Terms of reference (ToRs) for the procurement of services below the EU threshold

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Training Needs Assessment for Electric Buses in India	Project number/ cost centre: 15.2197.0-001.00

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0. List of abbreviations

AVB	General Terms and Conditions of Contract (AVB) for supplying services and work 2018
ToRs	Terms of reference
STU	State Transport Undertaking
FAME	Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India
CNG	Compressed Natural Gas
OEM	Original Equipment Manufacturer
Discoms	Distribution Companies
CIRT	Central Institute of Road Transport
ARAI	Automotive Research Association of India
IIT	Indian Institute of Technology
CoE	Center of Excellence
TOTs	Training of Trainers

1. Context

Brief description of the Project

Deutsche Gesellschaft fuer Internationale Zusammenarbeit (GIZ) GmbH and Ministry of Housing and Urban Affairs (MoHUA) is jointly implementing the "Integrated Sustainable Urban Transport Systems for Smart Cities (SMART-SUT)" project to improve the planning and implementation of sustainable urban transport in selected Indian cities. The implementation focuses on the pilot cities of Bhubaneswar, Coimbatore, and Kochi, which were selected by the German Government for special support on their way to becoming a Smart City.

The Project combines transport-oriented and methodological advisory services and training of the political partner and the implementing organisations (meso-level) with selected demonstration measures for sustainable urban transport at the micro level (multi-level and multi-actor approach). The project has four components namely: (i) planning and implementing sustainable urban transport projects; (ii) institutional performance and coordination; (iii) learning and exchange formats, (iv) state-level capacity building

Background

Electric Buses ("E-Buses") have been gaining traction in India in recent times. State Transport Undertakings and City Transport Authorities (commonly referred to as STUs) form the major market for E- Buses presently. However, over a period of time, as technology stabilizes and charging infrastructure becomes available, even the private bus market is likely to show interest.

The STU's market demand for E-Buses stems primarily from the Government of India's policy actions to promote green mobility through the two FAME Schemes. While the first tranche under phase I of FAME supported only a few hundred buses to a limited number of STUs, the second tranche is far larger and ambitious; it involves assisting STUs for procurement of nearly 7000 buses under the Gross Cost Contract (GCC) model over a period of 3 years using around INR 35,000 million of budgeted funds.

A second demand trigger for E-Buses in the STU market is arising from restrictions placed by the various courts and the National Green Tribunal, a quasi-judicial body, on several cities over addition of new diesel buses. Increasingly the regulations are discouraging diesel buses, allowing cities to use only environment friendly fuels like CNG, and many cities are planning to leapfrog directly to the zero-emission technology like pure electric propulsion.

The above developments are likely to accelerate E-Buses adoptions in STUs, creating a strong case for preparing for their acquisition and use. Initial experiences have revealed a very large gap in understanding and expertise required in STUs for E-Bus adoption. E-Buses procured under FAME I, operational in small numbers in Hyderabad, Ahmedabad, Lucknow and Kolkata, have involved several new experiences, mostly in the area of range, scheduling requirements, infrastructure costs and commitments. It has led to a realization that E-Buses, at least in the near future, will require to be treated differently through their life cycle compared to conventional fuel buses and this will require a deeper understanding of not only the strengths, but also the limitations of E-Bus technology.

In this background, STUs in India shall need to deepen their understanding on entire value chain and life cycle of E- Buses from planning, procurement, O&M, safety, human resources and integration with legacy fleet system, to realize intended benefits. It would also need to empower and build capacities. Through this assignment, GIZ intends to discover capacity gaps

in STUs and City Transport Authorities and help them fill these gaps by developing training modules for E-Bus lifecycle management to successfully assist E-Bus adoption, reduce transitional costs and support green mobility.

Objectives

The assignment intends to take up three areas of capacity building relating to E-Buses, namely

(i) Training Needs Assessment (TNA) & Training Planning
(ii) Training Modules Preparation

This work package is pertaining to the Training Needs Assessments (TNA) & Training Planning only. The objectives can be enumerated as follows:

- Understand initial E-Bus deployment experience in cities where E-Buses are being operated to understand initial experience and identify emerging capacity gaps that require to be plugged for successful E-Bus adoption
- Undertake training needs assessment of STUs across the E-Bus life cycle starting from need, technology selection, procurement, operation, maintenance and disposal at the senior, middle and junior levels
- This assignment aims to aid Government of India's efforts to improve adoption and integration of E- Buses as envisaged in the FAME II scheme

Box 1: Questions that need to be covered under the Capacity Building Program

The intended capacity building exercise must answer the following questions:

Why is the capacity building required? The contractor is expected to build upon the initial background and justify the need for the training in terms of perceived gap between existing skill versus desired skills, performance deficiencies that can arise due to absence of such capacity building and benefits that can arise out of the training.

