

OIL & GAS DEVELOPMENT COMPANY LIMITED



**HIRING CATHODIC PROTECTION SERVICES FOR
ALL FIELDS AND PROCESSING PLANTS**

**TENDER ENQUIRY # PROC-SERVICES/CB/CORR-
4470/2019**

Terms of Reference (TOR) / Scope of Work (SoW)

CP SYSTEMS OPERATION MAINTENANCE REHABILITATION

UP-GRADATION & INSTALLATION SERVICES

1. INTRODUCTION.

- i. OGDCL, the largest Oil & Gas Exploring and Production Company in Pakistan intends to hire services of experienced and reputed CP contractor for hiring cathodic protection services at its various fields in all areas of the country to ensure external corrosion control of the installed assets.
- ii. The services shall be required on rate-running contract basis initially for a period of one year (extendable further with mutual consent) in all parts of the country at all field locations where OGDCL carries its field operations.
- iii. Since the operating fields and area of operation are very wide and also nature of systems are different therefore the services have been split in groups. The bids shall be submitted group wise because the technical & commercial evaluation shall be carried out group-wise and contract shall also be awarded group-wise.
- iv. The bid shall be evaluated on group basis therefore the bidder can offer bid for any single group or all groups separately.

2. Purpose of Services

- i. To hire experienced contractor with specialized experience and certified manpower to monitor, carry out audit & inspection, do minor repairs, maintain for proper effectiveness & efficiency, rehabilitate & up-grade of already installed CP Systems and install new systems where ever and whenever needed / required at all OGDCL fields / processing plants for all type of assets such as well casings, pipelines, storage tanks and processing plant's under-ground piping network etc. Material for new installation & up-gradation of CP system shall be provided by OGDCL.
- ii. To ensure that installed CP Systems are efficiently and effectively working for proper protection of the assets as per NACE standards / recommended practices.
- iii. To enhance life expectancy of the installed CP Systems through expert operations.

3. Required Services.

- i. **Periodical Bi-monthly visits** for monitoring, inspection & audit, minor repair & maintenance etc. of already installed CP Systems at major fields which have been divided in two groups on basis of DC Power sources. This segment of services shall include minimum but not limited to following. The successful contractor shall have to fulfill these requirements during each visit;
 - a. To monitor each and every installed CP System including all its components, hardware etc.
 - b. To take readings of all components TR Units, Solar Systems, TEGs etc. (whatever the case may be).
 - c. To check functioning of and ensure that all components / hardware of CP systems are working properly.
 - d. The over-all system is effectively providing required potential (*on-Potential as well as off potential as per NACE criteria*).

- e. Periodical, preventive & Routine repair & maintenance including check, change, replacement of TEG Filters, cleaning of all components, removing rust, battery water, solar cards, shunts, rheostats, AJB / CCB / test post connections, positive / negative cable connections etc. (whatever the case may be).
 - f. Oil check for TR Units. If required to fill the remaining oil. Transformer oil shall be provided by OGDCL.
 - g. In case of TEGs, cleaning of any debris from all components.
 - h. Dust removing from solar panels.
 - i. All above activities shall be carried out directly by NACE CP Level-II certified Engineer and report shall be endorsed by NACE Corrosion technologist with minimum of 15 Years CP and Corrosion related experience.
- ii. Partial Installation of individual CP Components:** As part of major repair, maintenance, rehabilitation and up-gradation of already installed CP Systems following services may be required on as and when required basis at any of the fields:
- a. Installation of individual Anode Junction Box(es), Anode Ground Bed(s), Current Control Box(es), Bond Box(es), Test Post(s) etc. as per field's specific requirement.
 - b. For this purpose all civil works such as foundation(s) for AJBs, CCBs, Bond Boxes, Test Posts etc. digging / trenching, back-filling, welding etc. shall be contractor's responsibility.
- iii. Dismantling of installed CP System:**
- a. Service may also be required at any OGDCL field for dismantling of installed CP Systems from wells / sites where these systems are no more required.
 - b. The systems shall be dismantled carefully to get maximum material recovery for re-use.
 - c. All major components such as power source, AJBs, CCBs, shunts, rheostats, cables etc. to be checked for re-usability.
 - d. After dismantling, all material shall be transported to store / designated place by field engineer for proper stacking. The transport for material shifting from well / site to store shall be provided by OGDCL.
- iv. Installing New CP System**
- a. The contractor may also be required to install new CP System at any OGDCL field / plant for underground pipelines and / or above-ground storage tanks with TR Unit or Solar Unit as source of DC power material shall be provided by OGDCL.
 - b. The design parameters and material requirement / BOQ shall be discussed (*on basis of available data and already designed CP Systems for that area*) before installation.
 - c. The installation shall be carried out under direct supervision of NACE CP Level-II Certified Engineer and finally endorsed by NACE Corrosion technologist with minimum 15 years of CP & Corrosion related experience.
 - d. All major components (such as power source, anodes, cable, AJBs, CCBs, test posts, shunts, rheostats, slice kits, cad weld of the system)

shall be provided by OGDCL. The other consumable items shall be contractor's responsibility.

