
Electric Vehicles (EVs) Charging Infrastructure Planning and Development of an online platform for Gujarat Energy Development Agency (GEDA)	Project number/ cost centre: 18.2053.9-001.00
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0. List of abbreviations

BMZ	Federal Ministry of Economic Cooperation and Development
CV	Curriculum Vitae
DISCOMs	Distribution Company
EVs	Electric vehicles
RE	Renewable Energy
ToRs	Terms of reference
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GEDA	Gujarat Energy Development Agency
WPs	Work Packages
2W	Two-wheeler
3W	Three-wheeler
4W	Four-wheeler
MIS	Management information system

1. Context

“Energy transition with distribution companies (DISCOMs)” is a project under the umbrella of Indo – German Energy Programme being implemented in India by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the Federal Ministry of Economic Cooperation and Development (BMZ) in Germany. The programme supports Indian DISCOMs in building up a broad-based, technically, and economically efficient, socially, and ecologically sustainable energy.

The rapid proliferation of electric vehicles (EVs) represents a transformative shift towards sustainable transportation solutions. As urban centers strive to mitigate pollution and reduce carbon emissions, the adoption of EVs becomes increasingly imperative. However, the successful integration of EVs into urban landscapes necessitates robust charging infrastructure and supportive policies. This activity proposes the development of a comprehensive plan for EV charging infrastructure in urban centers, complemented by an online platform facilitating access to financial incentives, thereby fostering widespread EV adoption and sustainable mobility.

The transition from conventional Internal Combustion Engine (ICE) vehicles to EVs presents multifaceted challenges and opportunities. Urban cities, serving as hubs of economic activity and population density, are prime arenas for EV deployment. Yet, the lack of adequate charging infrastructure remains a significant barrier to widespread EV adoption. Furthermore, while financial incentives such as tax credits, rebates, and subsidies exist to promote EV uptake, navigating the diverse array of incentives can be complex and cumbersome for consumers.

In lines with the commitment of the state government, the Government of India and Government of Gujarat is providing financial incentives to promote the adoption of electric vehicles. So, this study analyzes the existing deployment of EV infrastructure, plan for the future modernization of distribution grid and an Online Tool to locate EV Charging stations and avail incentives.

1.1 Objective

The project aims to catalyze the adoption of electric vehicles (EVs) by developing a comprehensive strategy for Gandhinagar city. That involves developing a robust plan for the deployment of EV charging infrastructure in urban centers, emphasizing strategic location planning, technological integration, and sustainable business models to effectively address urban mobility challenges. Additionally, this tender focuses on the development of an online platform aimed at streamlining access to financial incentives for EV purchasers. This platform will prioritize transparency, ease of use, and personalized guidance, thereby encouraging widespread EV adoption and maximizing the utilization of available incentives.

Target Group and Other Stakeholder

Gujarat Energy Development Agency (GEDA), Discoms like UGVCL, Torrent power, and others

2. Tasks to be performed by the contractor.

2.1 General Terms of reference

The Terms of Reference (ToR) covers the scope and deliverables by the contracts to provide strategic inputs on developing charging Infrastructure for Electric Vehicles (EVs) along the Urban Area in Gandhinagar Gujarat and Online platform for financial incentives for EV purchases. This assignment consists of two (2) main work package as mentioned below:

Work Package 1: Developing a roadmap for the deployment of electric vehicle (EV) charging infrastructure in the city of Gandhinagar.

Work Package 2: Create an online/web-based platform aimed at simplifying access to financial incentives for individuals purchasing electric vehicles (EVs), emphasizing transparency, user-friendliness, and tailored guidance.

2.2 Details Discussion of Task

This assignment consists of two major work packages (WPs). Details of these WPs are provided in the following section:

Work Package 1: Develop a roadmap for the deployment of electric vehicle (EV) charging infrastructure in the city of Gandhinagar.

The consultant shall conduct a rigorous historical data analysis of existing EVs, Charging Stations, Financial Incentives through the secondary research and carrying out the primary research to identify the location best suited for the future deployment.