Who will be involved in the training, in terms of target population, decision maker support, and training resources required.

What will the training involve, in terms of content and skill building? What skill or knowledge gaps will the training address and why?

How will the training be imparted, in terms of method, pedagogy etc? This is important to make sure training and skill building have maximum impact and holds recipient's interest.

When should the training be conducted? STUs have responsibility to the public and they are understaffed at the top and middle and usually have little time to spare for long-term job-related needs. Hence a carefully drafted training calendar is necessary.

Target Group

The target group for the training program shall be persons engaged at senior, middle and junior management levels in STUs /City Transport Authorities.

- **Senior:** Decision makers and Senior level managers such as Managing Directors, General Manager and Chief Engineers, Chief Operations Managers of STUs

- **Middle:** Managers such as Divisional Heads, Deputy Operations Managers, Deputy Engineers, Depot Manager, Divisional Traffic Controllers and Works Managers
- **Junior:** Assistant Managers, Supervisors, Maintenance Staff, Drivers etc.

2. Tasks to be performed by the Contractor

The Contractor shall understand and document the training requirements across critical areas of E-Bus life cycle of planning, procurement, testing and delivery, safety requirements, integration of E-Buses with legacy fleet, operation & maintenance and scrap & disposal. The contractor shall undertake review of existing training material if any and undertake extensive stakeholder consultation to complete this task. The learnings and output from this task shall be used to develop TNA Framework for persons engaged at the senior, middle and junior levels. The contractor shall map the competencies with requirements to assess the training gaps for number of cities specified in detailed tasks in subsequent section. Detailed scope of this section is specified below -

T1 – Conduct Stakeholder Consultations

- The contractor shall conduct stakeholder consultations with key stakeholders to understand their experiences, issues & challenges faced during planning and deployments and pre-requisite for E- Bus deployment and operations
- Key stakeholders shall include E-Bus OEMs, battery manufacturers, charger manufacturers, private operators, policy makers/industry experts, discoms and STUs/ City Transport Authorities where E-Bus deployment has happened and is operational
- The contractor shall finalize enquiry points in consultation with GIZ. Indicative enquiry points envisaged at this point is provided in ***Annexure-2***. Enquiry points shall address the training/capacity needs of critical areas indicated in ***Annexure-1*.**
- Tentative sample size of each stakeholder is specified below -

Stakeholders	**Suggestive Sample size***
E-Bus OEMs	3
Battery Manufacturers	2
E-Bus Charger Manufacturers	2
Private Operators	4
Policy Makers/Experts at Ministries/Industry Experts/Consultants/ Institutions (CIRT/Training Institute / ARAI /IITs /CoEs)	8
Discoms	2
STUs/City Transport Authorities	For all selected cities

**Numbers to be finalized in consultation with SMART-SUT project.*

- The outcome of this task shall provide pre-requisites and incompetencies in critical areas indicated in Annexure-1 for persons engaged in senior, middle and junior management levels

T2 – Prepare Training Needs Assessment

- The learning and outputs from T1 shall be used to develop performance functions, competency requirements and key performance indicators for ***target group (as defined in Chapter 1)*** in critical areas
- The TNA Framework shall be prepared based on above inputs to provide skill inventory, work out skill requirements, identify skill gaps and provide a plan for addressing the competency gaps. It shall include details of the ***target group (as defined in Chapter 1)*** using structured questionnaires. Broadly it shall focus on performance functions, competencies and performance indicators for target group. The questionnaires /TNA Framework shall be finalized in consultation with SMART-SUT Project
- The sample size for conducting TNA shall be 7 cities. The contractor shall select four cities from group A and 3 cities from group B in consultation with SMART-SUT Project. The list of cities included in group A and group B is specified in table below -

Group A	**Group B**
1. Ahmedabad 2. Hyderabad 3. Pune 4. Mumbai 5. Kolkata 6. Lucknow 7. Manali	1. Bangalore 2. Nagpur 3. Coimbatore 4. Chennai

