MODEL DETAILED PROJECT REPORT

ESTABLISHMENT OF EV-Charging Station

UNDER UTTAR POORVA TRANSFORMATIVE INDUSTRIALIZATION SCHEME (UNNATI), 2024



DEPARTMENT FOR PROMOTION OF INDUSTRY AND INTERNAL TRADE MINISTRY OF COMMERCE & INDUSTRY GOVERNMENT OF INDIA



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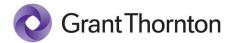




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1. Introduction

The transition to electric mobility is rapidly transforming the global transportation landscape, driven by the urgent need to reduce carbon emissions, improve air quality, and enhance energy sustainability. Electric Vehicles (EVs) have emerged as a promising solution to achieve these goals, necessitating the development of robust charging infrastructure to support their widespread adoption. A Detailed Project Report (DPR) for EV Charging Infrastructure serves as a comprehensive document outlining the technical, financial, and operational aspects of establishing EV charging stations, ensuring alignment with government policies, environmental goals, and industry standards.

a. About the project

The proposed project is for setting up an EV-Charging Station. The proposed station entails a total investment of about Rs. XX.XX million. This includes a capital investment of Rs. XX.XX million and a sum of Rs. X.XX million as initial working capital. The project is financed through X% debt and X% equity. The Net Present Value (NPV) of the project is around Rs. XX.XX million with an Internal Rate of Return (IRR) of X% and a payback period of X.XX years. Higher returns on investment and a steady growth of business are expected if the entrepreneur has some prior experience in the related field of business. The project will generate direct employment opportunity for XX persons. The legal business status of this project is proposed as 'Sole Proprietorship/Partnership/LLP/Pvt. Ltd.'.

b. Global Scenario

The global adoption of electric vehicles (EVs) has witnessed exponential growth over the past decade, fueled by advancements in technology, favorable government policies, and increasing awareness of environmental sustainability. As countries transition toward reducing carbon emissions and achieving net-zero goals, the development of reliable and accessible EV charging infrastructure has become a critical component of this transformation.

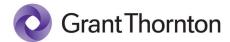
The global EV market is expected to grow at a compound annual growth rate (CAGR) of over 20% between 2022 and 2030. By 2030, EVs are projected to account for over 30% of new vehicle sales globally. Countries such as China, the United States, and members of the European Union are leading this transition, driven by aggressive policy frameworks, substantial subsidies, and advancements in battery technology.

EV-Charging Market Projections

The Electric Vehicle (EV) charging market represents a critical pillar in the global transition toward sustainable mobility, driven by the rapid adoption of EVs and the need for robust charging infrastructure. With increasing environmental concerns, supportive government policies, and technological advancements, the EV charging market is poised for exponential growth in the coming decades.

Market Drivers







Rising EV Adoption: The global EV market is projected to grow at a compound annual growth rate (CAGR) of over 20% between 2022 and 2030, with EV sales expected to account for 30% of new vehicle sales by 2030. This surge necessitates the development of widespread charging networks.

Government Policies and Incentives: Governments worldwide are introducing policies to support EV adoption, including subsidies for EVs, tax benefits, and funding for charging infrastructure. Programs like the European Green Deal, U.S. Infrastructure Investment and Jobs Act, and China's EV policy framework play a pivotal role.

Urbanization and Sustainability Goals: With urban areas contributing significantly to carbon emissions, cities are prioritizing sustainable transportation solutions, including EVs and public charging infrastructure, to reduce their carbon footprint.

✓ Market Segmentation

The EV charging market can be segmented based on charging type, location, and user profile:

✓ Charging Type:

- AC Charging: Ideal for residential and workplace charging; relatively slower but more affordable.
- DC Fast Charging: Preferred for public and highway charging; offers rapid charging for convenience.
- Wireless Charging: Emerging technology for hassle-free charging, particularly for fleets and urban use.