The tasks to be undertaken encompass:

- **Conducting Market Analysis:** Delve into the dynamics of the EV market in Gandhinagar, including growth projections and consumer behavior.
- **Performing Infrastructure Assessment:** Evaluate the existing infrastructure assets and propose recommendations for capacity expansion and grid modernization to support EV deployment.
- **Conducting Techno-Economic Analysis:** Conduct a comprehensive assessment of the costs, benefits, and return on investment associated with the deployment of EV infrastructure.

- **Developing Deployment Strategies:** Formulate strategies for the strategic deployment of charging infrastructure, including criteria for location selection, network optimization, and adherence to interoperability standards.
- **Integration with Renewable Energy:** Explore opportunities to integrate renewable energy sources, such as solar or wind power, to reduce the environmental impact of charging infrastructure.
- **Providing Business Model Recommendations:** Devise innovative business models tailored to Gandhinagar's socio-economic context, aimed at fostering sustainable revenue streams and encouraging private sector participation in EV infrastructure development.
- **Creating a Stakeholder Engagement Plan:** Develop a framework for stakeholder engagement and collaboration, ensuring inclusivity and alignment of interests among relevant parties.

Further, the consultant is accountable for conducting both primary and secondary research, as outlined below:

Primary research: The tasks assigned to the consultant includes below mentioned

- Identify the target audience of electric vehicle users.
- Segregation of the vehicle user type.
- Analyse historical data related to electric vehicle usage.
- Conduct primary research with a minimum sample size of 30 individuals representing various user types, including 2W (personal/delivery), 3W (fleet/delivery), 4W (fleet/personal), and commercial (bus/fleet).
- Conduct interviews with academia, industry experts from oil marketing companies, and stakeholders in charging infrastructure companies (charge point operators, charger OEMs, etc.).
- Perform geo-mapping of Gandhinagar city and nearby areas to locate:
 - a. All types of existing charging facilities (operational/non-operational, slow/fast).
 - b. Hotspots of present EV population and trends in upcoming areas.
 - c. Finding out the high EV traffic routes within the city.
 - d. Potential locations for charging infrastructure considering high asset utilization, user accessibility, and lower barriers.

Secondary Research: The tasks assigned to the consultant includes below mentioned

- Conduct a comprehensive review of existing literature, reports, portals, and data pertaining to EV adoption trends, market dynamics, and infrastructure development.

- Analyse historical data sourced from Parivahan/RTO, etc., alongside projections, to ascertain past trends and forecast the future growth of EVs in Gandhinagar.

Deliverables:

- A detailed report/Roadmap incorporating all the points under Work Package 1

Work Package 2: Create an online platform aimed at simplifying access to financial incentives for individuals purchasing electric vehicles (EVs), emphasizing transparency, user-friendliness, and tailored guidance.

The consultant reviews the existing procedure for financial incentives for EVs with the various government existing networks and understands the standardized procedure is being taken up. The next task shall be to develop an online platform for providing the details of the EV Infrastructure in the city, and processing of the EV subsidy to the consumers of the state of Gujarat. The Online portal shall have the minimum but not limited to the following modules in the Portal:

- Developing Web application for submission of request for processing subsidy for Electric Vehicle.
- Develop a Portal to process receipt of applications for new requests under the applicable rules.
- Develop a Portal to manage the application and monitor the progress in the transparent and centralized manager.
- Integration with the other state departments and agencies for processing of the applications.
- Develop a Portal to receive and process complains from the uses for seamless communication through the portal to solve the queries of the stakeholders.
- Development of Interactive Dashboard and MIS reports for project monitoring
- Support with the handholding and server for minimum 8 months.
- Conduction of at least one workshop/presentation/round table talk to discuss the report and outcomes of activities carried out in Work Packages 1 to 2.

Deliverables:

- The consultants are required to develop, end-to-end testing and get approval from GIZ.
- The consultants must provide thorough documentation, encompassing codes, methodology, and integration strategy of the online portal
- A knowledge dissemination session with GEDA, GIZ, and other relevant stakeholders to discuss the report and outcomes of activities carried out in Work Packages 1 to 2 in the form of workshop/presentation/round table talks.