- Assessment shall also include at-least one international city (preferably Shenzhen, China) and how they work towards the training, skill development and capacity building at various stages of E-Bus deployment. Contractor must document the experience and learning considering the objective of the assignment
- Contractor shall establish the communication with the city through various channels (emails/skype/video conferencing etc.) and arrange a visit keeping the objective of the assignment in mind. All costs towards such international travel of GIZ staff and partners (if any) shall be borne by the GIZ separately
- This task shall help in identifying capacity gaps (at each of the senior, middle and junior level management) and focus areas for developing training contents
- Contractor shall also propose resource requirements in the existing organization structure at various levels, for delivering various functions anticipated for operating and managing the E-Buses. This will include the type of resources, numbers, qualification, job description, roles and responsibilities/standard operating procedures (SOPs)
- The contractor shall review existing training material (if any)
- Output of this task would be the identification of proposed modules for training on E-Buses and detailing out the scope of such modules.

T3 – Planning & Preparing the Training Program

- The Contractor shall propose program for conducting training on the proposed training modules. The purpose of this plan is to outline who should be trained when and how on an ongoing basis.

- The Training Program shall include following for each training module:
  - Training length (in number of days)
  - Target Group and target STUs/City Transport Authorities
  - Training Locations
  - Frequency of training (number of courses to be conducted within India in one year)
  - Comprehensive Method: online/off-line or mix of both
  - TOTs/Pilots
  - International visits
  - Budget
  - Other requirements
- This plan shall provide GIZ an estimate of the commitment needed for each training module.

T4 – Further Requirements - Identification of host institutions

- The contractor shall also assist GIZ in identification of host institution(s) and potential trainer(s) for preparation and dissemination of training program. Identification of such institutions can be based on the availability of infrastructure and expertise with them. Identification of such institutions should not be limited to India.
- The contractor shall also assist GIZ in initiating the communication with such institutions and establishing the agreement between the institution and GIZ to host and conduct such trainings in future.
- The output of this task will be in the form of a report that outlines the program plan. The contractor shall submit the report to GIZ for review and comment and revise the report accordingly.

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

S. No.	Deliverables	Main Content of the Deliverables	Time frame
1	Inception Report	• Understanding of the Project • Approach & Methodology • Staff deployment and task completion plan • Support required from SMART-SUT	0.5 month from start of assignment (D1)
2	Task-1 & Task-2 Report	• Appraisal of already available training material • Report on gap assessment for E-Buses deployment as seen by supply side and STU side • Report on TNA framework and gap assessment	D1 + 2.5 months (D2)
3	Task-3	• Preparing the training program	D2 + 1 month (D3)

4	Task-4	• Identification of host institutions and setting up the communication and follow-ups	D2+1 month

3. Concept

In the bid, the bidder is required to show how the objectives defined in Chapter 2 are to be achieved, if applicable under consideration of further specific method-related requirements (technical-methodological concept). In addition, the bidder must describe the project management system for service provision.

Technical-methodological concept

Strategy: The bidder is required to consider the tasks to be performed with reference to the objectives of the services put out to tender (see Chapter 2). Following this, the bidder presents and justifies the strategy with which it intends to provide the services for which it is responsible (see Chapter 2).

The bidder is required to present the actors relevant for the services for which it is responsible and describe the **cooperation** with them.

The bidder is required to present and explain its approach to **steering** the measures with the project partners and its contribution to the results-based monitoring system.

The bidder 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 Chapter 2 are to be provided. In particular, the bidder is required to describe the necessary work steps and, if applicable, take account of the milestones and contributions of other actors in accordance with Chapter 2.

The bidder is required to describe its contribution to knowledge management for the partner and GIZ and promote scaling-up effects (**learning and innovation**).

Project management of the contractor

The bidder is required to explain its approach for coordination with the GIZ project.

- The contractor is responsible for selecting, preparing, training and steering the experts (international and national, short and long term) assigned to perform the advisory tasks
- The contractor makes available equipment and supplies (consumables) and assumes the associated operating and administrative costs
- The contractor manages costs and expenditures, accounting processes and invoicing in line with the requirements of GIZ
  The contractor reports regularly to GIZ in accordance with the AVB of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

In addition to the reports required by GIZ in accordance with AVB, the contractor submits the following reports:

- Inception report
- Contributions to reports to GIZ's commissioning party

- Brief monthly/quarterly or half-yearly reports on the implementation status of the project (5-7 pages)

The bidder is required to draw up a **personnel assignment plan** with explanatory notes that lists all the experts 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.

