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PART II



TECHNICAL

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P	14.05.2026	14.05.2026	ISSUED FOR CLIENT'S REVIEW	SS/RP	SKB	SKB
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SCOPE OF WORK
FOR CONSULTANCY SERVICES
FOR
220 KV SWITCHYARD EXTENSION, 220 KV OVERHEAD
TRANSMISSION LINE, 220 KV CABLING AND
ASSOCIATED SYSTEM FOR PERMANENT GRID POWER REQUIREMENT
FOR BCGCL COAL TO AMMONIUM NITRATE PROJECT
AT LAKHANPUR, JHARSUGUDA (ODISHA)

0	01.06.2026	01.06.2026	ISSUED FOR TENDER	SS/RP	SKB	SKB
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	CONSULTANCY SERVICES FOR 220 KV SWITCHYARD EXTENSION, 220 KV OVERHEAD TRANSMISSION LINE, 220 KV CABLING AND ASSOCIATED SYSTEM FOR PERMANENT GRID POWER REQUIREMENT 2000 TPD COAL TO AMMONIUM NITRATE PROJECT AT LAKHANPUR, JHARSUGUDA (ODISHA)	PC-298-TS-0804	0	
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1. BACKGROUND

The proposed project at Lakhanpur, Jharsuguda (Odisha) is being developed by Bharat Coal Gasification and Chemicals Limited (BCGCL), a joint venture of Coal India Limited (CIL) and Bharat Heavy Electricals Limited (BHEL). As part of the project development, electrical infrastructure is required to be established for providing permanent grid power connectivity for the project facilities.

Power requirement of the said BCGCL's Project is around 90 MW, which shall be met through sourcing power from the Grid.

The electrical infrastructure proposed under this assignment broadly includes establishment of a 220 kV overhead transmission line/underground cable for permanent grid power connectivity and Extension of 220 kV GIS/AIS switchyard along with associated electrical systems.

To ensure effective planning, engineering coordination, implementation and timely completion of these facilities, Project Management Consultancy (PMC) services are proposed to be engaged.

2. OBJECTIVE

The objective of this assignment is to provide Project Management Consultancy (PMC) services for planning, engineering, coordination, statutory clearances facilitation, procurement support, construction supervision, testing and commissioning for establishing electrical infrastructure required for 220 kV overhead transmission line/underground cable for permanent grid power connectivity and Extension of 220 kV GIS/AIS switchyard along with associated electrical systems for the proposed BCGCL project at Lakhanpur, Jharsuguda.

The PMC shall support the Project Owner (BCGCL) in implementation of:

- I. 220 kV Double Circuit overhead transmission line and 220 kV Underground Cabling etc. for permanent grid power for the BCGCL plant
- II. Extension of 220 kV GIS/AIS switchyard and associated electrical systems.



Presently, there are following 2 options for permanent grid power for the BCGCL Project :-

- 220 kV Double circuit Line from Grid Substation, Budhipadar to BCGCL Plant alongwith extension of 220 KV AIS Switchyard at Grid Substation, Budhipadar.
- 220 kV Double circuit Line from Grid Substation, Lephripada to BCGCL Plant, along with stringing of Circuit II from Grid Substation, Budhipadar to Grid Substation, Lephripada.

Out of above two options, one option shall be finalised by Project Owner at later stage in consultation with PMC.

The scope of PMC shall be from Grid Substation(s) to Receiving Gantry and from Receiving Gantry to Main Substation within Plant Battery limit (upto termination to Main Substation GIS Incoming Feeders). Plot Plan indicating tentative location of Receiving Gantry (marked as Switchyard) and Main Substation attached for reference.