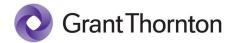
c. Indian Scenario

India is on the brink of a transformative shift in its mobility ecosystem, driven by the increasing adoption of electric vehicles (EVs) and the government's commitment to achieving sustainability goals. The growth of EVs in the country has highlighted the need for a robust and widespread EV charging infrastructure to overcome challenges such as range anxiety and ensure seamless adoption of electric mobility.

✓ Current EV Market in India

India's EV market is growing rapidly, with EV sales crossing significant milestones in recent years. The market is expected to grow at a compound annual growth rate (CAGR) of over 40% between 2023 and 2030. Key factors contributing to this growth include:

Government Initiatives: Schemes like the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME II) and state-level EV policies provide subsidies and incentives for EV





d. State Profile

The state _, located in the northeastern part of India, is a treasure trove of natural beauty, biodiversity, and cultural heritage, making it a promising destination for adventure tourism. The state's diverse geography, including the Brahmaputra River, lush tea gardens, rolling hills, and dense forests, provides the perfect backdrop for a variety of adventure activities. _ is emerging as a prominent destination for adventure tourism, with significant growth in both tourist arrivals and activities. In the 2022-23 tourist season, the state welcomed 9.812 million domestic tourists and 18,946 foreign tourists, marking a notable increase in footfall. Popular activities include river cruises on the Brahmaputra, trekking in the Haflong Hills, rafting in the Brahmaputra's challenging rapids, and wildlife safaris in Kaziranga and Manas National Parks. Additionally, _ boasts 21 golf courses in regions like Jorhat and Dibrugarh, blending leisure with adventure experiences.

The state's tourism expenditure reflects its commitment to infrastructure development, with investments such as ₹994.589 million in 2020 and ₹627.340 million in 2023. Supported by government initiatives like eco-tourism promotion and private investments, _'s adventure tourism sector is poised to grow by 10–15% annually, leveraging its rich biodiversity, cultural heritage, and increasing popularity as an eco-friendly adventure hub.

e. Sector Overview

The Electric Vehicle (EV) charging station sector is a critical enabler of the global shift toward sustainable transportation. With the rapid adoption of EVs worldwide, the need for a robust and accessible charging infrastructure has become more urgent. This sector plays a pivotal role in addressing range anxiety, ensuring seamless mobility, and supporting the widespread transition to electric mobility.

√ Market Dynamics

Global Growth: The EV charging station market is expected to grow at a compound annual growth rate (CAGR) of over 25% from 2023 to 2030, driven by increasing EV adoption and supportive government policies.

✓ Key Drivers:

- Rising fuel costs and environmental concerns.
- Government incentives and subsidies for EV and charging station adoption.
- Advancements in battery technology and charging solutions.

✓ Segmentation:

- Charging Types: AC (slow) charging, DC (fast) charging, and wireless charging.
- Installation Sites: Residential, commercial, public, and highway charging stations.
- End Users: Individual EV owners, fleet operators, and public transportation systems.

✓ Technological Advancements





- Fast Charging Technology: Development of ultra-fast chargers (150-350 kW) that can recharge EVs within 15-30 minutes.
- Smart Charging Systems: Integration of IoT, AI, and cloud-based platforms for real-time monitoring, demand response, and energy management.
- Vehicle-to-Grid (V2G): Emerging solutions allowing EVs to feed electricity back to the grid, enhancing grid stability.
- Renewable Energy Integration: Increasing use of solar and wind power to reduce carbon emissions and operational costs.

2. Investor's Background

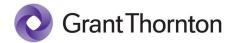
Details of all Investors in below format

Name	To be filled by the applicant
DOB	To be filled by the applicant
PAN	To be filled by the applicant
Address	To be filled by the applicant
Academic Qualification	To be filled by the applicant
Experience in business	To be filled by the applicant
Functional Responsibly in Unit	To be filled by the applicant
Name of associate concern (if any)	To be filled by the applicant
Nature of association (if any)	To be filled by the applicant
Net Worth	To be filled by the applicant

