NIT NO.: ITPS/Unit 3 & 4/19-20/265, DTD.14.03.2020

(ESP OVERHAULING)

Corrigendum – 1 dtd.19.03.2020

1) EMD amount has been revised to Rs.1,50,000/-
2) Revised Scope of Work for Overhauling of ESP UNIT- 3 & 4 (2X660 MW)
3) Revised BOQ & Price Bid Format

SCOPE OF WORK FOR OVERHAULING OF ESP UNIT- 3 & 4 (2X660 MW)

1	**Derik fabrication-** • Making a side store, Derik fabrication ,erection of Derik (20 Mts height) with rope line of 20mm and pipe (8 inch dia and at least 6mm thickness) as per the requirement at site and ladder (20 mts height by using 50x50 angles and flat of 6x50mm) for Derik with all its accessories ,fixing of two no's of electrical winch 5T and 3T of each capacity and electrical operating station for refixing of damaged collecting electrodes by new collecting electrodes in all passes namely Pass A, B, C & D.
2	**WATER WASHING & ESP INTERNAL CLEANING** • Work includes cleaning & removal of ash from ESP, ESP internal including the GD screens to be water washed with water pressure of 4-5 kg/sq. cm. till metallic surface exposed completely free of ash deposits. Necessary hoses are to be arranged for the work by the contractor. The contractor has to clean the outer surface of ESP as per instruction of E-I-C.
3	**CLEANING, INSPECTION, REPAIR / RECTIFICATION OF ESP INTERNAL** • Cleaning and checking of support & shaft insulators, inside & outside corona shields, hopper inspection doors, casing doors, GD Screen and manholes are to be done. New ceramic rope is to be replaced, bolt tightness to be done for the above. Replacement of ropes/gaskets (inspection door, insulator housing door, CERM shaft cover, etc.) to be done and closing of inspection doors, manholes and final box up after completion of the works. • Inspection of GD Screen are to be done and if required same will be replaced / repaired. • Inspection & rectification of GD screen deflector plate and fixed new in replace of damaged deflector plate. • Inspection and rectification of Dust guard gap and cleaning of dust guard. • Inspection and rectification of screen tube gap. • Cut the angle and extra projected structure of the field for reduce the spark. • Maintain the gap between section one and section two field of collecting and emitting frame. • Inspection and maintain the gap (40 mm) in between shock bar and shock bar guide assembly (rapping and non-rapping side). • Alignment of field along with emitting system frame shall be in contractor scope.
4	**REPLACEMENT OF COLLECTING PLATE & FIELD RECTIFICATION :** • Detail investigation and marking of damaged internals, collecting electrodes, collecting suspension frame, emitting frame, shock bar & shock bar guide etc. • Finding out & marking of damaged collecting electrodes which are beyond repair. • Partially damaged collecting electrodes should be repaired at position by hook area strengthening. • Bowed electrodes should be repaired at position. • Repair and fabrication of damaged collecting suspension frame and emitting frame at site. • The damaged collecting electrode are to be taken out of the ESP through the top roof/ bottom / or through any other suitable means. For this purpose, necessary opening in the ESP roof / hopper, removal of insulation & sheeting / structures if any should be made. Shifting of rectiformer if any required during the collecting plate replacement will be in contractor scope. • Care should be taken while lifting and fixing in position of collecting electrodes, so that the collecting electrodes hook in position are in good