220 KV Cables shall be considered from Receiving Gantry to Main Substation.



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3. BROAD SCOPE OF PMC SERVICES

The PMC shall provide comprehensive services covering the following:

3.1 Permanent Grid Power for the BCGCL plant



- Finalisation of 220 kV Power source *for permanent grid power for the BCGCL plant;*
- *Route Survey Report prepared by OPTCL shall be shared by the Project Owner (In case any additional requirement not covered in the Report, same shall be in scope of PMC);*
- Right of Way (ROW) Facilitation;
- Preparation of Tower spotting schedules;
- Schedule of various types of towers(with coordinate of Each Tower, extensions and abstract of towers requirement;
- Brief description of terrain between each Angle Point section;
- Preparation of PTCC details;
- Preparation of EHV cable specification and final route map in line with the route survey report; Cable Route within Plant Battery Limit
- Specifications for transmission line towers, EHV cables, line materials, foundations etc. including detailed calculation of quantity of each item, sizing of equipment, cable etc.;
- Specification for Transmission Line Towers, cables, line material, foundation etc. for supply, erection, testing and commissioning covering Technical Specification & Data sheet for all Electrical Item, drawing & document as below but not limited to:
 - Tower of each type
 - Earthing Drawing
 - HV cable trench
 - EHV Cable Trench
 - Cable connection at both ends
 - Typical erection sketch
 - Foundation drawing for each tower considering soil strata of the Route
 - Foundation details
 - Profile, Route alignment Drg., Land schedule
 - Tower Schedule
 - Crossing location and details
 - Detailed foundation drawing
 - Structural Drawing.,
 - Technical specification and GTP
- Calculation of ACSR conductor as per latest IS: 398/other relevant standards;
- 220kV EHV cable sizing calculation;
- Basis of selection of towers at various location;

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- Detailed BOQ and tender estimates of all line materials and associated system required for the entire line based on detailed route survey with cost breakup along with basis of estimate;
- Vendor List as per OPTCL / TPWODL;
- Review and recommend for approval all design and drawings and technical documents submitted by transmission line contractor including but not limited to :
 - Design basis report
 - Tower Spotting on Route Alignment Layout and Longitudinal Section
 - Tower Schedule
 - Sag tension calculation for conductor and OPGW
 - Clearance and Loading Tree Diagram
 - BOQ for Towers, Conductors, Insulators, etc.
 - Design Validation and GA Drawing of Tower Structure
 - Tower Stub and Stub Setting – Template Drawing
 - Design Validation and GA Drawing of Tower Foundation
 - Tower Earthing Drawing & BOQ
 - Electrical equipment/system like conductor, insulators and hardware
 - All design, drawing & document submitted by Transmission Line Contractor shall be approved by OPTCL / TPWODL.
- Brief write-up regarding infrastructural facilities railway siding, availability of aggregates, sand etc.;
- Recommendation of Working Season;
- Detailed Time schedule for completion of the project with bar diagram;
- Estimate of associated civil job;
- Obtaining all Statutory clearances / approval like compliance of applicable provision of Standards on Grid Connectivity and Grid Standards by CEA, IEGC, OGC and SEGC in force, PTCC approval, Inspection by Electrical Inspectorate, Odisha and compliance of observations, Notification under Section 164 of the Electricity Act 2003, Environmental and Pollution Clearances, Forest Clearance, OERC guidelines and norms and all other requirement as applicable under the law of the land;
- PMC shall resolve all ROW issues;
- Based on the survey findings, PMC shall recommend the most techno-economically viable route and facilitate for relevant state authority approvals;

PMC shall assist, coordinate and support BCGCL and EPC Contractor related to ROW issues. Obtaining all ROW clearances shall be in the scope of the EPC contractor selected for the said works.

In case, there is change in Route due to ROW constraints; resulting to change in Design, technical Specifications, SOR etc., the same shall be in scope of PMC without any time & cost implication.