Period of Assignment

The selected consultant must complete the entire assignment and deliver the outputs within 6 months (Both Work WP-1 & WP-2 are Simultaneously). Please note that the contract will be awarded for a validity of 8 months to complete all billing/payment and contract closing purpose.

Certain milestones, as laid out in the table below, are to be achieved by certain dates during the contract term:

Milestone	Deadline
WP 1 Deliverables	5 Months after beginning of the assignment
WP 2 Deliverables	4 Months after beginning of the assignment

3. Concept

In the bid, the consultant should refer here to the overall project objective as described in section 1 and apply these in the sections for which s/he is responsible. The consultant is required to interpret the objectives for which s/he is responsible and to carefully review the terms of reference. Repetition of information in existing documents should be avoided. The limits on text length must be observed (see section 8).

3.1. Technical-methodological concept

1.1. Strategy

Objectives to the consultant (1.1.1): Please interpret the objectives of the assignment in your words. Additionally, from the consultant's point of view: What may be considered as critical? (up to 3 pages) **Weightage: 5%**

Strategy for delivering the services (1.1.2): As GIZ envisages an on-site presence of consultant, please briefly mention the strategy to associate with GEDA and deliver the services mentioned in this assignment along with the assumptions and risks. (up to 2 pages) | **Weightage: 6%**

1.2. Cooperation

(1.2.1) Presentation and interaction between the relevant actors in the consultant's area of responsibility (up to 2 pages) | **Weightage: 1%**

(1.2.2) Strategy for establishing cooperation and then cooperating with the relevant actors (up to 2 pages) | **Weightage: 2%**

1.3. Steering Structure

Steering with project partners (1.3.1): Please indicate how the consultant proposes to steer the project with GIZ and Indian partners. What would be the conflict resolution mechanism, if required during the implementation of the assignment. (up to 1 page) | **Weightage: 2%**

1.4. Processes

The consultant is required to describe the key processes for the services for which it is responsible and create a schedule that describes how the services according to section 2 are to be provided. In particular, the consultant is required to describe the necessary work steps and, if applicable, take account of the milestones and contributions of other actors in accordance with section 2.

Implementation plan (1.4.1): Please describe (preferably a chart) the work steps, a milestone of deliverables and scheduled timelines. (up to 2 pages) | **Weightage: 8%**

1.5. Learning and Innovation

People, organisations, and society must undergo a learning process if the cooperation system is to be capable of reacting to change. Learning and innovation are rooted in knowledge. A knowledge management system in a project or organisation identifies and stores relevant and experiential know-how and prepares this for subsequent exchanges, both with other projects and within the partner organisation. The consultant is required to describe its contribution to knowledge management for the partner and GIZ and promote scaling-up effects.

At a societal level, scaling up refers to a consciously selected, targeted impetus for anchoring and disseminating experience and knowledge. Vertical scaling-up involves institutionalising strategies/approaches that have already been successfully piloted. In horizontal scaling up, the piloted strategies/approaches are transferred directly between comparable organisations. Functional scaling-up involves transferring strategies, approaches, methods, and lessons learned etc. to a new context.

(1.5.1) Please describe your contribution to knowledge management for the project partners and GIZ. (up to 1 page) | **Weightage: 3%**

3.2 Project management

(1.6.1) The consultant is required to provide an **approach and procedure for coordination** under the purview of the GIZ project. The consultant is required to explain the coordination approach considering various relevant factors, e.g., reporting frequency, format, etc that would make the project successful. Coordination is also necessary at different levels in the project (up to 3 pages)

- Stakeholders: GEDA and others
- Consultant
- GIZ.