3. Company Profile

Name of the Unit	To be filled by the applicant	
Constitution	To be filled by the applicant	
PAN	To be filled by the applicant	
Registered Office address	To be filled by the applicant	
Activity	To be filled by the applicant	
Loan details	To be filled by the applicant	
Director	To be filled by the applicant	
Unit Registration	To be filled by the applicant	
Unit Location	To be filled by the applicant	







Category of Project (Manufacturing/Service)	To be filled by the applicant
Zone	To be filled by the applicant
District	To be filled by the applicant
State	To be filled by the applicant

4. Details of services and its marketing potential

EV charging stations are facilities where electric vehicles can be charged with electricity for their operation. They come in various types based on charging speed and power requirements:

√ Types of EV Chargers

AC Chargers (Slow Chargers): Power Output: Up to 22 kW. Charging Time: 4–8 hours for a full charge. Usage: Residential areas and workplaces.

- ✓ **DC Chargers (Fast Chargers):** Power Output: 50 kW and above. Charging Time: 30–60 minutes for 80% charge. Usage: Highways, commercial spaces, and public areas.
- ✓ **Ultra-Fast Chargers:** Power Output: 150–350 kW. Charging Time: 15–30 minutes for a full charge. Usage: High-demand urban and intercity travel hubs.

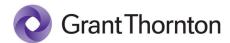
5. Details of Raw Materials with required quantity

Supplier	Raw material	Quantity	Year	Cost
To be filled by the applicant	To be filled by the applicant			

6. Proposed location and Site Plan

SI. No.	Particulars	Details
1	Land Area	To be filled by applicant
2	Status of Legal title & Possession	To be filled by applicant
3	if leased, Period of lease	To be filled by applicant
4	Coordinates of location	To be filled by applicant
5	Details of CLU	To be filled by applicant
6	Connectivity to roads	







	i) State Highway (in K	m.) To be filled by applicant
	ii) National Highway (ir	Km.)
7	Availability of Water	To be filled by applicant
8	Availability of Power	To be filled by applicant

a. Electrical Power

Power availability is one of the main factors for the successful operation of every organization/ establishment. The Adventure Tourism will need power load of around XX KW to operate the entirely including provision for general lighting. As the power requirement is reasonable and to have uninterrupted power at the Adventure Tourism unit, it has proposed to have one of diesel generating set of XX KVA as standby arrangement in case of power cut from grid supply. Estimate of requisite load is being enclosed separately.

i. Construction Phase

KW	Quarter of the Year
To be filled by the applicant	To be filled by the applicant

ii. Steady Phase

ĸw	Quarter of the Year
To be filled by the applicant	To be filled by the applicant

iii. Peak Phase

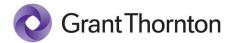
KW	Quarter of the Year
To be filled by the applicant	To be filled by the applicant

b. Water Requirement

The water required for an adventure tourism unit will be sourced from Local Municipal authority. Also, water requirement shall be met from ground water. The per day water requirement of the adventure tourism unit has been estimated at XX liters in the following manner:

i. Domestic consumption

Per Day	UOM
	Liter





ii. Utilities

Per Day	UOM
	Liter

iii. Engineering

Per Day	UOM
	Liter

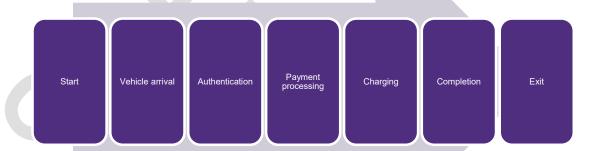
^{**} This estimate ensures adequate water for operations, hygiene, and amenities, supporting an adventure tourism unit daily need.