4. Personnel concept

Eligibility requirements of the firm

- Please provide the legal status of your firm
- Average annual turnover for the last three financial years: at least 150.000 EUR.
- The number of employees as at 31.12. of the previous year: at least 10 persons
- Please provide 2 reference projects in the field of City level/State level E-Mobility with at least 1 reference project in last three years
- The bidder is required to provide personnel who are suited to filling the positions described, on the basis of their CVs (see Chapter 7), the range of tasks involved and the required qualifications.

Technical Experience *(Refer : Assessing the eligibility of consulting firms)*

- Minimum 2 projects Experience in preparing plans for bus transport systems
- Minimum 2 projects Experience in training and capacity building
- Minimum 2 projects Experience in EV plans/feasibility

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

Team Leader cum Bus Transportation Expert

<u>Tasks of the team leader cum bus transportation expert</u>

- Overall responsibility for the advisory packages of the contractor (quality and deadlines)
- Coordinating and ensuring communication with GIZ, partners and others involved in the project
- Personnel management, in particular identifying the need for short-term assignments within the available budget, as well as planning and steering assignments and supporting local and international short-term experts
- Regular reporting in accordance with deadlines

<u>Qualifications of the team leader</u>

- Education/training (2.1.1): University qualification (Post-graduation or Equivalent) in Urban Planning /Transportation Planning/Transportation Engineering/Mechanical Engineering/Electrical Engineering
- Language (2.1.2): Good business language skills in English
- General professional experience (2.1.3): 25 years of experience in Transport Planning / Transportation Research and Bus Operation/Transport Policy/ Traffic and Transportation Studies/Management
- Specific professional experience (2.1.4): 10 years in of Bus based Transport System /Bus Technologies in India or abroad and should have worked in five bus-based

Projects, of which minimum two should be international projects. Should have thorough understanding of the governing policies, processes of public transport authorities/ institutions in the Indian context. Experience in Training Need Assessment/ preparing training modules will be an added advantage.
- Leadership/management experience (2.1.5): 6 years of management/leadership experience as project team leader or manager in a company
- Regional experience (2.1.6):
- Development Cooperation (DC) experience (2.1.7): Working experience in DC projects
- Other (2.1.8):

Expert 1 National EV Expert

Qualifications of expert 1
- Education/training (2.2.1): Bachelor's degree in Automobile Engg./Vehicle Technology or Equivalent
- Language (2.2.2): English
- General professional experience (2.2.3): 10 years overall experience with 2 years of experience in Electric Vehicle Technology in India or abroad.
- Specific professional experience (2.2.4): Must have thorough understanding of E- Bus Technology, Battery Management and its Operation and Maintenance aspects
- Leadership/management experience (2.2.5):
- Regional experience (2.2.6):
- Development Cooperation (DC) experience (2.2.7):
- Other (2.2.8):

Expert 2 International EV Expert

Qualifications of expert 2
- Education/training (2.3.1): Bachelor's/Diploma degree in Automobile Engg./Vehicle Technology or Equivalent
- Language (2.3.2): English
- General professional experience (2.3.3): 10 years overall international experience with 2 years of experience in Electric Vehicle Technology
- Specific professional experience (2.3.4): Must have thorough understanding of E- Bus Technology, Battery Management and its Operation and Maintenance aspects
- Leadership/management experience (2.3.5):
- Regional experience (2.3.6):
- Development Cooperation (DC) experience (2.3.7):
- Other (2.3.8):

Expert 3 Electric/Power Infrastructure Specialist

Qualifications of expert 3
- Education/training (2.4.1): Bachelor's degree in Electrical Engineering or equivalent
- Language (2.4.2): English
- General professional experience (2.4.3): 10 years' experience in the area of Load Assessment, Setting Up Power Supply Infrastructure and Charging Infrastructure
- Specific professional experience (2.4.4):
- Leadership/management experience (2.4.5):
- Regional experience (2.4.6):
- Development Cooperation (DC) experience (2.4.7):
- Other (2.4.8):