Weightage: 3%

(1.6.2) The consultant is required to draw up a **personnel assignment plan** that lists all the experts (preferably a table) proposed in the bid; the plan includes information on assignment dates (duration and expert days) and locations of the individual members of the team complete with the allocation of work steps as set out in the schedule. (up to 2 pages) | **Weightage: 3%**

(1.6.3) **Consultants backstopping strategy** (incl. CVs of the technical and administrative backstopper(s): Please explain how you intend to mobilise your expertise beyond the specified staff to the assignment as per section 4 (e.g., quality assessment of other staff, consultants' internal knowledge management, access to professional communities or other sources of knowledge or expertise) (up to 2 pages plus CVs of backstoppers) | **Weightage: 2%**

The consultant is required to describe its backstopping concept. The following services are part of the standard backstopping package, which (like ancillary personnel costs) must be factored into the fee schedules of the staff listed in the bid in accordance with section 5.4 of the GIZ AVB:

- Service-delivery control
- Managing adaptations to changing conditions
- Ensuring the flow of information between GIZ and field staff
- Consultant's responsibility for seconded personnel
- Process-oriented technical-conceptual steering of the consultancy inputs
- Securing the administrative conclusion of the project
- Ensuring compliance with reporting requirements
- Providing specialist support for the on-site team by staff at company headquarters
- Sharing the lessons learned by the consultant & leveraging the value of lessons learned on-site

In accordance with [AVB \(2020\)](#), the consultant submits the following reports and deliverables:

- Deliverables as mentioned in the table in section 2
- Contributions to reports to GIZ's commissioning party
- Monthly overview on expert days used
- Brief monthly reports on the implementation status of the activities the consultant is involved in (2-3 pages)

All reports and papers shall be submitted in the English language.

4. Criteria for Eligibility of Firms

Consulting organisation must have:

- Minimum average annual turnover of 1,50,000 EUR for the last three financial years {last- but- four financial can be included in case of invitation to tender held within six months of end of last financial year.

(All conversion rates must be taken from Infor-euro site:

https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/eurofxref-graph-inr.en.html)

- Minimum 12 Number of employees as at 31.12 of the previous year.
- The agency must submit a declaration on GWB clauses - refer Annexure "Legal Inferences".
- At least 3 reference projects in the technical field of EV charging Infrastructure planning and development.
- At least 1 reference project in online/web portal development for EV sector in last 3 years.
- The commission value of reference projects should be minimum 15,000 EUR
- Experience on EVs charging Infrastructure planning & development, and Renewable Energy sector.
- Experience on online/ web portal development
- Regional Experience in India

Note: Consortium with other firms is not allowed in this assignment.

The parameters/criteria for evaluation are also listed in the evaluation sheet named *Assessing eligibility of consulting firms*. The bidders are expected to submit documentary evidence against each criterion.

5. Personnel Concept

The consultant is required to provide personnel who are suited to filling the positions described, based on their CVs, the range of tasks involved and the required qualifications. The consultant is kindly requested to tailor their CVs shared as per specific experience requirements, as mentioned below.

The below-specified qualifications represent the requirements to reach the maximum number of points.

Team leader

The team leader for this project must hold the position of a senior consultant within the lead consultant's organization. Their primary responsibility will be to ensure the successful completion of all project tasks and serve as the main point of contact for project-related communication.

Qualifications of the team leader

- (2.1.1) Education/Training: Advanced university degree (Master's or equivalent) in relevant field (engineering/Science). | **Weightage: 2%**
- (2.1.2) Language: Good business language skills in English and Gujarati is **mandatory**. **Weightage: 3%**

- (2.1.3) General professional experience: The team leader must have at least 10 years of full-time professional experience in the energy sector. Part-time professional experience will not be considered. | **Weightage: 2%**
- (2.1.4) Specific professional experience: S/he should have professional experience of 5 years demonstrating: | **Weightage: 7%**
 - Knowledge of business management, sustainability principles, and policy considerations relevant to EV charging infrastructure deployment in urban centers. (5%)
 - Experience of working on technical and financial aspect of grid planning, RE and EV integration/energy transition (5%)
- (2.1.5) Leadership/management experience: 6 years of management/leadership experience as a project team leader or manager in an organization. | **Weightage: 3%**
- (2.1.6) Regional Experience: NA | **Weightage: 0%**
- (2.1.7) Development cooperation experience: S/he should have experience in development cooperation project design and implementation. | **Weightage: 2%**

Expert 1

The expert shall conduct a rigorous historical data analysis of existing EVs, Charging Station, Financial Incentives through the secondary research and carrying out the primary research to identify the location best suited for the future deployment as mentioned in work package 1. he/she will be responsible for the WP1 deliverables.

