



## BHARAT HEAVY ELECTRICAL LIMITED

Energy Storage Solution Group (ESSG), Industry Sector, New Delhi

### Delhi Metro Rail Corporation Ltd (DMRC)

Feeder Service under Punjabi Bagh Cluster as last mile connectivity

10 Nos 34 Seater AC Electric (Battery Operated) Buses & Charging Infrastructure along with O&M of 10 Years

Sl No.	Broad Requirements of DMRC
1	Procure, Operate & Maintain 10 AC Battery operated Electric Buses
2	Procure, Operate & Maintain battery charging infrastructure for 10 AC Electric Buses
3	Develop bus depot infrastructure for repair and maintenance of buses on land/plot provided by DMRC

Compensation ---> Monthly (GCC Model Basis)

Period of Work: 10 Years with provision of extension by 2 years

#### Other Major requirements

- 1 Bidder should have authorisation from OEM of Bus manufacturer meeting the specification
- 2 JV/ Consortium wherein one of the members is Electric Bus Manufacturer (OEM) meeting specification
- 3 **Minimum operational experience should be 90 PCU (Passenger Car Unit Years) during last three years (01.04.2015 to 31.03.2018)**
- 4  $PCU\ Years = (Nos\ of\ Vehicles \times Experience\ Weight\ as\ per\ applicable\ category \times PCU\ factor \times No\ of\ months\ of\ operations) / 12\ Months$
- 5 All approvals/clearances related to procurement and subsequent operation of battery operated buses shall be obtained by the contractor at its own cost.
- 6 Intelligent Transport System (ITS)
- 7 Registration on Buses in the name of contractor

#### Operational requirement of E Buses

- 1 i) Route No MC-701A (2.19 Kms): Punjabi Bagh west Metro---->Punjabi Bagh West Metro----->Via Punjabi Bagh East Metro Station
- 2 ii) Route No MC-702A (3.04 Kms): Punjabi Bagh west Metro---->Punjabi Bagh West Metro----->Via Shivaji Park Metro Station
- 3 Frequency: 3-5 Mins and 15 Mins run time for one trip completion
- 4 Avg Run per day per Bus: 200 Kms
- 5 Total service hours required per day: 170 Hours
- 6 Space for charging infrastructure: 2300 Sqm approx (free of cost)



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### Electricity/Power

- 1 DMRC shall provide the electricity connection on as is where is basis from DMRC nearest distribution board
- 2 **Any further augmentaton for electricity distribution shall be in bidder scope**
- 3 **Monthly electricity consumption charges in contractor scope**
- 4 **Building & Civil works for charging infrastruture including flooring, building for equipment, office space, workshop are in contractor scope**
- 5 **Insurance in contactor scope**

PRICE INPUT SUMMARY		Rs Lakhs
1	Supply E Buses 10 Nos (12 M)	1529.30
2	Supply of 120 KW DC fast Chargers 4 Nos (GB/T)	136.48
3	Freight Charges for E Buses 10 Nos (12 M)	0.00
4	Freight Charges for DC Chargers	5.46
5	AMC Charges for E Buses 10 Nos per year	232.80
6	AMC Charges for DC Chargers 4 Nos per year	8.05
7	Augmentaton for Electricity Distribution from DMRC terminal point	34.89
8	E&C Charges	20.56
9	Civil Works (Building for charging infrastruture including flooring, building for equipment, office space, workshop etc)	150
<b>Total</b>		<b>2117.55</b>
<b>Assumptions:</b>		
1	Expected range of E Bus per charge is 150 Kms	
2	All taxes & duties are included	
3	Insurance Charges are not included	
4	Electricity Consumption charges are not considered	
5	DMRC shall provide input power supply at 11KV , 700 KW at nearest terminal point	

<-----DIMTS may please review this figure