

**SUMMARY OF SCHEDULE OF RATES  
FOR  
PERMANENT CATHODIC PROTECTION WORKS  
FOR U/G STEEL PIPELINE NETWORK AT KAKINADA**

**PROJECT:** Permanent Cathodic Protection of CNG & City gas pipeline network of BGL In Kakinada 10"/6"/4" X 38 Km (Appox)  
**TENDER/BID DOC No.:** MEC/23R8/01/51/S2/CF/00/0008  
**ITEM:** PERMANENT CATHODIC PROTECTION WORKS FOR 10"/6"/4" x38 km PIPELINE  
**CLIENT:** Bhagayanagar Gas Limited, Hyderabad

Sl. No.	Description	Price in Indian Currency (INR)	
		(In Figures)	(In Words)
1	Total amount (inclusive of all taxes and duties) for Permanent Cathodic Protection Work Supply (item no. A)		
2	Total amount (inclusive of all taxes and duties except Service tax) for Permanent Cathodic Protection Work Erection, Testing & Commissioning (item no. B)		
3	Service Tax 15.00% on Total Amount mentioned at SL. No. 2 above		
4	Gross Total Amount (inclusive of all applicable taxes & duties and Service Tax) [1+2+3]		

**Notes:**  
1) Bidder has to quote all items of the Schedule of Rates.  
2) Price Schedule filled with price should be submitted with the Price Bid only.  
3) Evaluation and comparison of bid shall be as per clause no. 32 of ITB - Vol. I of II.

Place : \_\_\_\_\_  
Date : \_\_\_\_\_

Signature of Authorised Signatory  
Name :  
Designation :  
Seal :



Permanent Cathodic Protection of CNG & City gas pipeline network of BGL  
 In Kakinada 10"/4" X 38 Km (Appox)  
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**PERMANENT CATHODIC PROTECTION WORKS FOR 10"/4" x 38 km PIPELINE**  
 Bhagyanagar Gas Limited, Hyderabad



Item No.	Description	Unit	Quantity	Unit Rate (inclusive of all taxes and duties) in Rs.	Total amount (inclusive of all taxes and duties) in Rs.
<b>A</b>	<b>PCP-SUPPLY</b>				
1	Design, Detailed Engineering for Permanent Cathodic Protection system as per the corrosion survey	Nos.	1		
2	CPTR Units - Min 48V/25A, Automatic, Air cooled, Indoor type with remote monitoring and control through SCADA facility	Nos.	2		
3	1" dia & 1 M long 8A rating LIDA MMO anode sets for Deepwell anode ground bed (Each set consist of 10 Nos. of anode) with petroleum cock breeze, anode cable & cable joints etc.	Set	2		
4	<b>Junction Boxes</b>				
4.1	Anode Junction Boxes (IP-55, Weather Proof)	Nos.	2		
4.2	Cathode Junction Boxes (IP-55, Weather Proof)	Nos.	2		
5	<b>Permanent Reference Cell</b>				
5.1	Cu/CuSO4 Permanent Reference cell	Nos.	6		
5.2	Ag/AgCl Permanent Reference cell (Shall be used only if required based on survey report)	Nos.	3		
6	<b>Remote Monitoring of PSP Through GSM service band</b>				
6.1	Computerized test station Unit (CTSU)	Nos.	4		
6.2	CTSU reader	Nos.	2		
7	<b>PCP Cables- The Cables shall be annealed high conductivity, stranded copper conductor, 650/1100V grade, XLPE Insulated &amp; PVC Sheathed</b>				
7.1	1c x 6 mm <sup>2</sup> - armoured for potential measurement, Ref Cell	Mtr	1100		
7.2	1Cx 25 mm <sup>2</sup> - armoured for Bonding/Grounding etc.	Mtr	250		
7.3	1Cx 35 mm <sup>2</sup> - armoured for Anode & Cathode Header Cable.	Mtr	700		
7.4	3C X 10mm <sup>2</sup> - armoured for TR/CPPSM unit incomer cable.	Mtr	200		
8	<b>ER probes</b>	Nos.	2		
9	<b>ER probe Readers</b>	Nos.	1		
10	<b>Polarisation coupons (100 mmx100mm) with Magnetic reed switch</b>	Nos.	4		
11	<b>Solid State type Polarisation cells for HT power line crossings (66KV &amp; above)</b>	Nos.	5		
12	<b>20 Kg Sacrificial Zinc anodes for HT line crossing, Earthing of block valves on Cathodically Protected portion of pipeline</b>	Nos.	7		
13	<b>Earthing Electrodes 65mm dia x 3mtr long &amp; 4.5 mm thick GI pipe for earthing of cathodically inprotected pipeline</b>	Nos.	4		
14	<b>Test Stations (Weather Proof with IP-55)</b>				
14.1	Normal Size as per tender drawings	Nos.	5		
14.2	Big Size suitable for Polarisation Cells as per tender drawings	Nos.	2		
15	<b>Chainlink Fencing for Anodebed &amp; AJB for Deep Well AGB. (Required if anodebed is located outside the mother station)</b>	Nos.	2		
16	<b>Cable to pipe connections by Pin brazing / Thermit welding method for all sizes (Upto 1C x 35mm<sup>2</sup>)</b>	Lot	1		
17	<b>Recommended Spares for CP units</b>	Nos.	1		
18	<b>Recommended Spares for 2 Years Operation &amp; Maintenance of CP system as per spare list enclosed in Vol. II of II (Technical Specification)</b>	Nos.	1		
<b>TOTAL-PCP SUPPLY (A)</b>					