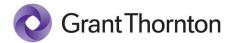
c. Transportation System

Local Infrastructure

7. Process Flow

Process flow of EV-charging station Services in North East India







8. Cost of the Project

Particulars	Amount (Rs. In Lacs)		
Land and Land Development	Leased		
Civil Cost	20.00		
Plant & Machinery	20.00		
Mis. Fixed Assets	10.00		
IDC	3.00		
Pre-operative/ Preliminary Expenses	1.00		
Total Capex	54.00/-		

a. Land details

The promoter Company own a plot of land measuring **X** bigha covered by **dag no. XXX** of **patta no. XX** of **XXXX** town, District: XXX, XXXX whereon present project is taken up. The site has already been developed by the promoter himself at his own cost. The location is within the heart of XXX town and cluster of Agriculture & Allied Industry. As we know, XXX town itself is known as Agriculture capital of XXX, people from distance places also visit the town to get avail cold storage facilities.

b. Building and civil works details

The total cost of civil work has been estimated to be Rs XX lakhs, which includes technical civil work and non-technical civil work. Cost of civil work comprises of the cost of process building, Raw material warehouse, Finished goods warehouse, transformer house & Utility building

c. Plant and machinery/equipment's details

SI. No.	Particulars	Qty	Approx. Rate/each (Rs.)	Approx. Rate/each (Rs.)
1.	DC Fast charger (50 Kw)	1	1000000	1000000
2.	AC Charger (Type-2, 22 Kw)	1	150000	150000
3.	Bharat DC Charger (15 Kw)	1	250000	250000
4.	Distribution transformer (300 KVA)	1	500000	500000
5.	Distribution Panel	1	100000	100000
Total				20.00/- Lakhs







** Please note that these prices are approximate and can vary based on factors such as brand, quality, and supplier. For the most accurate and current pricing, it's advisable to contact local suppliers or check online marketplaces.

d. Pre-operative expenses details

Rs. 24 lakhs. (Approx.)

Working Capital details

I) Consumable costs: - (Annual)

SI. No.	Item	Month	Rate (Rs. Lakhs)	Total (Lakh)
1	Utilities & Maintenances	1	0.50	6.00
2	Insurance Premiums	1	0.10	1.20
3	Software subscription	1	0.05	0.60
4	Consumables & Supplies	1	0.90	10.80
5	Lease/Rent	1	0.35	4.20
6	Licenses, Permits & Compliances	1	0.12	1.44
7	Misc. Expenses	1	0.50	6.00
	GRAND TOTAL			30.24/-

These estimates vary depending on the size of the operation, the number of activities offered, and the scale of marketing and staffing.

II) Utilities (Per Annum)

SI. No.	Item	Total (Rs.) Lakh
1	Electricity & Water Bills	0.20
2	Internet & Communication	0.60
	GRAND TOTAL	0.80/-





iii) Salary & Wages (Per Annum)

SI. No.	Designation	No.	Wages/Month (Approx.)	Total/Annum)
1	Charging attendants	4	15000	180000
2	Station Manager	1	25000	300000
3	Electrician	2	16000	192000
4	Cleaning staff	2	10000	120000
5	Security	1	12000	144000
GRAND	9.36/- Lakhs			

Note: Every year increment @ 5% has been considered towards financial calculation.

a. Working Capital limit: i + ii + iii = 30.24+0.80+9.36 = Rs. 40.40/- Lakhs

9. Proposed Means of Finance

Particulars	Amount (Rs. In Lacs)		
Promoter's Capital	24.00		
Unsecured Loans			
Term Loan form Bank/ Financial Institution	34.00		
Total	54.00/-		

10. Implementation Schedule with time chart

Activities	Starting Month	Ending Month
Arrangement of land	To be filled by applicant	To be filled by applicant
Single window clearance	To be filled by applicant	To be filled by applicant
Land development	To be filled by applicant	To be filled by applicant
Building and Civil Works	To be filled by applicant	To be filled by applicant
Order and delivery of P&M	To be filled by applicant	To be filled by applicant
Power arrangement	To be filled by applicant	To be filled by applicant
Manpower arrangement	To be filled by applicant	To be filled by applicant
Procurement of raw materials	To be filled by applicant	To be filled by applicant





Trial Operation To be filled by applicant		To be filled by applicant	
Commercial Operation	To be filled by applicant	To be filled by applicant	