	condition (without dents/camber/bend) and if rectification required same is to be done by contractor at no extra cost. • Removal and re-fixing of the associated shock bar, shock bar guide angle, shock bar guide are within the scope of contractor. • Making scaffolding for Huck Bolting • Transportation of collecting electrodes from central store to the work spot in contractor scope. The Length of the electrodes will be 15 meters. • All T&P like winch, chain pulley block, sling, hook chuck etc. should be arranged by contractor with valid test certificates for the erection and removal of the collecting electrodes. • Care should be taken while lifting & fixing in position of collecting electrodes by using Derik erection , so that the collecting electrodes hooked in position are in good condition (without dents/ camber / bend) & if rectification required same is to be done by contractor at no extra cost. • Removal & refitting of the associated shock bar (Fasteners of electrode plate in shock bar) & guide is within the scope of the contractor. • Removal, re-fixing and replacement of emitting electrode during collecting electrode replacement to be done by contractor at no extra cost. • Associated work like scaffolding, cutting & welding, grinding in scope of contractor • Gauging of electrode spacing and alignment of collecting plate & guide are within the scope. • Transportation of damaged electrodes at the designated scrap yard inside the plant as per instruction of EIC. • Normalization work (i.e. close by welding) of all the access openings made during replacement of the collecting electrodes. • Removal of insulation for working in contractor scope. • Re-insulation of ESP Roof / Casing / Hoppers in OPGC LTD scope. • Consumables like welding electrodes, grinding wheels, gases etc. to be arranged by contractor.
5	**INSPECTION & RECTIFICATION OF BOWED COLLECTING PLATE** • Repair of collecting plates, the job involves checking of bowed collecting plates, straightening of bowed collecting plates by heating, hammering or fasteners replacement if required & suitable clamps provided to maintain the gap of 150 mm between electrodes, if detached from the shock bar the suitable patch (to be provided by OPGC LTD) of same profile to be provided with bolting and welding thereafter with shock bar, repair of collecting plate at top hook position patch with 3 mm plates and welding.
6	**CHECKING OF EMITTING ELECTRODE SPRING BACK** • Removal of defective emitting electrodes and its fixing are to be done with a new one. Checking of the snapping, missing and loose electrodes and their recording are to be done. Checking of electrodes spring back/tension of all emitting electrodes in first fields and last field (of both section one and section two) and the rest field on random basis. During unhooked condition, minimum spring back gap should be 350mm otherwise replacement to be done. The stretching & fixing of electrodes have to be done through stretching device. The contractor has to arrange the stretching device.
7	**CHECKING OF GAPS BETWEEN ELECTRODES** • Gap between the collecting & emitting electrodes of each field is to be measured with "GO & NO GO" gauges and necessary rectification to be done if any to maintain the gap of 150 mm between collecting & emitting electrode all over the fields & recording thereof. Voltage gap to be maintained as per acceptable limit all along the field length.

8	**REPLACEMENT OF SUPPORT INSULATOR** • Support insulators (if found damaged/cracked) is to be replaced by a new one. The job involves checking of the cracked insulator, replacement of support insulator gasket if required, while replacement the suspension bolts and the screen tubes gaps are to be maintained. Detail arrangements like J Hooks will be provided by OPGC LTD.
9	**INSPECTION & RECTIFICATION OF EMITTING RAPPING MECHANISM** • The complete emitting electrode rapping mechanism including its pin wheel (Big/Small), Bush Bearing, inner arm, outer arm, vertical shaft, thrust bearing and plain bearing, emitting system and Support bracket system are to be thoroughly inspected and necessary replacement/modification and tack welding of bolts is to be done. The shaft straightness are to be checked and if necessary the bend/worn out shaft to be repaired/replaced and complete alignment of the shaft to be done as per the instruction of EIC. Shaft insulators (if found damaged) is to be replaced by a new one. Repair/replacement of Vertical shaft, corona shields are to be checked & replacement done if required. Checking of hammer for play in bush and pin looseness, removal of damage hammer by gas cutting, positioning of new hammer with full tightening of nuts and checking of hammer for freeness and straightening with respect to the Emitting frame. Rapping shaft rotation to be checked and ensure for every hammer hitting position with respective Emitting frame position correctly. Replacement of pin wheel (Big/Small), bush bearing, inner arm, outer arm and plain bearing to be done as per condition based & instruction of EIC.
10	**INSPECTION & RECTIFICATION OF COLLECTING ELECTRODE RAPPING MECHANISM AND GDRM** • The complete collecting electrode rapping mechanism with all its plain bearing, inner arm, outer arm, shock bar, shock pad, shock bar guide assembly (Rapping and non-rapping side) and its attachment are to be thoroughly inspected and necessary replacement/modification and tack welding of bolts are to be done as per the instruction of EIC. The shaft straightness are to be made and if necessary the bend/worn out shaft to be repaired/replaced and complete alignment of the shaft to be done as per the instruction of EIC. Checking of hammer for play in bush and Pin looseness, removal of damage hammer by gas cutting, positioning of new hammer with full tightening of nuts and checking of hammer for freeness and straightening with respect to the shock bar, checking/replacement of plain bearing, inner arm checking, Straightening of misaligned shock bar and its assembly are to be done and gap between the electrodes to be maintained. The clearance between the shock bar and guide assembly should be measured and modifications to be carried out as per requirement to maintain the required gap. Rapping shaft rotation to be checked and ensure for every hammer hitting position with respective shock bar position correctly for CRM & GDRM. Replacement of plain bearing, inner arm, outer arm, shock pad, shock bar, shock bar guide angle, set rings to be done as per condition based & instruction of EIC. Extra support for shock bar guide angle to be provided in all fields as instruction of EIC.
11	**Rectification of CRM motor, gear, coupling etc:** Checking of motor, coupling, Gearbox servicing, bearing replacement if any with its all accessories checking and rectification if any**.**
12	**Rectification of ERM motor, gear, coupling etc:** Checking of motor, coupling, Gearbox servicing, bearing replacement if any with its all accessories checking and rectification if any**.**