Expert 4 Transportation Planning Specialist

Qualifications of expert 4

- Education/training (2.5.1): Post-graduation or equivalent in Transportation Planning/Engineering
- Language (2.5.2): English
- General professional experience (2.5.3): 8 years of experience in Bus based Urban Transport System Planning
- Specific professional experience (2.5.4): Must have Experience in Planning and Scheduling of Bus Systems
- Leadership/management experience (2.5.5):
- Regional experience (2.5.6):
- Development Cooperation (DC) experience (2.5.7):
- Other (2.5.8):

Expert 5 Training Specialist

Qualifications of expert 5

- Education/training (2.6.1): Bachelor's degree
- Language (2.6.2): English
- General professional experience (2.6.3): 10 years of training experience in the transportation sector
- Specific professional experience (2.6.4): Experience in designing, implementing, monitoring and/or evaluating institutional building interventions/ operations and designing of training programs, designing and development of training support materials and implementing training programs
- Regional experience (2.6.5):
- Development Cooperation (DC) experience (2.6.6):
- Other (2.6.7):

Note: Evaluation of expert 5 will be done as per assessment criteria mentioned under "short-term expert pool 1" in Technical Assessment Grid

Soft skills of team members

In addition to their specialist qualifications, the following qualifications are required of team members:

- Team skills
- Initiative
- Communication skills
- Sociocultural competence
- Efficient, partner- and client-focused working methods
- Interdisciplinary thinking

5. Costing requirements

Assignment of personnel

Team leader: On-site assignment for **40** expert days

Expert 1: Assignment in country of assignment for **40** expert days

Expert 2: Assignment in country of assignment for **10** expert days, Assignment in home country for **10** expert days (Total 20 expert days)

Expert 3: Assignment in country of assignment for **15** expert days

Expert 4: Assignment in country of assignment for **30** expert days

Expert 5: Assignment in country of assignment for **30** expert days

Travel

The bidder is required to calculate the travel by the specified experts and the experts it has proposed based on the places of performance stipulated in Chapter 2 and list the expenses separately by daily allowance, accommodation expenses, flight costs and other travel expenses.

A tentative schedule of 20 domestic round trips (inclusive of travel to Delhi and Project cities) and 3 international round trips along with 60 nights of accommodation and per diem has been envisaged by the GIZ.

- Economy class Airline tickets shall be procured by the contractor and reimbursed by GIZ against provision of receipts, flight tickets, and boarding passes.
- Accommodation will be arranged by contractor and shall be reimbursed by against provision of invoices

Workshops, training

The contractor would need to conduct round tables/workshops and stakeholder consultation at various stages of the assignment (to be decided mutually at project inception stage). Format of the such meetings, types and number of participants will be decided in consultation with GIZ. A total of 3 such meetings are envisaged and cost distribution for organizing such meetings will be as follows:

- Developing & sharing study material/agenda etc. in soft & hard formats (contractor)
- Communication with participants, making presentations, minutes and follow-up (contractor)

Other costs

- Visa costs of international expert's travel to India and travel of Indian experts abroad shall be borne by SMART-SUT project

6. Inputs of GIZ or other actors

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

- Workshops logistics - Venue including lunch/dinner, stay (SMART-SUT)
- Costs towards travel, boarding, lodging related to trainers/faculty/institutes (SMART-SUT)

7. Requirements 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 (Chapter 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 (language).

The complete bid shall not exceed 10 pages (excluding CVs).

The CVs of the personnel proposed in accordance with Chapter 4 of the ToRs must be submitted using the format specified in the terms and conditions for application. The CVs 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 can also be submitted in English (language).

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

8. Annexes

Annexure 1: Critical training areas for E- Bus planning, procurement, operation, safety and scrap disposal (list is indicative and not comprehensive)

S. No.	Critical Training Area	Details

1	Planning Module	• Transition planning and Phasing for E- Bus deployment
		• Integration with legacy fleets.
		• Pre-requisites for procurement of E-Buses
		• Selection of Bus Technologies such as –
		  ○ Swapping
		  ○ Overnight + Opportunity Charging
		  ○ Overnight dedicated without Opportunity charging
		  ○ Flash Charging etc.
		• Infrastructure planning
		  ○ Depot selection, power infrastructure, electric load requirement and associated electric infrastructure
		  ○ Charging / Swapping stations.
		  ○ Strategies for overcoming power demand / outages/Grid failure
		  ○ Planning for resilient infrastructure for E-Buses
		• Route planning-based selection of charging Technologies.
		• Bus specifications