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3.2 Soil Investigation:

Complete soil investigation report shall be in scope of PMC comprises of following Minimum information :



- Excavation of trial pits to ascertain the type of soil strata;
- Soil Resistivity results for electrical grounding;
- Sub soil data for underground water table;
- Soil Bearing capacity

3.3 Modification Works at Existing Switchyard / GIS Substation



PMC shall provide consultancy services for extension of 220 kV AIS Switchyard / GIS and associated infrastructure at Budhipadar and / or Lephripada Grid Sub-Stations

Scope includes:

- Facilitation by PMC for acquisition of land required for extension of bays;
PMC shall identify the land required and facilitate Owner to acquire the same. PMC shall coordinate with concerned owner, State officials etc. for smooth acquisition of land.
- Single Line Diagram, Protection & Metering SLD, Plot plan and Layout (in line with OPTCL requirement);
- Relay Setting & Relay Coordination of 220 kV System Detailed BOQ and Tender Estimates with Cost Breakup;
- Basis of Estimate;
- Preparation of technical specification including SOR for contracts covering the equipment and system (as required):
 - 220kV AIS Switchyard & associated Control & Relays Panels;
 - 220kV GIS Switchgear including GIB and GIS-Air Bushings.
 - GIS Local Control Panel;
 - Circuit breakers;
 - Isolators;
 - Safety grounding switches;
 - Instrument transformers;
 - Surge arrestors;
 - Outdoor bushings, termination and other allied equipment related to GIS substation.
 - Upgradation of Substation Automation system
 - PLCC & Communication systems as per OPTCL/ TPOCDL Requirement
 - Erection of all Switchyard / GIS equipment & associated system
 - Bus duct.
 - Illumination system

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- Extension of GIS Building and Control room building (if applicable)
- Bay Layout Drawing Section & Elevation Drawing.
- Control and Protection Scheme
- Cable Schedule
- Earth Mat Drawing, Earthing Drawing., Lightning Protection Drawing.
- Control Room Layout
- SCADA, RTU & other Communication Equipment.
- ABT Metering at O/G Feeders for BCGCL
- Metering as per OPTCL/ TPWODL
- Integration with OPTCL System
- Foundation of Equipment
- Road, Fencing
- Detailed Estimate with basis of Estimate
- Vendor List as per OPTCL/TPWODL
- Approval of all Drawing /Document By OPTCL/TPWODL. PMC shall obtain all approval from OPTCL/TPWODL and other agencies.
- Review and recommend for approval all design and drawings and technical documents submitted by contractor including but not limited to following:
 - Review AIS, GIS, SLD, PSLD, Layouts including earthing and lightning protection, lighting, ventilation, safety, etc.;
 - Review and inspect GTP of various accessories including clamps, cable tray, etc.;
 - Review consolidated BOQ for each new drawing / revision;
 - Review AIS / GIS switchgear design calculation
 - Review AIS Switchyard Equipment / GIS Layout
 - Review calculation of GIS accessories and related electrical hardware & accessories.
 - Review and approve all GA drawing.
 - All Consolidated electrical BOQ.
 - Cable Schedule, Interconnection Schedule
 - Layout for Lighting, Earthing, Lightning Protection, Cables etc.
 - Drawings for integration with OPTCL/ TPWODL existing Grid Substation facilities
 - Specification for all electrical equipment
 - I/O Count for Electrical Control & Monitoring System (ECMS).
 - Lightning Drawing .

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- GTP and GA Drawing of AIS Switchyard equipment / GIS
- Drawing of Control & Relay Panel etc.
- Schematic Drawing,
- Cables
- Sheath current calculation
- Cable size
- FO cables and spill boxes
- Cable installation procedure and joint procedure
- GA drawing of joint and pit.
- Review design calculation of piling, structures and foundation including gantry, AIS Switchyard equipment, GIB, CVT, terminations, cable trench, etc.
- Review building design/ architecture drawing including GIS room, control room etc.
- Review switchyard crossing details, gate, drainage, sewage etc.
- Review and approve all the GA & RC details/drawing
- Consolidated Civil BOQ
- Road, Boundary wall, Fencing, Vehicle parking, Store etc.
- Review and approval of drawings and data submitted by Contractors;
- Review and approval of operation and maintenance manual provided by the contractors for accuracy and adequacy;
- All design, drawing & document submitted by the Contractors shall be firstly reviewed by PMC. PMC shall obtain all approval from OPTCL and other agencies;
- PMC shall hand over complete set of as-built documentation to BCGCL/PDIL in line with contracts finalized.