13	**Rectification of GDRM motor, gear, coupling etc:** Checking of motor, coupling, Gearbox servicing, bearing replacement if any with its all accessories checking and rectification if any**.**
14	**RECTIFICATION OF ESP HOPPER** • The job involves inspection of hopper welding joint. All air ingress & leakages are to be arrested. Measurement will be in Running Mtr. of welding area. If hopper plate is eroded, Cut and remove the eroded portion of hopper plate, Cut new piece of plate of required shape/profile of thickness 06/08 mm (to be provided by OPGC LTD). Fix the cut piece of plate in the position and complete the welding.

TECHNICAL SPECIFICATION OF ELECTROSTATIC PRECIPITATOR:

Type of ESP – Bhel Make ESP for OPGC Ib valley 2x660MW unit #3&4
Manufacturer - M/S BHEL, Ranipet

LIST OF CONSUMABLES

This list is only indicative and not exhaustive. Arrangement for other consumables required for timely completion of the job shall be the responsibility of the contractor and shall be arranged by him.

1. Kerosene/Diesel, Petrol and Rustolene.
2. Hacksaw blades.
3. Cotton waste.
4. Marking cloth and Old cloth.
5. Prussian blue.
6. Cutting & Grinding wheels. (BOSCH/NORTON/CUMI)
7. Oil stones.
8. Teflon tapes (1”, 1/2”)
9. Emery Cloths (fine, medium and coarse)
10. Oxygen and D/A cylinders.
11. Coir rope & Manila Rope.
12. 6013 & 7018 welding electrodes (ESSAB / D&H / ADVANI make only).
13. Polythene sheets.
14. Hand gloves (Asbestos, Cotton, Leather and Rubber),
15. Air hoses (1/2”, 3/4”, 1”)
16. Welding goggles & Helmets.
17. Rustolene
18. Fevicol
19. Quick fix Adhesive
20. Holdtite Liquid
21. LPG cylinder for heating