- e. All civil works such as preparing anode ground beds (shallow, horizontal / vertical, or deep ground bed), trenching, digging, back-filling, welding, cable connections etc. shall be contractor's responsibility.

v. **Call Out Services on day rate basis.**

Contractor may also be required to provide experienced & NACE Certified professional(s) at any field on call out basis for some specific jobs such as to attend major repair, replacement of component, specific inspection for expert opinion on any problem etc. on day rate basis.

4. **Operational / Service Zones**

As described above the monitoring / maintenance services as mentioned in TOR shall be hired for following fields put in two groups. Each bid shall be technically and financially evaluated on Group Basis and contract shall also be awarded on group basis.

i. **Group – A**

This group / zone will consist of following fields:

- a. Tando Alam Oil Complex including all its satellite fields such as Lashari, Lashari Center, Sono, Pasakhi, Thora, Main Facility, Daru, Nur-Bagla and storage tanks etc.
- b. Uch – I, Uch – II wells & Processing Plant, sale gas line and delivery station at Uch Power Plant and all storage tanks.
- c. Nashpa Field, Processing Plant, feeding wells and storage tanks.
- d. Chanda/Mela Field, Processing Plant, feeding wells and storage tanks.
- e. Dakhni Field & Processing Plant.

(Note: Total number of CP Systems installed at each location / field with source of DC power is given at Annexure – A-I)

ii. **Group – B**

This group / zone consists of following fields:

- a. Qadir Pur Field, gathering facility, Processing Plant and storage tanks.
- b. Sinjhero Field & Processing plant, feeding wells & storage tanks.
- c. Kunnar / KPD-TAY field & Processing Facility with feeding wells & storage Tanks.

(Note: Total number of CP Systems installed at each location / field with source of DC power is given at Annexure – A-I)

iii. **Group- C**

This group will consist of services as described at as mentioned in TOR i-e Partial Installation of individual CP Components, Dismantling of installed CP System, Installing New CP System, and Call out Services on day rate basis.

5. **Contractor's Responsibilities**

- i. The contractor shall be responsible to provide all services as described at as mentioned in TOR above at fields / processing plants described in three groups on regular and as and when required basis depending upon specific field requirements.
- ii. For all services as mentioned in TOR (Required Services), the contractor shall be required to depute NACE CP Level-II certified engineer with minimum 7

- years relevant experience and reports to be endorsed by NACE Corrosion Technologist with minimum experience of 15 years.
- iii. For regular visits as mentioned at as mentioned in TOR required services (Bi-Monthly) minimum 2 professionals (one engineer as mentioned above) and other technician with minimum 5 years CP experience shall be deputed. In case any labor is required, it will be service contractor's responsibility to hire from local market at his own cost.
 - iv. Since the Cathodic Protection Systems installed at fields of Group – B are operated majorly with TEGs as source of DC Power, it shall be a mandatory requirement for contractor to depute professional(s) who have proven track record and experience of TEG's installation, operations, maintenance, repair and troubleshooting along with NACE CP Level-II Certification. This requirement is not necessary for other two Groups i-e Group - A & Group – C given in financial bid format.
 - v. To provide proper PPEs, complete tool kit necessary equipped for monitoring, routine repair, maintenance etc. to meet above-mentioned requirement. Also to arrange transport for professionals for in-field movement & mob-demob purpose.
 - vi. The contractor's professionals shall ensure that all systems are properly attended and minor repairs, maintenance as described above have been made and systems are working properly.
 - vii. In case any major repair is required it shall be done separately against service mentioned at as mentioned in TOR (Call out services on day rate basis).
 - viii. The contractor shall be required to follow field instructions regarding safety and security.
 - ix. After every visit or job activity the contractor's professionals shall prepare & submit detailed report to concerned Field Manager / I/c (Prod) / I/c (PF & Corr) mentioning all readings, flaws (if any), repairs / maintenance work done, suggestions / recommendations for improvement etc.
 - x. During regular visit the contractor's rep shall also check available CP Material and suggest spares for future need and same shall be mentioned in visit report.
 - xi. After every job, the contractor's rep shall obtain Job Ticket / Work Completion Certificate duly signed by concerned field incharge to be presented with invoice for that particular job without which the invoice shall not be processed for payment.

