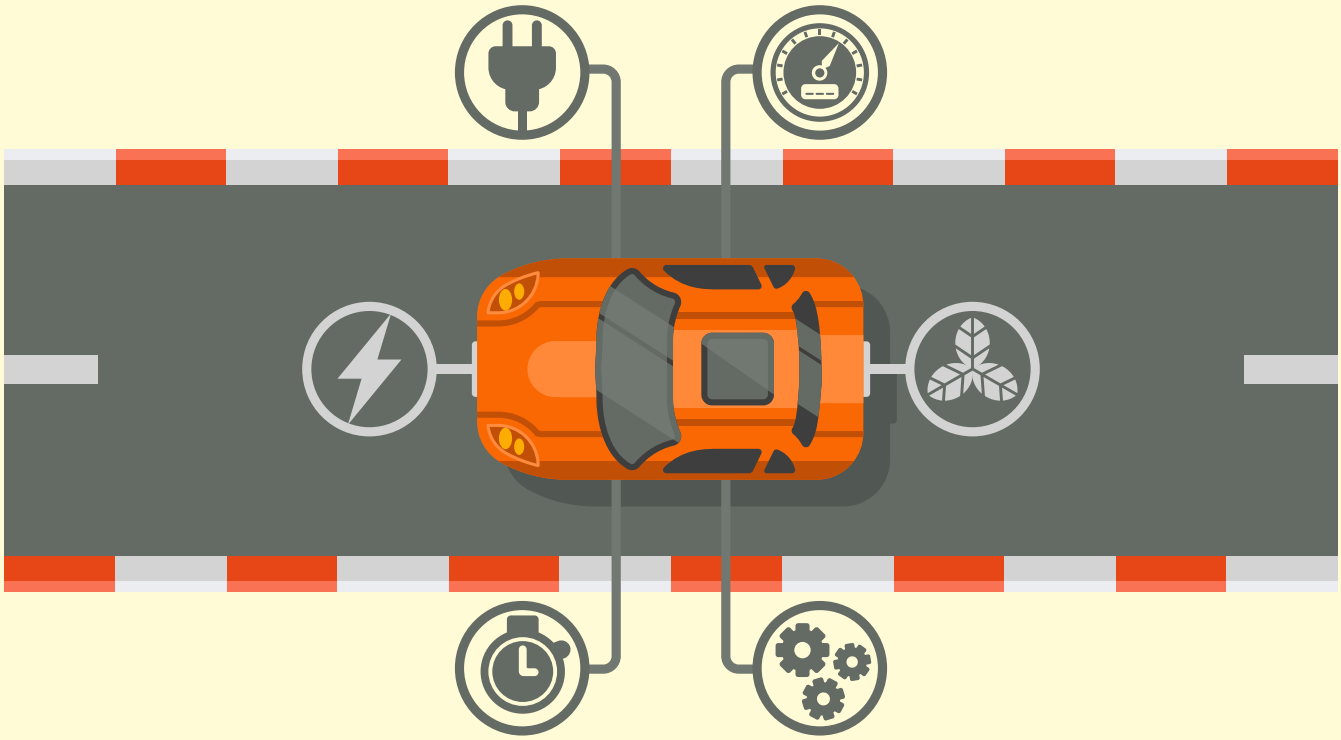
Sl. No.	Parameter	Specifications
	General Requirements	
1.	EVSE Type	Dual connector DC EVSE
2.	Energy Transfer Mode	Conductive
3.	Charging Mode	4
4.	Reliability and Serviceability	Modularity, self-diagnostic features, fault codes and easy serviceability in the field
	System Structure	
5.	Regulation Method	Regulated DC EV charging station with combination of CVC or CCC but not simultaneously
6.	Isolation	Each output isolated from each other with proper isolation
7.	Environmental Conditions	Outdoor use
8.	Power supply	DC EV charging station connected to the AC mains
9.	DC output voltage rating	Up to and including 100V
10.	Charge control communication	Communicate by digital and analog signals
11.	Interface inter-operability	Inter-operable with any EV (non-dedicated, can be used by any consumer)
12.	Operator	Operated by a trained person or EV Owner
	Input Requirements	
13.	AC Supply System	Three-Phase, 5 Wire AC System (3Ph.+N+PE)
14.	Nominal Input Voltage	3-Phase, 415V (+6% and -10%) as per IS12360
15.	Input Frequency	50Hz, +/-1.5Hz
16.	Input Supply Failure Backup	Battery backup for minimum 1 hour for the control system and billing unit, to enable activities such as billing, to be provided.

Sl. No.	Parameter	Specifications
Environmental Requirements		
17.	Ambient Temperature Range	0 °C to +55 °C
18.	Ambient Humidity	5 to 95%
19.	Ambient Pressure	86kpa to 106kpa
20.	Storage Temperature	0 °C to +60 °C
Mechanical Requirements		
21.	Mechanical Stability	Shall not be damaged by mechanical impact as defined in Section 11.11.2 of IEC 61851-1
22.	Mechanical Impact	Shall not be damaged by mechanical impact as defined in Section 11.11.3 of IEC 61851-1
23.	IP Rating	IP 54
24.	Cooling	Air cooled
25.	Dimension (W*H*D)/Weight	To be decided e.g. W*H*D mm, xxx kg
Output Requirements		
26.	Number of outputs	2
27.	Charger Configuration Types	• Type 1: Single vehicle charging 48V/60V/72V with a maximum of 10kW power, or a 2W vehicle charging at 48V with maximum power of 3.3kW. • Type 2: Single vehicle charging at 48V with a maximum 10kW power or 60V/72V with a maximum of 15kW power or a 2W vehicle charging at 48V with a maximum power of 3.3kW
28.	Output Details	Suitable for 48V/60V/72V vehicle battery configuration

Sl. No.	Parameter	Specifications
29.	Output Current	200A max
30.	Output connectors	2 output connectors
31.	Output connector compatibility	One connector with GB/T 20234.2 +1 connector to be defined
32.	Converter Efficiency	>92% at nominal output power
33.	Power factor	>/= 0.90 (Full load)
User Interface & Display Requirements		
34.	ON-OFF (Start-Stop) switches	Mandatory
35.	Emergency stop switch	Simple push button Type (Red Colour), visible and easily accessible
36.	Visual Indicators	Error indication, presence of input supply indication, charge process indication and other relevant information
37.	Display Size	Minimum 3.5” inches with 720x480 pixels, user interface through touch screen/keypad
38.	Support Language	English
39.	Display Messages	EVSE should display appropriate messages for user during the various charging states like • Vehicle plugged in/vehicle plugged out • Idle/ Charging in progress: SOC • Fault conditions • Metering Information: consumption units • Duration since start of charge, time to charge, kWh
40.	User Authentication	As per OCPP (Using mobile application or Card reader)