11. Projected Financial Analysis

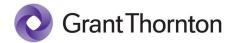
a. Installed Production Capacity	Quantity	Unit	Rate	Amount (Rs.) Lakh
Charging EV	Kw	36500	18	6.57
Cafeteria	EA	1	30000	0.3
Advertising	Per Screen	500000	50	250
Production Capacity Per Annum		536,501		256.87

b. SCHEDULE OF PRODUCTION AND SALES

CONSUMABLES REQUIRED

Item	Quantity	Unit	Rate	Amount (Rs.) Lakh
Consumable		1	30.24	30.24
Utility		1	0.8	0.8
Salary & wages		1	9.36	9.36
c. Cost of opera	40.44/-			

o. cost of operation/unitari					
Parameters	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
Capacity Utilization	60%	65%	70%	75%	80%
	536,501	536,501	536,501	536,501	536,501
	21900	23725	25550	27375	29200
Charging EV	0.6	0.65	0.7	0.75	0.8
Cafeteria	300000	325000	350000	375000	400000
Advertising	300	325	350	375	400
Production (In Tickets) as per Capacity Utilized	321900.6	348725.65	375550.7	402375.75	429200.8



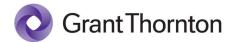


ITEMS	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
Capacity Utilization	60%	65%	70%	75%	80%
Charging EV	21900	23725	25550	27375	29200
Cafeteria	0.6	0.65	0.7	0.75	0.8
Advertising	300000	325000	350000	375000	400000
TOTAL PRODUCTION	321900.6	348725.65	375550.7	402375.75	429200.8
Sales Details					
Items	1 st Year	2 nd Year	3 rd Year	4 th Year	5 th Year
Charging EV	3.942	4.2705	4.599	4.9275	5.256
Cafeteria	0.18	0.195	0.21	0.225	0.24
Advertising	150	162.5	175	187.5	200
NET Sales Price	154.122	166.9655	179.809	192.6525	205.496
GST RATE@18%	27.74196	30.05379	32.36562	34.67745	36.98928
GROSS Sales Price	181.86396	197.01929	212.17462	227.32995	242.48528
e. COST OF PRODUCTION					
Items	1st Year	2 nd year	3 rd Year	4 th Year	5 th Year
	60%	65%	70%	75%	80%
Operation Cost	24.24	26.26	28.28	30.3	32.32
Utility	0.48	0.52	0.56	0.6	0.64
Direct Labor & Wages	5.616	6.084	6.552	7.02	7.488
Repairs & Maintenance	0.10	0.10	0.11	0.12	0.13
COST OF PRODUCTION	30.43	32.97	35.50	38.04	40.58



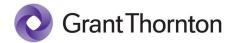


	TATEMENT 1st Year	2 nd year	3 rd Year	4 th Year	5 th Year
		-			
Capacity Utilized	60%	65%	70%	75%	80%
A. Sales					
Gross Sales	181.86396	197.01929	212.17462	227.32995	242.48528
Less: GST	27.74196	30.05379	32.36562	34.67745	36.98928
NET SALES	154.122	166.9655	179.809	192.6525	205.496
B. Cost of Production					
Operation Cost	24.24	26.26	28.28	30.3	32.32
Repairs & Maintenance	0.10	0.10	0.11	0.12	0.13
Total Cost of Production (C)	24.34	26.36	28.39	30.42	32.45
g. Gross Profit (A-C)	157.53	170.66	183.78	196.91	210.04
Interest Expenses					
Interest Expenses (Term Loan) @7.65% /Annum for 5 yr.	2.40	1.94	6.76	0.91	0.33
Interest Expenses (WC Loan) @11% /Annum	0.20	0.21	0.22	0.23	0.25
Selling, General & Administrative Exp.					
Profit before Taxation	154.93	168.50	176.80	195.77	209.46
Provision for Taxation	40.28	43.81	45.97	50.90	54.46