LIST OF T&P

Sl. No.	DECRIPTION	CAPACITY / SIZE	UOM	QTY.
1.	hydra	14T,with operator front cabin	Nos.	2
2.	Trailor	40ft length	Nos.	1
3.	Pick up vehicle		Nos.	1
4.	O2 analyser	Continuous measurent of O2	Nos.	2
5.	HUCK BOLTING MACHINE		Nos.	2
6.	Life line rope	8mm dia	Mts	500
7.	PP rope	20mm dia	Mts	100
8.	STRECHING DEVICE	For emitting electrode erection	Nos.	4
9.	Puff rivet gun	For riveting purpose(As per side requirements)	Nos.	2/3
10.	Welding Rectifier (With RCCB)	400 AMPS	Nos.	10
11.	Portable Welding M/C (With	220 V	Nos.	02
12.	CUTTING SET	WITH FIRE ARRESTOR	NOS	10
13.	Chain pulley block	2T to 5T	Nos.	15
14.	Chain pulley block	3T	Nos.	04 Each
15.	Chain pulley block	5T	Nos.	05 Each
16.	Pulling lifting m/c (Hook-Chuck)	3T & 5T	Nos.	01 Each
17.	D/E Open spanners	6x7 to 30X32	Set.	04 Each
18.	D/E Ring spanners	6x7 to 30X32	Set.	04 Each
19.	Box Spanner	6 to 32	Set	01 Each
20.	Adjustable Spanner	12" , 6"	Nos.	04 Each
21.	Pipe Wrench	12", 6"	Nos.	03 Each
22.	Screw Driver	12", 8”	Nos.	04 Each
23.	Combination & Nose Pliers	8”,6”	Nos.	02 Each
24.	Outside & Inside circlip Pliers	6", 8”, 12"	Nos.	03 Each
25.	Ball Pane Hammer	1.5lbs	Nos.	04
26.	Wooden Hammer		Nos.	06
27.	File (Flat, Round, Half round)	300 mm	Nos.	04 Each
28.	Needle File set	300 mm	Set	03 Each
29.	Feeler Gauge	6”.12:	Nos	01 Each
30.	Tap Set (Metric size)	6, 10, 12, 16, 20, 24, 30, 33, 36,	Nos.	02 Each
31.	Tap Set (Metric size)	M12X1.25 & M16X1.25	Nos.	01 Each
32.	Allen Key Set	Up to 30 mm and Inch	Set	02 Each
33.	Gas cutting set with back fire		Set	06
34.	Welding Cable	400 amps	Mtr.	400
35.	Welding Cable	600 amps	Mtr.	200
36.	Plum bob		Nos.	01
37.	Shim Cutter		Nos.	04
38.	Angle Grinder AG 4, AG 5 & AG 7		Nos.	02 Each
39.	Straight Grinder GQ - 4		Nos.	02
40.	Hand Drill M/C (up to 12 mm)		Nos.	02
41.	Drill Bit up to 08 mm	Assorted Size	Nos.	03 Each

42.	Drill Bit up to 08-12 mm	Assorted Size	Nos.	02 Each
43.	Wire Rope Slings (up to 10 MT)	Assorted Size	Nos.	02 Each
44.	Portable welding electrode oven		Nos.	02
45.	Electric switchboards Single Phase (extension boards with RCCB)		Nos.	4
46.	Electric switchboards three Phase (extension boards with RCCB)		Nos.	6
47.	Floor light arrangements (Hand Lamps etc.)		Nos.	8
48.	Floor light arrangements (24 V)		Nos.	16
49.	Floor light arrangements		Nos.	04

Note:
This list is only indicative and not exhaustive. Arrangement for any other T & P required for timely completion of the job shall be the responsibility of the Contractor and shall be arranged by him at his own cost.