Sl. No.	Parameter	Specifications
Cable Requirements		
41.	Charging cable length	5 meter, straight cable
42.	Cable Type	Charging cable and connector permanently attached to DC FC
Billing & Payment Requirements		
43.	Billing	Grid responsive metering
44.	Payment	BHIM/ Bharat QR or UPI compliant mobile application payment
Communication Requirements		
45.	Communication between EVSE and vehicle	CAN based as per Annexure G of AIS 138-2
46.	Communication Interface between charger and central management system (CMS)	Ethernet (Standard)/Wi-Fi/2G/3G/4G
47.	Communication between EVSE and central server	Open Charge Point Protocol (OCPP) 1.5 protocol or higher versions compatible to OCPP 1.5. Metering: Grid responsive metering
Performance Requirements		
48.	DC Output Voltage and current tolerance	DC Output current regulation in Constant Current Charging (CCC): +/- 2.5A for the requirement below 50A, and +/- 5% of the required value for 50A or more DC Output voltage regulation in Constant Voltage Charging (CVC): Max. 2% for the max rated voltage of the EVSE

Sl. No.	Parameter	Specifications
50.	Descending rate of charging current	EVSE should be able to reduce DC current with the descending rate of 100A/s or more
51.	Periodic and random deviation (current ripple)	1.5A below 10Hz 6A below 5kHz 9A below 150kHz
52.	Periodic and random deviation (Voltage ripple)	Max ripple voltage: +/-5V Max slew rate: +/-20 V/ms
Protection & Safety Requirements		
53.	Safety parameters	Over current, under voltage, over voltage, residual current, surge protection, short circuit, earth fault at input and output, input phase reversal, emergency shut-down with alarm, over temperature, protection against electric shock
Marking of BEVDC DC001		
53.	Marking requirements	The BEVC shall bear the markings in a clear manner as per clause No. 11.14.3 of AIS 138 Part 1



Cost of Charger and Other applicable Fees:

The EV Chargers being purchased by the consumer from the Empanelled Agency can be provided as per two business models - the "CAPEX model" and the "Subscription model"

CAPEX

- Consumer to Pay Up front Net Cost of Charger
- No Minimum Procurement Limits
- Cost Includes cost of Charger, Installation Cost with 5 meter wiring and AMC for 3 Years
- After Installation ownership is transferred to consumer

SUBSCRIPTION

- Payment through 36 Monthly Installments
- Minimum 10 No's Charging Points need to be procured
- Cost includes cost of Charger, Installation Cost with 5 meter wiring, operational cost and AMC for 3 Years
- Ownership transfer after 3 Years

CAPEX Model: In this model, the consumer makes the complete payment upfront to the Vendor/CPO. The payment made to the Vendor/CPO would include the cost of the EV charger (net of subsidy and inclusive of the GST), charger installation cost (including the cost of wiring of upto 5 meters) and the annual maintenance cost for 3 years). Any additional requirement for wiring will be paid for by the consumer. The Vendor/CPO must provide the cost of additional wiring/meter along with the quotes for EV chargers.

The Annual Maintenance Contract (AMC) may be extended based on performance of the Vendor/CPO through a separate mutual agreement between the Vendor/CPO and the consumer without any involvement/intervention of the DISCOM. A faulty or non-operational charger must be replaced by the Vendor/CPO within 24 hours of a formal complaint raised in this regard by the consumer.

Light Electric Vehicles AC (LEVAC) EV Chargers CAPEX MODEL

S. No.	Empanelled Agency	EVC Model No.	Cost of Charger without Delhi Govt. subsidy (INR)	Delhi Govt. Subsidy	Amount Payable by Consumer in CAPEX Model
1.	M/s. Magenta EV Solutions Pvt Ltd.	CHARGEGRID PENTASL01P1(3)	8,375	6,000	2,375
2.	M/s. Massive Mobility Pvt Ltd.	WF01 SOCKET MODEL 1	8,495	6,000	2,495
3.	M/s. P2 Power Solutions Pvt Ltd.	P2P LEVAC	8,802	6,000	2,802
4.	Kazam EV -Tech Pvt Ltd.	KAZAM 3.3 (LEV AC- IEC 60309)	9,000	6,000	3,000
5.	M/s. Amplify Cleantech Solutions Pvt Ltd.	POD	9,644	6,000	3,644
6.	M/s. Exicom Tele-Systems Ltd.	EVAC KIRANA CHARGER 3.3 KW 1P S	10,400	6,000	4,400
7.	M/s. ETO Motor Pvt Ltd.	LEVAC CHARGER POINT	8,374	6,000	2,374

AC001 EV Chargers CAPEX MODEL

S. No.	Empanelled Agency	EVC Model No.	Cost of Charger without Delhi Govt. subsidy (INR)	Delhi Govt. Subsidy	Amount Payable by Consumer in CAPEX Model
1.	M/s. Exicom Tele-Systems Ltd.	Bharat EVAC 9.9 KW	50,530	18,000	32,530
2.	M/s. Okaya Power Pvt Ltd.	ELZQ101CC000 0210	54,594	18,000	36,594
3.	M/s. P2 Power Solutions Pvt Ltd.	P2P-415-EVC-10KW	55,700	18,000	37,700
4.	M/s. Amplify Cleantech Solutions Pvt Ltd.	BEVC-AC001	56,122	18,000	38,122
5.	M/s Tata Power Company Ltd.	BEVC-AC001	62,107	18,000	44,107

DC001 EV Chargers (No GNCTD subsidy available) CAPEX MODEL

S. No.	Empanelled Agency	EVC Model No.	Cost of Charger without Delhi Govt. subsidy (INR)		
1.	M/s. Okaya Power Pvt Ltd.	ELZQ151CC00 00211	2,32,184		
2.	M/s Tata Power Company Ltd.	BEVC-DC001	2,81,857		
3.	M/s. Exicom Tele-Systems Ltd.	Bharat EV DC 15 KW	2,89,030		

Subscription model: In this model, the total cost to the Vendor/CPO would be paid by the consumer as equal monthly installments (Subscription fee) over 3 years (36 months). The Subscription fee must be paid directly by the consumer to the Vendor/CPO before the 5th of every month - either online or offline. The consumer will sign an ECS mandate for the monthly deduction of the subscription fee from their bank account or provide post-dated cheques (PDS) to the Vendor/CPO for the entire period of the OMC. The Vendor/CPO must provide the consumer with a fee receipt for each month. The Subscription fee must be calculated by deducting the subsidy on the EV charger.