Qualifications of the expert

- (2.2.1) Education/training: Advanced university degree (Master's or equivalent) in relevant field (engineering/Science). | **Weightage: 2%**
- (2.2.2) Language: Good business language skills in English is **mandatory**.
- (2.2.3) General professional experience: 8 years of professional full-time experience in Grid expansion planning. Part-time professional experience cannot be counted. | **Weightage: 2%**
- (2.2.4) Specific professional experience: S/he should have professional experience of 5 years demonstrating: | **Weightage: 10%**
 - Knowledge of relevant policies, regulations, and incentives related to EVs and charging infrastructure in India.
 - Knowledge of business planning, data analysis, financial analysis, and economic modelling for EV charging infrastructure deployment.
 - Understanding of electrical systems, power distribution, and renewable energy technologies.
- (2.1.5) Leadership/management experience: NA | **Weightage: 0%**

- (2.1.6) Regional Experience: NA | **Weightage: 0%**
- (2.1.7) Development cooperation experience: NA | **Weightage: 0%**

Expert 2

The expert will be responsible for designing, developing, testing and deployment an online/web portal as per the project scope and he/she will be responsible for WP2 deliverables.

Qualifications of the expert- 2

- (2.2.1) Education/training: University degree in relevant field (engineering /IT/Science). | **Weightage: 2%**
- (2.2.2) Language: Good language skills in English is **mandatory**.
- (2.2.3) General professional experience: 8 years of professional full-time experience in software developer with Energy sector. Part-time professional experience cannot be counted. | **Weightage: 2%**
- (2.2.4) Specific professional experience: S/he should have professional experience of 5 years demonstrating: | **Weightage: 10%**
 - Experience in website development technologies, understanding of data bases and related query languages Oracle, SQL, MySQL. (4%)
 - Experience in designing, developing, testing, data collection, integration, storage and management for software/IT-based tools for web and mobile/tablet-based applications. (2%)
 - Experience in .NET, GIS, and Python (2%)
- (2.1.5) Leadership/management experience: NA| **Weightage: 0%**
- (2.1.6) Regional Experience: NA | **Weightage: 0%**
- (2.1.7) Development cooperation experience: NA | **Weightage: 0%**

Short-term expert pool with 2 members

Tasks of the short-term expert pool:

The short-term expert pool (2 members) is required to collectively meet all the eligibility criteria specified for this assignment.

Qualifications of the short-term expert lead

- (2.6.1) Education/training: Advanced university degree (master's or equivalent) in relevant field (engineering / Science). | **Weightage: 3%**
- (2.6.2) Language: Good business language skills in English is **mandatory**.

- (2.6.3) General professional experience: one expert with 6 years of professional experience in electricity and second expert with 6 years of professional experience with IT sectors. Part-time professional experience cannot be counted. | **Weightage: 3%**
- (2.6.4) Specific professional experience: All experts should have combined experience in: | **Weightage: 12%**
 - Knowledge of relevant policies, regulations, and incentives related to EVs and charging infrastructure in India.
 - Knowledge of business planning, data analysis, financial analysis, and economic modelling for EV charging infrastructure deployment.
 - Experience in designing, developing, testing, data collection, integration, storage and management for software/IT-based tools for web and mobile/tablet-based applications.
- (2.1.5) Leadership/management experience: NA | **Weightage: 0%**
- (2.1.6) Regional Experience: NA | **Weightage: 0%**
- (2.1.7) Development cooperation experience: NA | **Weightage: 0%**

6. Costing requirements

6.1 Assignment of personnel and travel expenses

In total, the contract has a volume of 180 working person-days to be covered by the short-term experts of the bidding organisation(s). A brief break-up of task wise person day requirement is mentioned in the table below.