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Item No.	Description	Unit	Quantity	Unit Rate (inclusive of all taxes and duties except Service tax) in Rs.	Total amount (inclusive of all taxes and duties except Service tax) in Rs.
<b>B</b>	<b>PCP-SURVEY/INSTALLATION/MONITORING /TESTING &amp; COMMISSIONING</b>				
1	Soil Resistivity Survey at PCP anode ground bed Locations along with soil chemical analysis (Min Three Locations shall be selected for the survey)	Nos.	2		
2	CPTR Units - Min 48V/25A, Automatic, Air cooled, Indoor type with remote monitoring and control through SCADA facility	Nos.	2		
3	Deepwell anode groundbeds consisting of 1" Dia x 1M long 8Amp Rating Lida Single (MMO) Electrode sets including cutting trench & backfill with Petroleum Cokebreeze or Drilling of borehole, lowering of MS Casing pipe & PVC pipe with petroleum coke breeze backfill and anode tail cable laying etc as required to complete the installation of the AGB in all respect.	Nos.	2		
4	Chainlink Fencing for Anodebed & AJB for Deep Well AGB. (Required if anodebed is located outside the mother station)	Nos.	2		
5	Junction Boxes IP55 AJB & CJB	Nos.	4		
6	Permanent Reference cell				
6.1	Cu/CuSO4 Permanent Reference cell	Nos.	6		
6.2	Ag/AgCl Permanent Reference cell (Shall be used only if required based on survey report)	Nos.	3		
7	Computerized Test station Unit (CTSU)	Nos.	4		
8	<b>Cable laying</b>				
8.1	1c x 6 mm2 - armoured for potential measurement, Ref Cell	Mtr	1100		
8.2	1Cx 25 mm2- armoured for Bonding/Grounding etc.	Mtr	250		
8.3	1Cx 25 mm2- armoured for Anode & Cathode Header Cable.	Mtr	700		
8.4	3C X 10mm2- armoured for TR/CPSPM unit incomer cable.	Mtr	200		
9	ER probes	Nos.	2		
10	Polarisation coupons (100 mmx100mm) with Magnetic reed switch & Permanent ref Cell	Nos.	4		
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14	<b>Test Stations (Weather Proof with IP-55)</b>				
14.1	Normal Size as per tender drawings	Nos.	5		
14.2	Big Size suitable for Polarisation Cells as per tender drawings	Nos.	2		
15	Cable to pipe connections by Pin brazing / Thermit welding method for all sizes (Upto 1C x 35mm <sup>2</sup> )	Lot	1		
16	Testing & Commissioning of Permanent Cathodic Protection System.	Nos.	2		
17	Monitoring of PCP system once a Month till Handing Over for three months from date of Commissioning.	Months	3		
18	<b>Post Commissioning Surveys</b>				
18.1	CIPL Survey	Mtr	38000		
18.2	Current Attenuation Test Survey (CAT)	Mtr	38000		
18.3	CAT with "A" Frame or DCVG Survey at Holiday / Defect Location	Mtr	3800		
18.4	AC-DC Interference Detection and Mitigation	Lot	1		
19	Preparation and submission of As-Built drawings/documents including final commissioning report for PCP system, Post commissioning survey, Interference study report.	Nos.	1		
20	Repairing of the Coating damages and providing a concrete pad of length 4 Mtrs for the 10" pipeline	Lot	1		
	<b>TOTAL AMOUNT (inclusive of all taxes and duties except Service tax) OF PCP SURVEY/INSTALLATION/MONITORING/TESTING &amp; COMMISSIONING (B)</b>				



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	Note-
1)	Scope of work and other terms and conditions are strictly as per bid document.
2)	Bidder to clearly indicate "Quoted"/ "Not Quoted" against each sl. no.in the price column in the un-priced Schedule of rates and submit the same in un-priced part of the bid. Bidders to submit price part of above schedule of rates in their Priced Bid. All column of price schedule must be filled with required information as applicable.
3)	Bidder must quote the price in Schedule of Rates formats only. Bid submitted with changed format/ description is liable to be rejected.
4)	Quoted rates are firm and fixed till complete execution of the entire order.
5)	Commissioning spares as required shall be included in the supply.
6)	LS Quantities are Quantities required for completion of the project in all respect as per the Approved Design Document & Bill of Material.
7)	Above quantities are estimated quantities and may change as per site condition/detail engineering. Successful tenderer shall supply the equipments, at the same rate, as per the changed quantities.
8)	Bidder shall submit necessary documents as per BEC / Commitment letter from Expert Agency for doing the AC and DC Interference & AC High Induced voltage detection & Mitigation with the Bid.