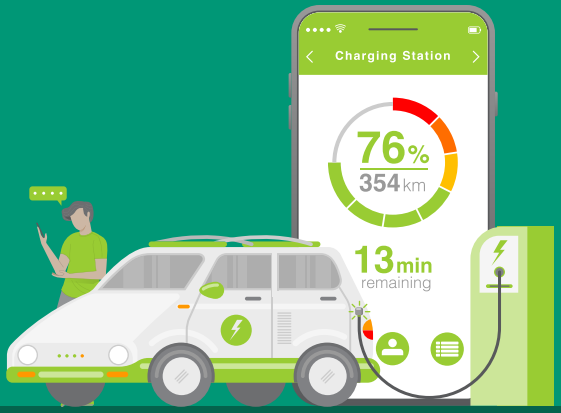
The payment made to the Vendor/CPO would include the cost of the EV charger (net of subsidy), installation cost, operational cost and maintenance cost for 3 years. The Vendor/CPO will not charge any additional cost from the consumer other than the pre-defined monthly subscription amount. After the end of the subscription period of 3 years, the ownership of the EV charger(s) would be transferred to the consumer. A consumer can opt for a subscription model only if a minimum of 10 EV Charging Points are to be procured from the Vendor/CPO.

The Vendor/CPO must incorporate network services such as efficient mapping (like location of charger, availability of charger), charger booking and payment services. Vendor/CPO will share the data from the semi-public sites required as per CEA order dated 27/06/2019.

However, the data need not be shared from private EV chargers installed at residential places, including CGHS.

The OMC must include provisions for the planned maintenance every month, breakdown related repairs (and maintenance), and the provision of charging and payment through the mobile application. The Vendor/CPO may provide the staff for operations as an additional option for the customer. The OMC may be extended based on the performance of the Vendor/CPO through mutual agreement between the Vendor/CPO and the consumer without any involvement/intervention of the DISCOM.

After completion of 3 years, the ownership of the EV charger will be transferred to the Consumer. The Vendor/CPO will issue a No Due Certificate (NDC) to the consumer, which must state that the ownership of the EV charger has been transferred to the Consumer. Thereafter, all the operational costs, including the cost of availing network services, would be the responsibility of the Consumer. The Vendor/CPO must support the Consumer, if required by the Consumer, migrating the EV chargers to a new network service provider.



Light Electric Vehicles AC (LEVAC) EV Chargers for SUBCRIPTION Model for 36 Months

S. No.	Empanelled Agency	EVC Model No.	Monthly subscription Cost of charger without Delhi Govt. subsidy (In INR per month	Delhi Govt. Subsidy (One Time per charger) (INR)	Monthly subscription Cost of charger after Delhi Govt. subsidy (INR)
1.	M/s. Amplify Cleantech Solutions Pvt Ltd.	POD	349	6,000	132
2.	M/s. Massive Mobility Pvt Ltd.	WF01 SOCKET MODEL 1	315	6,000	148
3.	M/s. Exicom Tele-Systems Ltd.	EVAC KIRANA CHARGER 3.3 KW 1P S	440	6,000	220
4.	M/s. P2 Power Solutions Pvt Ltd.	P2P LEVAC	420	6,000	253
5.	M/s. ETO Motor Pvt Ltd.	LEVAC CHARGER POINT	291	6,000	117
6.	M/s. Tecso Charge-zone Pvt Ltd	LEVAC	361	6,000	288
7.	Kazam EV -Tech Pvt Ltd.	KAZAM 3.3 (LEV AC- IEC 60309)	499	6,000	332
8.	M/s. Magenta EV Solutions Pvt Ltd.	CHARGEGRID PENTA-SL01P1(3)	503	6,000	337

AC001 EV Chargers for SUBCRIPTION Model for 36 Months

S. No.	Empanelled Agency	EVC Model No.	Monthly subscription Cost of charger without Delhi Govt. subsidy (In INR per month	Delhi Govt. Subsidy (One Time per charger) (INR)	Monthly subscription Cost of charger after Delhi Govt. subsidy (INR)
1.	M/s. Exicom Tele-Systems Ltd.	Bharat EVAC 9.9 KW	1,830	18,000	1,180
2.	M/s. Amplify Cleantech Solutions Pvt Ltd.	BEVC-AC001	2,029	18,000	1,378
3.	M/s Tata Power Company Ltd	BEVC-AC001	2,494	18,000	1,456
4.	M/s. P2 Power Solutions Pvt Ltd.	P2P-415-EVC-10KW	1,990	18,000	1,490
5.	M/s. Tecso Charge zone Pvt Ltd.	Bharat EVAC 9.9 KW	2,004	18,000	1,591
6.	M/s Evolt Energy Systems LLP	BEVC-AC001	2,750	18,000	2,250
7.	M/s Blu-Smart Charge Pvt.Ltd	BEVC-AC001	4,500	18,000	4,200

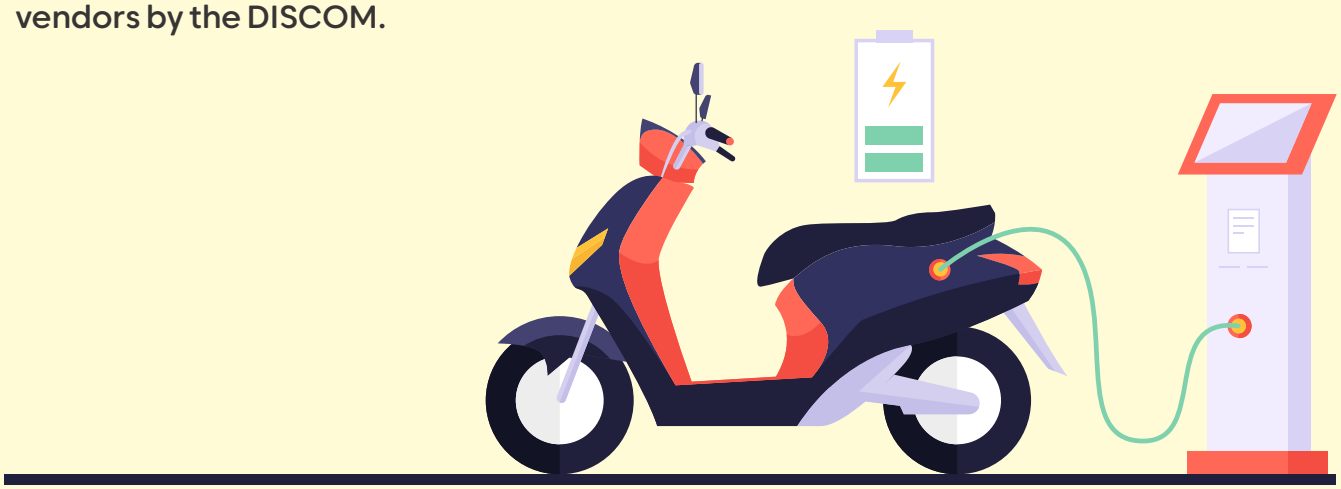
DC001 EV Chargers for SUBCRIPTION Model (No GNCTD subsidy available) for 36 Months					
S. No.	Empanelled Agency	EVC Model No.	Monthly subscription Cost after Delhi Govt		
1.	M/s. Exicom Tele-Systems Ltd.	Bharat EV DC 15 KW	10,450		
2.	M/s. Tata Power Company Ltd.	BEVC-DC001	14,680		
3.	M/s. ETO Motor Pvt Ltd.	BEVC-DC001	12,297		
4.	M/s. Tecso Charge Zone Pvt Ltd.	Bharat EV DC 15 KW	11,849		
5.	M/s Evolt Energy Systems LLP	BEVC-DC001	10,700		
6.	M/s Blu-Smart Charge Pvt.Ltd.	Bharat EV DC 15 KW	13,000		