Sr. No.	Work Packages	Person-days
1	Develop a roadmap for the deployment of electric vehicle (EV) infrastructure in the city of Gandhinagar	100
2	Online portal development providing the details of the EV Infrastructure in the city	80

Following is the personnel-wise allocation of the person-days:

- Team leader (senior consultant): 20 person-days
- Expert 1 (consultant): 45 person-days
- Expert 2 (consultant): 38 person-days
- Short-term expert pool (2 members): 77 person-days

Flexible Remuneration: 5000 EUR.

6.2 Travel

It is to be noted that the preference is to have important meetings through face-to-face approach. However, if the situation due to COVID-19 is not conducive for travel, all the meetings/workshops are encouraged to be conducted on a virtual platform.

The consultant is required to propose a travel budget for this project. The travel budget shall comprise of number of flights, overnight accommodation, per diem and local travel envisaged with estimated prices.

GIZ envisages domestic flights (within India). The domestic sector of travel is the duty station (consultant's base) to Gandhinagar. The consultant is supposed to propose a travel/flight plan in the financial offer. For domestic flights up to 4 hours, only economy class are reimbursable. For long-haul flights (journeys of at least six hours excluding interruptions or stopovers), seats can be booked in premium economy class or business class. First-class tickets are not permitted. Consultant is requested to comply with GIZ travel guidelines and minimize the carbon footprint by choosing more sustainable options for travel and other resources.

The consultant is supposed to propose travel/flight plan in the financial offer. All necessary flights and other travel costs (such as transfer costs to the airport and back, taxi costs will be reimbursed accordingly (against evidence). Only these amounts shall be inserted into the price sheet for the financial offer.

Please note that all travel, per-diem allowances, and accommodation costs shall only be reimbursed as against evidence (actual payment will depend on the actual travel costs against proper original receipts, hotel bills, taxi bills, flight, or train tickets and boarding pass.). Before traveling, each travel request will have to be approved by the GIZ officer in charge for implementation of the project.

It must be noted that interns cannot be deployed in the assignment and travel expenses of only those experts will be reimbursed whose CVs are proposed in the offer. Travel budget will only be used and paid when actual travel happens.

If restrictions arise due to the measures to combat the Coronavirus/Covid-19 (restrictions in air transport and other travel, restrictions on admission, quarantine measures, etc.) GIZ and the consultant are obliged to adjust their contractual services to the changed conditions in good faith.

7. Requirement on the format of the bid

The structure of the bid must correspond to the structure of the ToRs. In particular, the detailed structure of the concept (section 3) is to be organised in accordance with the positively weighted criteria in the assessment grid (not with zero). It must be legible (font size 11 or larger) and clearly formulated. The bid is drawn up in English.

The complete bid shall not exceed **20 pages** (excluding CVs & other supporting company documents)

The CVs of the personnel proposed in accordance with section 4 of the TOR shall be submitted using the EU (<https://europass.cedefop.europa.eu/documents/curriculumvitae>) format and shall not exceed 4 pages. The CVs must clearly show the position and job the proposed person held in the reference project and for how long. The CVs must be submitted in English only.

If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment.

Please calculate your price bid based exactly on the aforementioned costing requirements. In the contract, the consultant has no claim to fully exhaust the days/travel/workshops/ budgets. The number of days/travel/workshops and the budget amount shall be agreed in the contract as 'up to' amounts. The specifications for pricing are defined in the price schedule.

The financial offer must contain the daily rate of fees for each expert and the travel budget.

The technical offer may not contain any price information. Technical and financial offers must be submitted as separate PDF documents and signed.

8 Other costs

Printing, communication, and workshop material cost - GIZ will arrange as per requirement.

9 Inputs of GIZ or other actors

GIZ and/or other actors are expected to make the following available:

- Eg. Workshops logistics