Profit After Taxation	114.65	124.69	130.83	144.87	155.00
h. DEBT SERVICE (COVERAGE RATIO (COMPANY	AS A WHOLE)			
	1st Year	2 nd year	3 rd Year	4 th Year	5 th Year
Profit After Tax	114.65	124.69	130.83	144.87	155.00
Add: - Interest Expenses (Term Loan) @7.65% /Annum for 7yrs	2.40	1.94	6.76	0.91	0.33
Interest Expenses (WC Loan) @11% /Annum for 7 yrs	0.20	0.21	0.22	0.23	0.25
Depreciation	5.00	4.35	3.79	3.30	2.88
Total (A)	107.04	118.19	120.06	140.43	151.55
Interest Expenses (Term Loan) @7.65% /Annum for 7yrs	2.40	1.94	6.76	0.91	0.33
Interest Expenses (WC Loan) @11% /Annum for 7 yrs	0.20	0.21	0.22	0.23	0.25
Depreciation	5.80	6.26	6.76	7.30	7.87
Total (A)	8.41	8.42	13.74	7.30	7.87
Interest Expenses (Term Loan) @7.65% /Annum for 7yrs	2.40	1.94	6.76	0.91	0.33
Interest Expenses (WC Loan) @11% /Annum for 7 yrs	0.20	0.21	0.22	0.23	0.25
Term Loan Repayment	5.80	6.26	6.76	7.30	7.87
Total Debt Payment (B)	8.41	8.42	13.74	7.30	7.87
DSCR (A/B)	12.04	13.30	8.24	18.25	18.25
Cash Inflow	101.24	111.93	113.30	133.13	143.67





i.BREAK EVEN ANALYSIS	1 st year	2 nd year	3 rd Year	4 th Year	5 th Year
A. Net Sales	154.122	166.9655	179.809	192.6525	205.496
B. Variable Expenses					
Consumables	24.24	26.26	28.28	30.3	32.32
Power & Fuel	0.48	0.52	0.56	0.6	0.64
Repairs & Maintenance	0.10	0.10	0.11	0.12	0.13
Direct Labour & Wages	5.616	6.084	6.552	7.02	7.488
	30.43	32.97	35.50	38.04	40.58
C. Contribution (A-B)	123.69	134.00	144.31	154.61	164.92
D. Fixed Expenses					
Direct Labour & Wages	5.616	6.084	6.552	7.02	7.488
Selling, General & Administration	0	0	0	0	0
	5.616	6.084	6.552	7.02	7.488
Breakeven Sales at Operating Capacity	0.80	0.80	0.80	0.80	0.80

j. Projected Balance Sheet					
	1st Year	2nd Year	3rd Year	4th Year	5th Year
Liabilities					
Capital	20.00	20.00	20.00	20.00	20.00
Revenue Reserves	11.46	12.47	13.08	14.49	15.50
Net Worth	31.46	32.47	33.08	34.49	35.50





Term Loan	2.40	1.94	6.76	0.91	0.33
Working Capital Limit	12.06	0.21	0.22	0.23	0.25
Current Liabilities					
Creditors					
Liability for expenses					
Total	45.93	34.62	40.07	35.63	36.08
Assets					
Fixed Assets					
Gross block	40.00	35.00	30.65	26.86	23.56
Depreciation	5.00	4.35	3.79	3.30	2.88
Net Fixed Assets	35.00	30.65	26.86	23.56	20.68
Non-Current asset/investments					
Current assets					
Inventory		0	0.12	0	0.11
Debtors					
Security Deposits					
Loans and Advances					
Cash & Bank Balance	10.92	3.97	13.08	12.07	15.28
Total	45.92	34.62	40.07	35.63	36.07

12. Projected Employment Details

Type of Employment	Number of Employees	Projected Cost (in Lakhs)
Skilled Manpower	1	3.00
Semi-skilled Manpower	2	1.92
Unskilled Manpower	7	4.44
	TOTAL	9.36/-







13. Requirement of Statutory clearances

Item	Status
Partnership Deed	
Lease deed registration	
PAN	
GST Registration	
UDYAM	
Trade License	
NOC form local authority	