2	Procurement Module	• Procurement planning and time frame • Ways of procurement (purchase vs lease vs others) • Review of existing procurement documents available and value addition if any required • Balanced risk distribution between City, OEM and/or Operator • Procurement process for E-Buses and related infrastructure • Key attention areas for preparing tender document • Contract structure and Contract length • Responsibility matrix • Risk mitigation
3	Operation and Maintenance Module	• Planning and Scheduling of an E-Bus: What's different and how should it be managed? • Battery Management • Servicing, inspection, repairs, overhauls/refurbishments. • Preventive and breakdown maintenance; performance monitoring and analytics etc. • Energy load management at a location of charging infrastructure • Understanding and using generated data (bus health and performance) and use it for preventive maintenance and planning
4	Equipment Handling and Safety Requirements	• Equipment handling such as automated battery swapping system etc. • Fire safety requirements on Bus and off Bus while handling electrical and mechanical equipment • Fire safety requirement due to electric charging infrastructure. • Disaster Management (O&M of E-Buses and related infrastructure during disaster and flooding
5	Scrap and Disposal	• Disposal of scrapped batteries • Scrapping of E-Buses and chargers
6	Soft Skills Development	• Supervisor and Driver training • Interdepartmental co-operation • Contractor and Vendor management

Annexure 2: Suggestive Enquiry Points with Stakeholders - Supply Side and STU side

(I) Supply side

S. No.	Stakeholders	Suggestive Enquiry Points
1	E-Bus OEMs	• E-Bus technologies, suitability of charging technologies, usage mapping, trade-offs • Challenges and mitigation in pilot deployments

		• Pre – requisites by the cities for operation planning • E-Bus performance and what important O&M guidelines for good asset management • What changes in STU structure (with roles and responsibilities) to host strong E-Bus procurement and O&M • What good contracting options and business models for STUs/cities? How different from existing models, and what cities finding difficult for procurement?
2	Battery Manufacturers	• Battery performance data from pilots, and what insights on drivability and O&M (correlated to battery chemistry, pack design and bus placement) • What important infra setup and O&M guidelines for good battery life management • Safety considerations • What procurement guidelines for STUs
3	E-Bus Charger Manufacturers and SIs	• E-Bus Charging technologies, selection matrix, trade-offs • location planning and checklist • Charging performance data from pilots, and its impact on overall battery health, E-Bus performance and overall bus operations • Important areas in infra setup and O&M guidelines related to Chargers • What procurement guidelines for STUs
4	Private Operators (wet lease, dry lease)	• What is current perception (or real experience) for E-Bus services management for STUs or for self? • What challenges faced from OEM side? What can be solutions? • What challenges faced from STU side (for procurement and O&M)? What can be solutions?
5	Policy makers/Ministries/Industry Experts/ Consultants etc.	• What challenges faced with E-Bus procurement, deployment, integration and O&M? • What Training Needs Areas for the STUs/ cities? Who all key stakeholders to which Training to be directed?

(ii) STU side

S. No.	Stakeholders	Affiliation to	Suggestive Enquiry Points
1	Head, STU	City/ STU	• E-Bus desired and actual benefits/ proposition • What plans for further E-Bus procurement? What changes to expect from past learning? • What gap areas for capacity building
2	Head, SPV	STU	• Current contracting structure, success and challenges for procurement and operations of E-Bus • What challenges faced during planning, procurement, operations and integration? What can be avoidable – how?

3	Head, Operations/ Traffic	STU	• How E-Bus currently operating and integrated with legacy fleet? What changed infra, resources and processes in place? • What current utilization and performance of E-Buses and charging system? What challenges faced? • What experience of drivers, and maintenance personnel?
4	Head, Commercial	STU	• What distinction, if any, in treating cost and revenues for E-Buses over legacy fleet?
5	Head, Procurement	STU	• What process followed for last E-Buses procurement? What challenges faced? What changes required or planned? • What training need areas across roles within STU and city to facilitate right E-Bus procurement and contracting
6	Private Operator	STU	• What distinct experiences of E-Buses management over ICE buses? • What faced challenges in planning, procurement, operations and integration? What suggestions to improve?
7	Head, Civil/ Infrastructure	STU	• What kind of changes/upgradation require in depot/terminal infrastructure to make it resilient
8	Discom	City	• What current effect on loading of network? • What plans for power supply network to manage future increased E-Buses adoption • What kind of infrastructure assessment needed from Discom side and at what stage of planning