Additional Charges in CAPEX and Subscription models:

The cost of electrical infrastructure would be paid for by the consumer as per the applicable DERC regulations. This cost will be added to the consumer's electricity bill by the DISCOM in the subsequent billing cycle.

The Vendor/CPO has to pay 5% of the total cost upfront (for the subscription model, total cost is “quoted price * 36” or INR 500 (whichever is lower) to DISCOM as per the details provided in the empanelment letter as service / facilitation charge for installation of AC-001 and LEV AC EV chargers. For DC-001, the service / facilitation charge will be INR 3000 per charger.

The DISCOM will approve the subsidy and provide the completion certificate to the Vendor/CPO after receiving the receipt of payment of service / facilitation charge. The Vendor/CPO shall submit the monthly payment report of service / facilitation charges for reconciliation. The limit and mode of payment of such charges shall be in line with DERC regulations as specified in the Empanelment letter / MOU shared with qualified vendors by the DISCOM.



Selection of EV Charger:

The EV charging requirements depend on the specifications of the EV batteries, as power must be supplied to the battery at the right voltage and at correct levels to permit charging. The typical capacity and voltage of EV batteries varies among the different EV segments, as shown in the table below. E-2Ws and e-3Ws are powered by low-voltage batteries. Electric LCVs will comprise of both low-voltage and high-voltage vehicles, depending on their load-carrying capacity.

Vehicle Segment	Battery Capacity	Battery Voltage
E-2 WHEELER	1.2-3.3 KWH	48-72 V
E-3 WHEELER	3.6-8 KWH	48-60V
E-4 WHEELER (1st Gen)	21 KWH	72 V320-
E-4 WHEELER (2st Gen)	30-80 KWH	500 V

EVSEs have different power ratings or levels based on charging requirements, which in turn determine the input power requirements for the charging infrastructure. While EVSEs with power ratings of up to 500kW are globally available, they are largely applicable for heavy vehicles like buses and trucks. Normal power AC charging is adequate for electric 2Ws, 3Ws and cars. For high-voltage e-cars with battery capacities between 30-80kWh, high-power DC charging of 50kW is used.

While high-power DC charging takes less time for e-cars, it requires higher electricity supply with additional infrastructure. Normal power charging points are therefore adequate for most charging requirements, including slow or overnight charging of e-cars.

Table below categorizes EV charging by power level, with normal power charging going up to 22kW and high power charging going up to 200kW.

Charging	Power Level	Current Type	Compatible EV
Slow/Medium Charging	<7KW	AC&DC	E-2Ws, e-3Ws, e-cars, other LCVs (up to 1 ton)
	7KW<P<22KW	AC&DC	
Fast Charging	22KW<P<50K	DC	E-cars, LCVs and MCVs (1-6 tons)
	50KW<P<200KW	DC	

Table below describes EV Chargers available with vendors under different financial models

No. of Charging Gun	Type of Charger	No. of Empanelled Vendors	
		CARPEX	SUBSCRIPTION
1	LEVAC (3.3KW)	7	8
3	AC001 (9.9KW)	5	7
1	DC001 (15WK)	3	6

Choose Your EV Charger

MOHUA Norms for No. of Charging Points	4W	3W	2W	E-BUS
	1 Slow Charger per 3EV'S 1 Fast Charger per 10EV'S	1 Slow Charger per 2EV'S	1 Slow Charger per 2EV'S	1 Fast Charger per 10EV'S

- If you are a domestic/individual consumer and wish to have a EV charger for private use, You have 1 EV in house, you may go for one LEVAC Charger

  OR

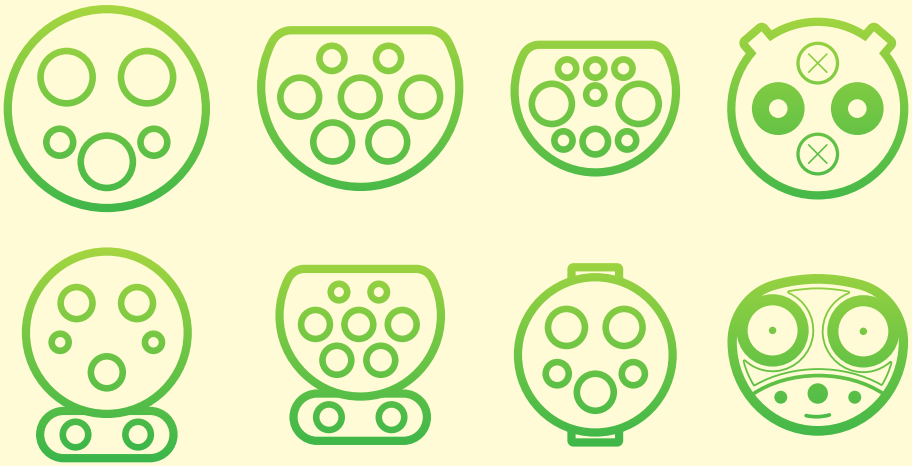
  You have/Plan to have more than 1 EV in House, you may go for one AC001 Charger

- If you have a parking lot based charging facility for 3Wheeler/E-Rickshaw or wish to monetize your space (Departmental Store/Kirana Store/Café/Bar) for EV Charging