6. Miscellaneous Requirements

- i. OGDCL will provide boarding and lodging facilities for professionals of the contractor at field facilities / camp.
- ii. Messing shall be an option. If contractor desires to avail messing facilities, it can be provided from field messes per head per day basis to be payable in cash before leaving the location. The rate shall be as per field messing per day rate.
- iii. Provision of transportation for mob-Demob of professionals to & from field and inside the field for CP jobs as per requirement shall be sole responsibility of contractor. However transportation of material during dismantling or installation shall be company's responsibility.
- iv. Contractor shall be responsible for providing all type of tools, equipment's and consumables required as per job requirement.

- v. Regarding HSEQ, Safety & Security the contractor shall be required to strictly follow following;
 - a. To follow Company's HSEQ & safety, security Policies.
 - b. All time coordinate field management's instructions / guidelines.
 - c. No professional of the contractor shall leave field / well or plant site without prior information to field management / coordinator.
 - d. All employees must wear proper PPEs with their company's logo.
 - e. Obtain proper work permits for specific jobs.
 - f. To follow timing for field mobilizations – after sunset mobilization is generally not allowed at most fields.

7. Duration of Contract:

The services shall be required on rate running contract basis initially for a period of One (01) year (extendable further with mutual consent) in all parts of country at all field locations OGDCL carries its field operations.

8. Schedule of Payment / Invoicing Terms and Conditions.

- 8.1 Further to Clause 6 (BID PRICE) and Clause 7 (PAYMENT) of Master Set of Tender Documents, following terms shall also apply:
- 8.3 The contractor shall be liable to submit invoice and shall be considered for processing for payment after following has been done;
 - a. The assigned work or segment of the work or any individual activity as per as mentioned in TOR (Required services (Bi-Monthly visits), partial installation of individual CP components, dismantling of installed CP system and installation of new CP system is completed.
 - b. Proper work completion certificate or job ticket duly signed and stamped by Field Manager or his nominee or Field Coordinator has been obtained and provided with invoice.
 - c. The invoice may be for individual job for each field in specific Group or different jobs / activities carried out at one field during invoicing month (as the case may be) on basis of unit rate given in financial bid / contract.
 - d. Incomplete invoices shall not be entertained and be returned unpaid.

8. Bid Bond:

Bid Bond/Bid Security for amounting to USD 10,000/- (US Dollars Ten Thousand Only) is to be attached/provided with **Technical bid**. Please see Master Set of Tender Document for further details.

9. Mode of Procurement:

Bids against this tender are invited on “Single Stage Two Envelope Bidding Procedure” through press tendering, therefore, the bidders shall submit original and copy of their Technical and one original financial bid.

Note: The Master Set of Tender Documents for Services uploaded on OGDCL's website (www.ogdcl.com) is the integral part of this TOR.

SUMMARY OF CP SYSTEMS INSTALLED AT DIFFERENT FIELDS

Sr.#	Field Name	No. of CPS	DC Power Source	Remarks
Group – A				
1.	Uch Gas Field	31	Solar Power	Well Casing
		5	T/R Units (Oil-Cooled)	Flow Lines & Storage Tanks
2.	Tando Alam Oil Complex	2	Solar Power	Flow Lines
		5	T/R Units (Oil-Cooled)	Flow lines & Storage Tanks
3.	Nashpa Oil Field	4	Solar power	Well casing
		5	T/R Units (Oil-Cooled)	Flow lines & storage tanks
		1	5 Sacrificial anodes	Under-ground Plant piping
4.	Chanda / Mela Field	6	Solar power	Flow lines
		8	T/R Units (Oil-Cooled)	Flow lines & storage tanks
5.	Dakhni Field	6	Solar Power	
		4	T/R Units	

Group – B				
1.	Qadir Pur Gas Field	58	Thermoelectric Generators (TEGs)	For well Casings
		14	T/R Units (Oil-Cooled)	Flow Lines, Plant Piping and Storage Tanks
2.	Sinjhor Gas / Condensate Field	15	Thermoelectric Generators (TEGs)	Well casing
		6	T/R Units (Oil-Cooled)	Flow Lines, Plant Piping and Storage Tanks
		1	5 Sacrificial anodes	Plant piping
3.	Kunnar KPD-TAY	38	Thermoelectric Generators (TEGs)	Well casing
		12	T/R Units (Oil-Cooled)	Flow Lines, Plant Piping and Storage Tanks

Technical Evaluation & Responsiveness Criteria

Following are minimum requirements for being technically responsive and to be considered further for financial bid evaluation.