SPECIAL TERMS & CONDITIONS OF CONTRACT

1. Contractor has to deploy administrative manpower (like- Supervisor, Electrician, store keeper etc.) at his own cost for smooth execution of the work.
2. Since the jobs are to be carried out 24X7, the Contractor should also ensure availability of his consumable and T&P round the clock (i.e. 24x7), Upto field charging
3. The contractor will have to arrange all consumables as required for completion of job. Any other consumable, which will go permanently with the machine, will be supplied by OPGC LTD. Arrangement of any other consumables required for timely completion of the job shall be the responsibility of the Contractor. Contractor has to ensure availability of Consumables and T & P.
4. Contractor has to ensure availability of welding equipments, oxyacetylene set at site during the Welding consumables and oxygen and LPG to be arranged by the Contractor. Only those welding electrodes listed in the approved list of OPGC LTD are to be used. All general purpose electrodes (for e.g. E-6013 & 7018 etc.) shall be under Contractor's scope.
5. In case of extreme emergency, in a situation, where in the Contractor is unable to arrange DA & LPG, OPGC LTD will provide the same on chargeable basis with 100% overheads on the actual OPGC LTD rates.
6. Special tools and tackles supplied by equipment manufacturer will be provided by OPGC LTD. A tentative list of T&P to be mobilized by the Contractor is enclosed**.** However in case of extreme emergencies depending upon the availability of the same with OPGC LTD, T&P items like welding machine, grinding machine, chain pulley block etc. may be issued to the contractor on chargeable basis.
7. Special fixtures for assembly and dismantling of equipments available with OPGC LTD will be supplied by OPGC LTD. Any other fixtures as and when required will have to be fabricated by Contractor free of cost.
8. All lifting equipments and tools (chain pulley blocks, lifting & pulling machine, slings etc.) for the job will have to be arranged by the Contractor. All such tools have to be load tested and certified by the Competent Authority (as per Factories act) before being deployed for the job.
9. Portable machines like grinders, portable drill machines, blowers etc. and their consumables like grinding wheels, cut off wheels, mounted point tools, buffing wheels, drill bits etc. will be arranged by the Contractor.

10. Contractor has to ensure the healthiness of all electrical appliances i.e. equipments / Tools, movable lighting system etc. OPGC LTD will provide the existing electrical points near by the work.

11. Scaffolding/ working platforms required for the job will have to be erected by the Contractor with his own manpower, material shall be provided by OPGC LTD on free of cost.

12. Lighting at work site will be Contractor's responsibility for which power supply of 220V will be provided by OPGC LTD free of cost. 24V supply will be permitted for lighting in confined spaces. Contractor has to ensure availability of 220V/24V transformers and bulbs for the purpose. Welding Machine & Extension boards with ELCB are only permitted.

13. For the spares used, record is to be maintained and submitted at the time of billing. The damaged bearings and other spares replaced are to be kept in Contractor's custody and should be deposited to OPGC LTD stores immediately after the completion of work. The stock of the damaged spares will be cross-checked with the spares issued. If the Contractor fails to do so, the cost of the spares will be deducted from the Contractor's bill. The Contractor must return the unused spares issued.

14. Transportation of material to/from central stores and from/to site stores or site or workshop will be Contractor's responsibility. Material handling equipment like hydra, cranes, forklifts etc. wherever required will be provided by OPGC LTD.

15. Accommodation for all employees shall be under the scope of contractor.

16. The contractor should not engage any subcontractor for the awarded contract. All the official communication, bills, wage sheet etc. must be on contractor's letter head.

SAFETY, HEALTH & ENVIRONMENT

1. The contractor shall ensure compliance with all the Acts, Rules & Regulations pertaining to HSE (Health, Safety & Environment) as applicable from time to time. The contractor shall be fully responsible for the safety of his workmen & shall take necessary precaution to avoid any accident.
2. The contractor has to deploy safety supervisor. All employees of the contractors shall undergo the safety induction before the start of the job. (CLASS ROOM TRAINING 1 DAY)
3. The contractor's workmen will be required to work at various heights, location & in vicinity of rotating/running/charged equipments and also equipments in not working conditions. He should also give proper instructions to his workmen to be careful to avoid accident.
4. The contractor shall arrange proper and sufficient no of PPE appliances such as hand gloves , helmets, nose mask, ear muffs, safety shoe, safety belts (double life protection) etc. & first aid box and ensure that his workmen use them during execution of work.
5. **Electrical Appliances**: The contractors have to ensure that all the electrical equipment/gadget used by them are ISI marked only. All the electrical work should be carried out as per the norms in the Indian Electricity Act, 2003 and Indian Electricity Rules, 1956. All types of electrical equipment should be provided with ELCB/RCCB & body earthling. Only authorized persons should be engaged for any kind of repair, maintenance job.
6. **Industrial Gas Cylinders**: All types of Gas cylinders should be handled in proper manner with safety cap on it.
7. **Tools & Tackles:** Valid test certificates for all lifting/pulling T&Ps are to be submitted by the contractor before starting of work. The Test Certificates of All Lifting Tools & Tackles to be submitted by the contractor before starting the job.
8. Any violation in the safety norms like not using PPE at the work, a token of penalty will be imposed as deemed fit by the OPGC LTD's Safety Officer.