  You may choose one AC001/ 3 LEVAC Charger

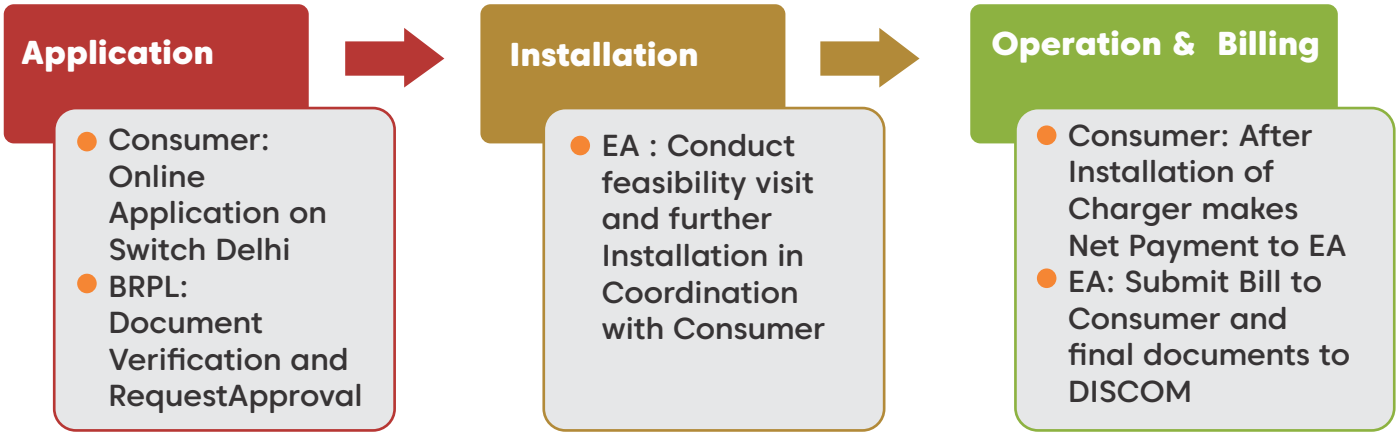
- If you are a RWA/Society/Mall/Hospital/Cinema Hall /Restaurant/Any other Facility with parking space,

  You may choose a mix of LEVAC,AC001&DC001 chargers based on Parking Space available and Charging Requirements.



EV Charger Application & Installation:

A consumer can get an EV charging station installed at his/her home and semi-public places like shops, clubs, RWA offices etc through a hassle-free single window system and Discom empanelled vendors. BRPL has developed an online 'Switch Delhi Portal' (https://bsesbrpl.co.in/switchdelhi/). This portal facilitates a complete online application system for installing an EV Charger. The same is accessible for the vendors, where they can view the pending consumer requests in their grid and also submit installation documents for subsidy disbursement.



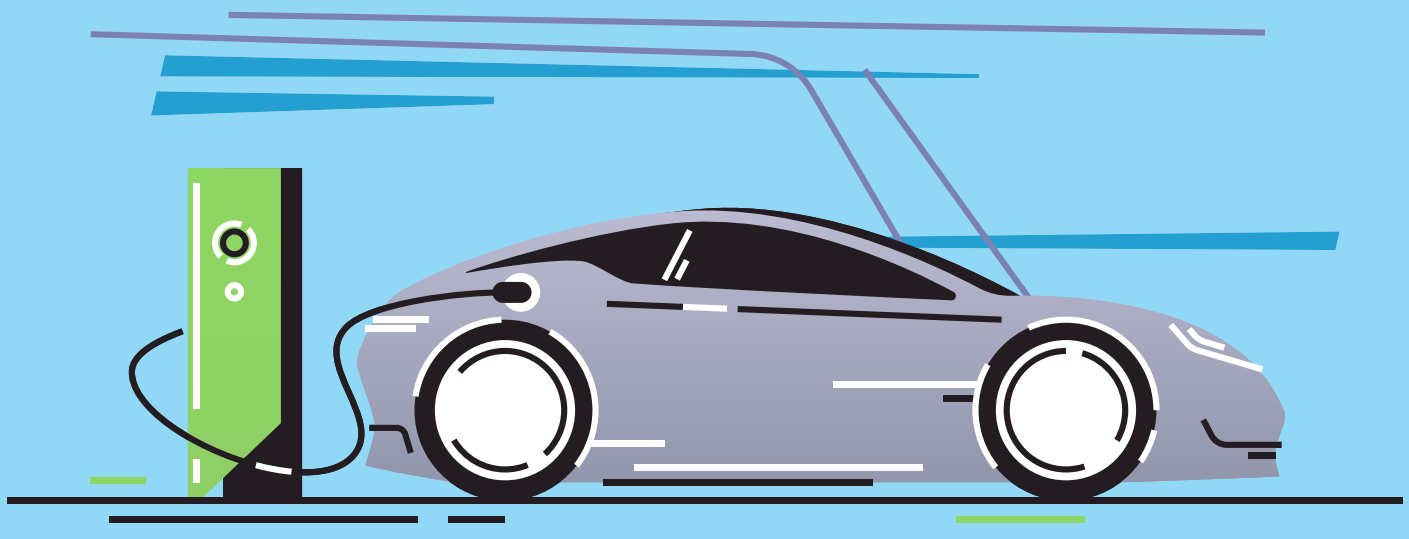
Process flow for the Installation of EV Chargers

1. An online web portal developed by BRPL displays information on the EV chargers being provided by the empanelled agencies and the technical details of the chargers. The price/subscription fee of all the chargers offered by the empanelled agencies is also displayed on the portal (http://bsesbrpl.com/switchdelhi/)
2. A consumer with his/her CA Number will register on the online portal. On successful registration, he/she will get a login ID and Password.
3. After login, using the new ID and password, the consumer will be required to upload the ID Proof and the land ownership proof, select the procurement model (capex or subscription) and select the type and number of EV charger/(s), to be bought from the DISCOM's website. The online portal will check for eligibility of the subsidy as per consumer's entitlement and provide the net of subsidy price to be paid by the consumer.
4. Based on information made available on the DISCOM,s website, the consumer will be able to determine, whether they are required to apply for a new connection to avail the EV tariff. The suggestive use cases are defined in the table below.