SNo.	Description of Requirements	OGDCL's requirement	Bidder to Provide
1.	Registration of the company with SECP, FBR and related authorities as CP Services provider company.	Evidence of registration(s)	To be attached in technical bid
2.	Registered Office in Pakistan	Full Address with all contact details	To be attached in technical bid
3.	ISO Certified in CP Services & other related jobs	Evidence of ISO certification	To be attached in technical bid
4.	Minimum ONE CP Level-II certified Engineer with minimum 7 years proven CP related experience regarding audit, inspection, monitoring, maintenance, trouble shooting and installation as its employee / on payroll supported by 3-4 technicians for assistance.	Name(s), evidence of degree certificate(s), valid NACE Level-II certificate, proof of experience. Names of technicians.	To be provided in technical bid
5.	One NACE Certified Corrosion Technologist with minimum 15 years corrosion & CP related experience.	Name(s), evidence of degree certificate(s), valid NACE certificate, proof of experience.	To be provided in technical bid
6.	Proven track record of CP monitoring, maintenance, audit and inspection services provided in E&P and other relevant companies in Pakistan.	Minimum 10 jobs completed comprising mixture of CP audit, inspection, installation during last two years.	Proof in shape of contract, Work completion certificates etc. to be provided.
7.	Mandatory requirement of having technical expertise & experience for TEG's installation, operation, maintenance & trouble-shooting (For Group – B services only)	Minimum 5 years track record of TEGs inspection, trouble shooting, maintenance etc.	Evidence to be provided

Financial Bid Format/Evaluation Criteria

The bidders are required to submit their financial bids in following format only as no other format shall be acceptable, no hidden charges shall also be considered. **The technical and commercial bids shall be evaluated and contract will be issued on Grand Total of each Group Basis.** Therefore the bidders can submit technical & commercial bid for any or all groups.

SNo.	Description	Unit Cost	Est'd Qty	Total Cost
Group – A (Tando Alam, Uch-1 & 2, Nashpa, Chanda/ Mela & Dakhni Fields)				
1.	Periodical Monitoring, minor repair, maintenance & Audit of installed CP Systems for Tando Alam Oil Complex	Lump Sum per visit	06 Bi-monthly visits (for 01 year)	
2.	Periodical Monitoring, minor repair, maintenance & Audit of installed CP Systems for Uch – I & II	Lump Sum per visit	06 Bi-monthly visits (for 01 year)	
3.	Periodical Monitoring, minor repair, maintenance & Audit of installed CP Systems for Nashpa oil field.	Lump Sum per visit	06 Bi-monthly visits (for 1 year)	
4.	Periodical Monitoring, minor repair, maintenance & Audit of installed CP Systems for Chanda & Mela fields.	Lump Sum per visit	06 Bi-monthly visits (for 01 year)	
	Periodical Monitoring, minor repair, maintenance & Audit of installed CP Systems for Dakhni Field	Lump Sum per visit	06 Bi-monthly visits (for 01 year)	
Grand Total for Group-A				
Group – B (Qadir Pur, Sinjhero, Kunnar, KPD & TAY Fields)				
1.	Periodical Monitoring, minor repair, maintenance & Audit of installed CP Systems for Qadir Pur field	Lump Sum per visit	06 Bi-monthly visits (for 01 year)	
2.	Periodical Monitoring, minor repair, maintenance & Audit of installed CP Systems for Sinjhero field	Lump Sum per visit	06 Bi-monthly visits (for 01 year)	
3.	Periodical Monitoring, minor repair, maintenance & Audit of installed CP Systems for Kunnar, KPD-TAY field	Lump Sum per visit	06 Bi-monthly visits (for 01 year)	
Grand Total for Group-B				
Group – C (Miscellaneous CP Services)				
1.	Installation of new CP Systems with T/R or Solar systems	Lump Sum per system	4 systems	
2.	Installation of anode ground beds (AGB) - Deep / Semi-Deep type	Lump Sum per AGB	3 AGBs	
3.	Installation of AJB or CCB or Bond Box etc.	Lump Sum per unit	5 units	
4.	Installation of test posts	Per unit	20 units	
5.	Dismantling of installed systems	Per unit	05 units	
6.	NACE CP-II certified Engineer's call out services	Per visit	12 visits	
7.	CP Technician's services	Per visit	24 vists	
Grand Total for Group-C				