9. Compliance with statutory rules, regulation and local conditions: The contractor shall comply with provision of all statutory rules, regulations and acts as applicable from time to time.
10. All inflammable materials should be removed from the vicinity of the place where sparks/hot metal from welding/gas cutting/grinding are likely to fall. Coverings are to be provided for inflammable materials for permanent installations.
11. D/A carrying hoses should be kept away from the welding cables & should have flash back arrester. The hoses should be healthy with proper clamping to prevent chances of gas leaks. Gas cylinders should not be rolled on the ground or carried on bicycle. Trolleys should be used for their transportation. For lifting and lowering the cylinders proper cage should be used.
12. Working platforms at height should have adequate space and proper railings. Toe Guards should be provided in the platforms. Proper approach should be made up to the work area. Scaffoldings and platforms should be properly supported. Contractor has to ensure that workmen working at heights should wear safety belts.
13. The used cotton waste, cloth or muslin contaminated with used/ waste oil should be properly disposed at designated place and finally carried over to the stores at the storage facility before being finally disposed in accordance to the statutory environment regulations.
14. Contractor has to ensure that all man and material have been cleared from the work site after completion of work and before trial of the equipment.
15. **Indemnity:** OPGC LTD shall not be responsible for any accident to the labor employed by the contractor. The Contractor shall provide necessary Medical aid to his workmen at his own cost during any incident/accident at site. The contractor shall be responsible for all risk involved, liabilities & obligation arising out of the contractor under any provision of law in force from time to time.

MANPOWER

1. The Contractor should clearly understand that close and technically competent supervision of work is an extremely important part of the work specified in this contract. The Contractor shall have a site-in-charge exclusively for the contract. In addition to the site-in-charge, the Contractor has to ensure supervision of work in progress by deploying technically competent site supervisor. The site-in-charge of the Contractor shall authorize his representative to collect/return materials from/to OPGC LTD as per requirement of work.
2. The job is of skilled nature and manpower with suitable requisite skill and experience only shall be permitted to be deployed. The manpower engaged should be as per the category mentioned and experience, which will be ensured by OPGC LTD through interviewing the person. Contractor has to ensure that the credentials and certificates of the welders deployed for welding work are submitted to OPGC LTD / FQA and are to be vetted by them before the start of work.
3. The contractor has to mobilize adequate human resource to carry out the job on day & night shifts on all days including Sundays, holidays and national holidays.

SCHEDULE

1. Schedule is the essence of the Contractor. The contractor has to complete overhauling maintenance activity within the time period as per instructions and time schedule given by the EIC. If contractor's fails to do the job, OPGC LTD will get the work done by other Contractor at the risk and cost of the contractor. Further OPGC LTD shall penalize the contractor for non-executed activity / sub activity at twice the expenditure incurred amount for carrying out the activity / sub activity. The decision of EIC on this regard shall be final and binding on the contractor.
2. Contractor has to mobilize his resources after getting the notice from EIC, and if fails, a penalty @ 5% per day of the job's value shall be imposed. In case the contractor

fails to execute the job and then the work will be get done by OPGC LTD and cost of the same shall be recovered along with penalty from contractor's RA bills.

3. It is to be noted that the rates of activity are to be read in conjunction to the attached detailed scope work. The elements for which description is not clear to the contractor, job shall be taken up only after recording clear understanding of scope. The decision of EIC in this regard shall be final and binding on the contractor.