Type of site	Load Requirement	Minus metering	Options	Recommended Option
Kirana Store / private single dwelling household	up to 10 kW (3 LEV AC or 1 AC 001)	Sanctioned load is small and the difference in voltage levels required for minus metering is unlikely	1. Apply for new EV connection for availing EV tariff 2. Continue with existing connection with domestic/commercial tariff	Apply for new EV connection with prepaid meter
Mini supermarkets	up to 45 kW	May or may not be possible based on Sanctioned Load	1. Opt for minus metering with EV tariff 2. Apply for new EV connection for availing EV tariff 3. Continue with existing connection with commercial tariff	Priority 1 - Opt for minus metering with EV tariff if possible Priority 2 - Apply for new EV connection with prepaid meter
Commercial buildings ,CGHS, Institutional buildings etc	Immaterial	Minus metering will most likely be possible	1.Opt for Minus Metering with EV tariff if CA number is same 2. If CA number is to be different, opt for minus metering with new EV connection	Priority 1 - Opt for minus metering with EV tariff if possible Priority 2 - Apply for new EV connection with prepaid meter

5. If a new connection is required, the consumer will have the option of applying for the same on the DISCOM portal/website. If new connection is not required, the consumer can submit the application on the portal and get the acknowledgment receipt.
6. After submission of the application, the documents will be verified by the DISCOM and if found in order, will be forwarded to the Vendor/CPO
7. Vendor/CPO will visit the site, install the charger and the required electrical infrastructure and submit the final bill to consumer.

8. The Consumer will pay the Vendor/CPO any additional charges for installation. The consumer must be provided a bill for the purchase and installation of the EV charger by the Vendor/CPO, as well as for any additional charges for installation. In case of the Subscription model, the Vendor/CPO and the consumer will also be required to sign the OMC.
9. Post installation, the Vendor/CPO will submit the documents (Bill of Charger, Proof of Installation and Facilitation payment receipt) on the Switch Delhi portal for subsidy disbursement, if any.
10. Post installation, the DISCOM must use the login provided by the GNCTD to record the CA number of the consumer and the amount of subsidy (if any)
11. The empanelled agency uses its login to upload the CA number of the consumer, number and type of charger(s) installed, amount of subsidy claimed, copy of the bill provided to the customer and in-case of a subscription model, the OMC signed by empanelled agency and the consumer.
12. On receipt of the service charge, the DISCOM must provide a completion certificate to the empanelled agency within 5 working days of the payment of the service charge.
13. Additionally, the DISCOM must use the login provided by GNCTD to approve the subsidy.
14. As soon as the EV portal of the GNCTD receives input for the subsidy (for the same CA number) from the empanelled agency and the DISCOM, it automatically verifies if the amount of subsidy entered by both the entities is the same. If yes, the nodal officer of the transport department is provided a confirmation of verification, along with amount of subsidy and document uploaded by the empanelled agency
15. The nodal officer initiates transfer of subsidy to the empanelled agency's registered account within 2 days of the receipt of the confirmation of verification.



EV Charging Energy Metering

First step in getting the electricity supply for EV charging is to estimate the required power demand in kilowatts (kW). This is equivalent to the sum of the rated input requirements of all the charging points that are part of the planned installation at a given location. Once the required power demand is known, an EV owner or CPO may choose from three options to provide electricity for the EV charging infrastructure:

- Draw electricity from an existing power connection
- Arrange for a new sub meter through the DISCOM (only for Single Point connections)
- Arrange for a new electricity connection
- Use a captive renewable energy generation system

Energy Use Mode	Fixed Charges (On Enhanced Load)	Energy Charges	SLD	Security Deposit
Existing Meter	Existing Rates	Existing Rates		Existing Rates
Minus Metering (For Single Point Ony	Existing Rates	4.5/KWH	3K (up to 5KW). 3K + 500/KW (up to 150KW, max 15K)	2500/KW
EV Meter	NA	4.5/KWH		2500/KW
1. Security Deposit for Prepaid Meter is fixed at INR 3000 (up to 45KW)				

In instances, where private, semi-public EV charging is built within a facility, the CPO may choose to draw electricity from the existing power connection subject to load feasibility. CPOs or EV owners can apply for an exclusive electricity connection for EV charging within an establishment or for standalone charging facilities.

Large commercial and institutional establishments like malls, large office buildings, entertainment parks, etc. are preferred locations for providing EV charging points. Generally, these establishments have their own HT/LT connections with exclusive DTs and a high sanctioned load. In such circumstances, there is a convenient way to provide a separate LT metered connection, for EV charging, from the existing HT connection.

Users can consider the provision of “minus metering”, whereby an exclusive electricity connection for EV charging is drawn from the existing HT/LT connection of the owner establishment and the energy consumption for EV charging is measured using a sub meter. The energy consumed for EV charging will then be billed based on the applicable EV tariff.

CPOs may also choose to meet the energy requirement for EV charging, partly or in full, through captive electricity generation. However, the feasibility of this option needs to be assessed on a case-by-case basis. Captive electricity generation for EV charging is typically enabled through solar photovoltaic (PV) or solar-wind hybrid systems, supported by stationary energy storage for reliable power supply.

Sample Model for determining Cost of EV Connection:

S. No.	Type of charger	Applied Load (In KW)	Type of Connection (Pre-Paid / Post-Paid)	Security charges (In INR)	SLD Charges with GST (In INR)*	Total Demand Note Charges (In INR)	Tariff Charges for EV_LT Category excluding GST (In INR)	Benefits of EV_LT Category Connection
1.	LEVAC (Light Electric Vehicle AC charger) 3.3kW	3kW	Pre-Paid**	3,000	3,540	6,540	4.50 per Unit	Exemption of Fixed Charges
			Post-Paid (INR 2500 per kW)	7,500	3,540	11,040		
2.	Bharat AC001 (3.3kW * 3 Charging point)	10kW	Pre-Paid**	3,000	6,490	9,490		
			Post-Paid (INR 2500 per kW)	25,000	6,490	31,490		
3.	Fast Charger DC001 (15kW Single Gun)	15kW	Pre-Paid**	3,000	9,440	13,440		
			Post-Paid (INR 2500 per kW)	37,500	9,440	46,940		

Case Study on EV Charging Infrastructure Revenue Model:

Regulations permit a person with space availability to monetize his/her land with Electric Vehicle charging setup. For such consumers, revenue realization plays a vital role in making decision on type of charger, number of chargers followed by payback period to come on board for a charging infrastructure owner.