3.4 The scope of Tendering shall broadly include

- Preparation of complete bid documents (Technical as well as commercial) and Pre-Qualification Criteria (PQC) for tendering;

Presently following Minimum 3 Packages (SOR basis) are envisaged:

- 220 kV overhead transmission line, 220 kV Cabling (Laying, testing & commissioning only) etc. for permanent grid power for the BCGCL plant.
- 220 kV Cables
- Extension of 220 kV GIS/AIS switchyard and associated electrical systems (if applicable).
- Submission of Bid evaluation criteria (BEC) for tendering;
- Pre-bid meeting(s) and clarifications to bidders;
- Resolution of vendor Pre-Bid Queries and recommendation;

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- Techno-commercial evaluation of bids and preparation of Techno-commercial Recommendation;
- Price bid evaluation and recommendation to BCGCL for award of contract;
- Preparation of Work Order / Contract for issuance to successful Contractor;
- All NIT documents shall be vetted /approved by BCGCL;
- All NIT documents shall be vetted /approved by OPTCL /TPWODL.

3.5 Statutory Approvals and Clearances

PMC shall facilitate the Project Owner in obtaining statutory approvals including:

- 220 kV overhead Transmission line from State Transmission Utility & other relevant authorities;
- Grid connectivity approvals;
- Electrical Inspector approvals;
- Railway / highway crossing approvals;
- Forest clearance where applicable;
- PMC shall provide technical documentation and coordination support;
- Any other approval as required for completion of scope.

PMC role shall be limited to providing technical support, necessary coordination and documentation. Obtaining statutory approvals from the concerned authorities shall remain the responsibility of the EPC Contractor on behalf of Project Owner with support & coordination with PMC.

3.6 Right of Way (ROW) Facilitation through respective EPC Contractor



- PMC shall assist the Project Owner in:
 - Identification of ROW
 - Identification of ROW constraints
 - Details of land (type, owner details, obstructions etc) falling in ROW
 - Coordination with local authorities
 - Facilitation of meetings with land owners
 - Providing technical inputs for ROW resolution.

However, ROW acquisition and compensation payments shall be handled by the Project Owner.

3.7 Construction Supervision

PMC shall supervise construction activities including:



- Supervision, monitoring and operationalization of transmission line / cabling and Switchyard / substation works including storage, handling of equipment/material at site;
- Review implementation plan prepared by the executing agencies;

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- Monitoring, inspection and acceptance of the completed works from the executing agencies, Co-ordination with local authorities with a view to expedite the works at site;
- Prepare monthly progress reports incorporating photographs and describing the progress achieved in the reporting period, supported by an update of the construction progress;
- Finalization of amenities and specifications with client and contractors;
- Review safety standards followed at site by the contractors;
- Periodic site visits for assessing observations as and when necessary for BCGCL/OPTCL/TPWODL/other relevant authorities' clarifications;
- Review completion report and drawings for issuance of clearance by statutory authorities.
- Prepare formats required by site representatives for site supervision;
- Hold regular planning and progress meetings to monitor production of design information and approval of drawings, contractors' progress, delays and issue minutes of meeting to BCGCL;
- PMC shall monitor and supervise construction activities carried out by the Contractor to ensure compliance with approved drawings, specifications and Contract requirements;
- Supervision of Foundation works, Tower erection, Conductor stringing, Earthing & Lightning Protection installation, Equipment installation, Busbar erection, Cable laying, Control and protection panel installation, testing & commissioning of transmission line and Switchyard / Substation Equipment & Systems and all other ;
- Organize, plan, supervise and manage the construction activities as a whole;
- Coordinate, inspect and expedite the work of contractors in order to secure completion of contracts in conformity with plans, specifications and approved schedule;
- Certify quality and quantity of work performed by Contractors and maintain necessary records required for certifying Contractor's measurement according to the condition of Contracts. Perform duties as Engineer-in-charge for the contracts;
- Preparing lag analysis and suggest suitable mitigation measures;
- PMC shall depute qualified and experienced engineers to site for construction supervision during execution of the project. Also, PMC shall depute qualified and experienced testing & commissioning engineers to site for testing, pre-commissioning & commissioning;
- PMC shall supervise the construction work for execution in a safe manner;
- PMC shall ensure Maintaining records such as pour Cards, piling records, piling termination, surveying records etc., as applicable by EPC Contractor;
- All the pile terminations to be witnessed and certified by PMC.