MOBILISATION OF MANPOWER

Following documents are required before mobilizing the Manpower:

1. Photo Stamp size -2 Nos
2. PF Code No. and photo copy for evidence.
3. Un-named Insurance Policy WC & GPAI (As per wage categorized manpower, Min sum assured Rs.8,00,000.00 each, 50% as a GPA and 50% as a WC) or as per company policy and rules regulations.
4. Labor License (If 20 or more than 20 Labor engaged).
5. Register & Records which are required to maintain by the Contractor:
   i. Register of Master Roll (Attendance Sheet). Form – XVI.
   ii. Workmen Register – Form – XIII.
6. Purchase Order copy.
7. Gate Pass issuance after getting details in prescribed format as enclosed with ID Proof.
8. The contractor shall mobilize their resources which include both manpower and T&P in advance as per the scheduled unit overhauling date and mentioned in scope of work where ever mention for particular job/activity. All T&P & manpower gate passes should be ready and contractor has to submit a copy of all gate passes to EIC or his representative before shutdown of the unit.

Following documents are required for Billing:

1. Register of Wages sheet – Form – XVII
2. Overtime Register – Form – XXIII (If required)
3. Cancel Gate pass Photo copy
4. No dues from BMD, Central Store (OPGC LTD)
5. Certification of Job from EIC

Corrigendum-1 dtd.19.03.2020
Revised Bill of Quantity (BOQ) & Price Bid Format

Sl	ACTIVITY DESCRIPTION	UOM	QTY	RATE (Rs.)	VALUE (Rs.)
1	WATER WASHING & ESP INTERNAL CLEANING	PER FIELD	80		
2	CLEANING, INSPECTION, REPAIR / RECTIFICATION OF ESP INTERNAL	PER FIELD	80		
3	Removal and refixing of Hot roof of Pass A, B ,C & D of Unit-3 from inlet	No	48		
4	Removal and refixing of Cold roof of Pass A,B,C & D of Unit-3 from inlet side	No	48		
5	Shifting of rectiformer and reinstallation during collecting plate erection	Nos	12		
6	REPLACEMENT OF COLLECTING PLATE	PER PLATE	520		
7	REPLACEMENT OF Emitting electrodes	PER PLATE	5000		
8	INSPECTION & RECTIFICATION OF BOWED COLLECTING PLATE	PER PLATE	40		
9	CHECKING OF GAPS BETWEEN ELECTRODES	PER FIELD	80		
10	CHECKING OF EMITTING ELECTRODE SPRING BACK	PER FIELD	80		
11	REPLACEMENT OF SUPPORT / SHAFT INSULATOR	PER INSULATOR	10		
12	SERVICING OF EMITTING ELECTRODE BALL BEARING HOUSING	PER HOUSING	10		
13	INSPECTION & RECTIFICATION/replacement if any OF EMITTING RAPPING MECHANISM	PER FIELD	10		
14	INSPECTION & RECTIFICATION/Replacement if any OF COLLECTING ELECTRODE RAPPING MECHANISM	PER FIELD	10		
15	RECTIFICATION OF ESP HOPPER	PER Sq METER	2		
16	Rectification & SERVICING OF CERM GEAR BOX PER GEAR BOX	PER GEAR BOX	5		
17	Rectification & SERVICING OF EERM GEAR BOX	PER GEAR BOX	5		
18	Rectification & SERVICING OF GDRM GEAR BOX	PER GEAR BOX	2		
19	Removal & refixing of Pent house sheeting (Roof Sheet) in Pass -A,B ,C &D from illet side (Assuming first two field in each Pass)	Per sq mts	2400		
20	Removal & refixing of Pent house structurein Pass -A,B ,C & D from inlet side(Assuming first two field in each Pass)	Lump sum per pass	4		
TOTAL VALUE IN RUPEES (EXCLUDING GST)					

Note: Above quoted price is exclusive of GST and shall be extra as applicable (SAC code along with GST % to be indicated)