We have made an attempt to frame a business case on EV Charging as a Service

Following assumptions/figures were used for this business case:

- 1 SC is Suggested against 3- 4W and 1 FC against 10- 4W
- 1 SC is Suggested against 2 - 2W/3W
- Average a 4 wheeler EV runs 7-9 KMS/Unit of energy
- Average a 3 wheeler EV runs 13-16 KMS/Unit of energy
- Average a 2 wheeler EV runs 30-40 KMS/Unit of energy
- One AC001 has 3 Charging Points
- Service Charge for EV is considered as 2Rs/KWH unit consumed for charging
- 10Rs/Hour for 4W and 5Rs/Hour for 2W/3W is assumed as parking charges

Hence for a 20 Charging Points Infrastructure:

No. of Electric Vehicles		
4 Wheelers	3 Wheelers	2 Wheelers
6	14	21
No. of Charging Point		
LEVAC	AC001	DC001
10	3	1
Subsidy		114000
Average Travel Distance per day (In KMs)		
4 Wheelers	3 Wheelers	2 Wheelers
50	80	40
Units Required		
4 Wheelers	3 Wheelers	2 Wheelers
7	6	1

Based on the above values captured, the table below gives a brief idea of revenue generated and investment for 20 charging Point Infrastructure.

Case Study for Revenue from EV Charging Point Infrastructure			
Investment			
Description	Avg. Rate	Qty	Net Amount
3.3KW Single Point LEVAC Charger Required	₹ 9,314	10	₹ 93,140
9.9KW Three Point AC001 Charger Required	₹ 55,811	3	₹ 1,67,433
5KW Single Point DC001 LEVAC Charger Required	₹ 2,67,690	1	₹ 2,67,690
Cost of Chargers			₹ 5,28,263.00
Subsidy on LEVAC and AC001 Charger (Max 1,20,000)			₹ 1,14,000.00
Net Investment			₹ 414,263.00
Charging			
Description	Energy Consumption	No. of Charge Cycles / Day	Total Unit Consumed
Average Unit Consumption of 4 Wheeler	3.5	6	21
Average Unit Consumption of 3 Wheeler	6	14	84
Average Unit Consumption of 2 Wheeler	1	21	21
Total Energy Consumption/Day			126
Revenue			
Description	Rate/Hour	No of Hours for Full Charge	Parking Revenue
Parking Rate for 4 Wheeler	₹ 10.00	8	₹ 480.00
Parking Rate for 3 Wheeler / 2 Wheeler	₹ 5.00	4.5	₹ 787.50
Revenue from Energy Sale (Rate/KWH+Tax+3.5 Energy Service Charge)	₹ 9.62	126	₹ 1212.12
Total Revenue /Day			₹ 2,479.62
Total Income/Day			₹ 1,708.50
Annual Net Income from Energy Sales (Energy Sale Service Charges)			₹ 160,965.00
Annual Total Income (Inclusive of Parking Charges)			₹ 6,23,602.50
Payback Period from Energy Sales (In Years)			2.57

FAQ's:

Q. 1Where will my EV charger and EV Meter be installed & how much space will be required?

Type of Charger	Mounting/Installation	Approx. Average Dimension in Ft.
LEVAC	Wall Mounted	1.15x1x0.5
AC001	Wall Mounted	2.25x1.5x0.5
DC001	Plinth Mounted (On ground)	5.25x1.6x1.15

Q. 2 What is the timeline for installing an EV Charger and EV Meter?

The existing guidelines, as laid down in the Supply Code and Performance Standards Regulations, GOI, are applicable to the EV meter connection as well. The EV charger vendor will comply with the schedule as discussed with the consumer.

Q. 3 Are there any monthly recurring charges for the EV Charger or EV Meter?

One time net charger cost (CAPEX Model) or monthly EMI (Subscription Model) is the only payment to be incurred by the consumer while purchasing a charger. No additional cost towards operations or maintenance (Up to for 3 years) are to be paid by the consumer.

Q. 4 Based on my EV Charger, what type of EV Connection and meter will be installed?

Type of Charger	Input Supply Type	EV Meter
LEVAC	Single Phase 230V AC	Single Phase Meter LT
AC001	Three Phase 400V AC	Three Phase Connection LT/HT
DC001	Three Phase 400V AC	Three Phase Connection LT/HT

Q. 5 Can anyone use my charger installed in an open space?

EV Chargers begin charging session only after authentication by the preset Pin Number/OTP. Hence, only authorised person with the requisite details of the Pin/OTP can use the EV charger.

Q. 6 How will I charge the user towards energy use from my Charger?

LEVAC Charger generates a receipt after each charging session and hence can be used to charger the user in the postpaid mode. AC001 and DC001 enable you to opt for a prepaid facility before any charging session through a mobile application.

Q. 7 Can I connect my EV Charger with Solar?

Yes, a consumer can connect his/her EV charger with captive solar or any other energy generation source.

Q. 8 What documents are required to get a EV Charger?

Only two self attested documents i.e. ID proof and land ownership proof of charger installation site required to apply for EV Charger

Q. 9 Is there a single application for EV Connection and EV Charger?

No. A consumer has to apply separately for an EV Charger on the 'Switch Delhi' portal (https://bsesbrpl.co.in/switchdelhi/) and on the BRPL Website for the EV Connection.

Q. 10 Can I operate my EV Charger from Remote location?

LEVAC chargers come with Bluetooth connectivity and therefore, can be controlled and operated from within the Bluetooth range. However, some LEVAC models also have Wi-Fi connectivity and can be remotely operated. AC001 and DC001 Chargers have internet connectivity and can be controlled remotely.

Q. 11 Why Do I need a separate EV Charger when I have an onboard Charger in Vehicle?

Having a charger installed at your premises ensures safety while charging, as also providing a controlled input to the charger, ensuring its long life and prevent damage to it.

Q 12 How many vehicles can be charged using a single charger?

LEVAC and DC001 are single Gun chargers i.e. you can charge only 1 vehicle at a time while AC001 have 3 guns and enable you to charge 3 vehicles at a time.

Q 13 What is charging time for my Vehicle?

Charging time for any vehicle depends on the current charge status of the battery, charger type and the battery capacity. On an average with slow/moderate speed chargers, you can charge your 4 wheeler from 0 to 80% in about 6-8 Hours and in about 1 hour using a fast charger.

Q.14 Can I return the Charger If not required by me after few years?

Ownership of the charger is transferred to the consumer while installation and hence, the same cannot be returned by the consumer.

Q 15 What will be cost involved for installing a Charger?

No additional cost. The price of the charger as mentioned in the booklet includes the cost of charger, installation cost and 3 years AMC. Hence, no additional charges are to be paid by the consumer.

Q 16 Being a consumer how will receive subsidy for Charger?

The consumer has to only pay net of the subsidy to the vendor as is directly credited to the vendor's account by the GNCTD.

Q 17 Can I install a charger from any vendor?

A consumer can install a charger at his/her premise from any vendor provided they meet the safety and technical requirements, but will not be eligible for the subsidy grant. Subsidy will only be provided on installing charger(s) form DISCOM empanelled vendors and their selected chargers.

Q18 What is the maximum number of Charging Points I can install at my premises?

A consumer can install as many charging points as required by him/her. However, subsidy is provided only on one charging point meant for private use and for in the case of semi private use, on 20% of the parking capacity/20 charging points, whichever is lower.

Q 19 Can I charge all my vehicles from a single Charger?

Using LEVAC/AC001 and DC001 you can charge all types of vehicles with some additional connector if required by your vehicle.

Q 20 What will be the repair time for my charger and what will be cost Involved?

Vendor will repair/replace the charger within 48 hours of the complaint.

Q 21 Can I install my EV Charger at my neighbor's premises?

Yes, a consumer has to provide a NOC from land owner where he/she wishes to install the charger.

Q22 If vendor denies providing AMC, how will be consumer rights protected?

All empanelled vendors are SLA bound to deliver the set performance standards as per the tender document.

Q 23 What is the process for raising a complaint?

For raising any complaint related to EV Charger, a consumer will have to visit the vendor's portal or the call centre / service engineer. Furthermore, if a grievance is not resolved within the time limits, the same may be communicated to the EV Cell BRPL for further action.

Q24 How can I monitor energy use, charger status and other parameters?

From onboard display of the EV Charger and through the mobile application, a consumer can monitor their charging session and other electrical parameters.

For a Safe Charging and enhanced life of battery, BRPL EV-Cell Suggest

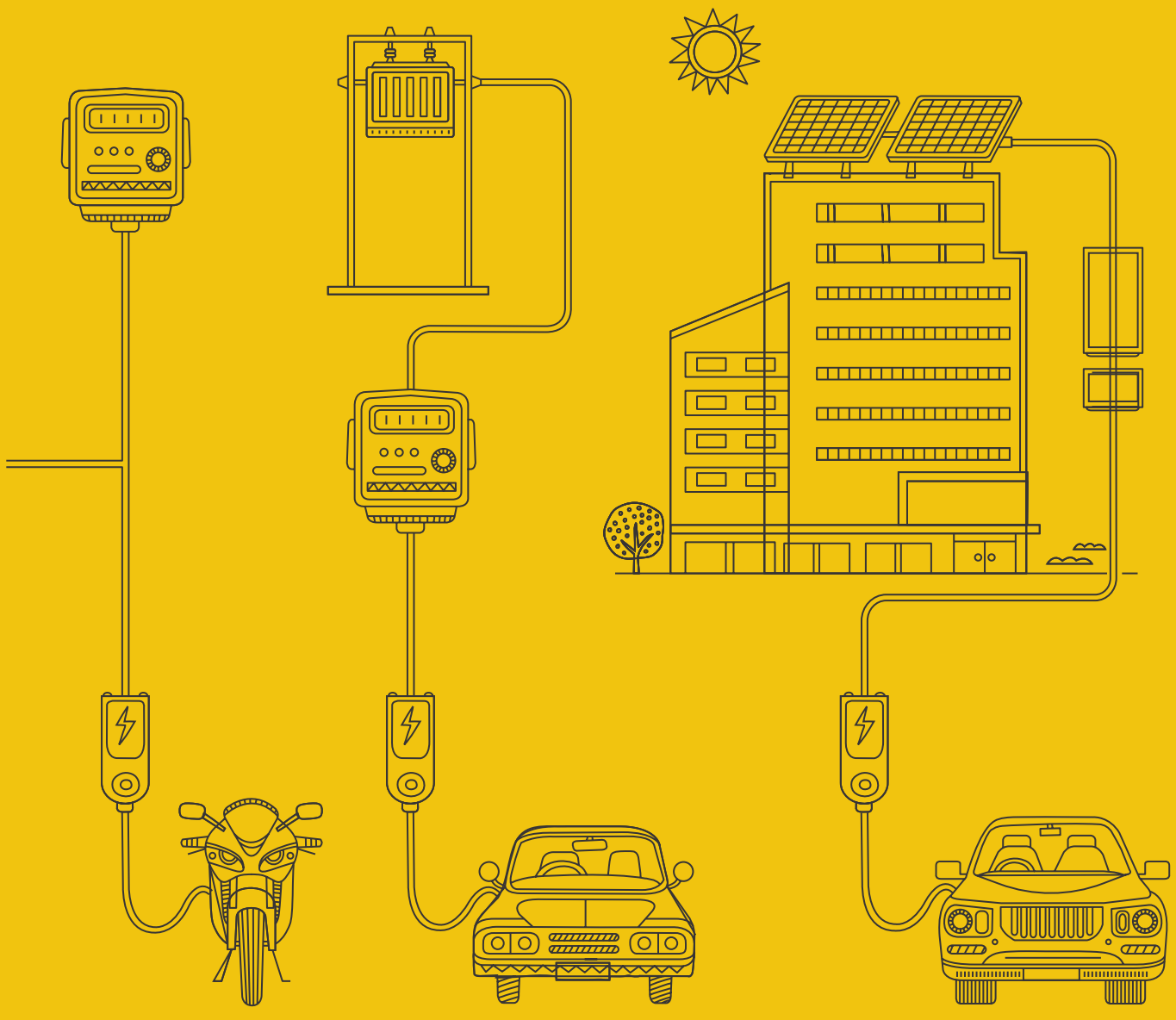
1) Always ensure terminations of Battery are properly tightened.
2) Never start charging immediately after drive as ions are hot, give a cool down period before start of charging.
3) Use Battery Designed for your EV and charge using designated chargers only.
4) Do not Use wall output for charging EV as they provide a unmonitored and uncontrolled input to your EV & Battery.
5) Never place excess weight over battery and ensure battery is firmly held. Perform a regular cleaning of surface and terminations.
6) Avoid battery overcharging / continuous charging despite battery is fully charged.
7) Park vehicle in dry places (low humidity), proper ventilation and avoid long duration parking under direct sunlight.
8) A circuit intended to supply an electric vehicle should be dedicated to the use of the chargers, and not be part of a ring main or used for other purposes.
9) Physical segregation of the charging areas from storage areas.
10) Control and Isolation of Power Supply for EV Charging Station away from EV Parking Location.

Useful Links :

Switch Delhi Portal:	https://bsesbrpl.co.in/switchdelhi/
Consumer Interest Form:	https://forms.gle/ZuiYiKKgykwEUojt8
New Connection & Related Forms:	https://www.bsesdelhi.com/web/brpl/e-mobility

Reach Us At :

Whatsapp : 7011931880 | Call: 19123 (Option 8)



Reference image by NITI Aayog

BSES

BSES Rajdhani Power Limited

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