3.8 Quality Assurance, Inspection and Safety Monitoring

PMC shall review and monitor implementation of quality assurance and safety practices during execution of the works. The scope shall broadly include:



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- Witness Factory Acceptance Test inspections for the major items along with OPTCL/TPWODL, BCGCL at manufacturer premises;
- PMC shall witness inspection with OPTCL/TPWODL/relevant authority, BCGCL and issue clearance for dispatch of material on satisfactory inspection;
- Coordination with OPTCL/ TPWODL for dispatch instruction;
- QAP is prepared by the EPC Contractors and PMC to review the QAP;
- Maintain Project Quality by developing Quality Assurance Plan (QAP);
- Review works are constructed in compliance with the approved designs and drawings;
- Review materials and workmanship in the works conform to the contractual specifications;
- Checking of all tests reports for compliance to the respective standards and submission to BCGCL;
- Report to BCGCL any issue that may affect the quality of workmanship with suitable mitigation measures and action plan for implementation;
- Monitoring compliance with applicable technical standards, specifications and approved drawings;
- Review and verification of quality related documentation submitted by the EPC contractors;
- Monitoring of inspection and testing activities during construction and installation works;
- Monitoring implementation of safety practices and procedures at site.

3.9 Testing and Commissioning

The scope shall broadly include

- Prepare the detailed schedule & procedure for pre-commissioning / commissioning of 220 kV Transmission Line, 220 kV Cabling, 220 kV AIS Switchyard / GIS along with associated System;
- Prepare system wise checklists and ensure resolution of checklists;
- Witness & provide clearance in consultation with the EPC Contractor for pre-commissioning /commissioning activities;
- Assist BCGCL during internal and external for pre-commissioning /commissioning safety audits and ensure compliance of safety audit checklists;
- Review the contractor's test procedures for compliance with manufacturers' requirements and design criteria;
- Witness in testing, pre-commissioning and commissioning of transmission line, cabling and 220 kV AIS Switchyard / GIS along with associated System;
- Witness in Protection relay testing, Equipment testing, Transmission line / cables charging, Substation energisation;

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- Witness in Acceptance test of components of lines (Towers/conductor), AIS Switchyard / GIS substations, SCADA, communications and protection;
- Review of test reports;
- Issuance of Certificate for successful completion of Commissioning;
- Facilitation for Issuance of Certificate for successful completion of Commissioning by competent Authority;
- Certificate of submission of certified As-built documents;
- Ensuring of handing over of spares and surplus materials;
- Recommendations on taking over from contractors.

PMC shall assist in achieving successful commissioning of 220 kV systems.

3.10 Project Monitoring and Reporting

The scope shall broadly include

- Preparation of project schedules;
- Organization of and participation in project kick-off meetings with contractors and relevant stakeholders;
- Reviewing master schedule L1, L2, L3 prepared by the contractors for the project, addressing the main phases of the project, milestones and key inter-relationships;
- Integration of project schedules, and monitoring of schedules maintained by the contractors;
- Reviewing resource mobilization plan adopted by contractors for timely job execution;
- Assessing delays in project, if any, and carrying out stakeholder interactions for preparation of revised schedules and resource mobilization by the contractors;
- Assessing associated project risks including technical, environmental and financial risks;
- Preparing financial outlay for quarter-wise and year-wise allocation of funds;
- Establishing communication and reporting framework across stakeholders;
- Prepare detailed bar chart covering all activities to be performed by the Consultant with respect of the Project Schedule;
- Prepare and submit weekly, monthly progress report for the above activities;
- Conduct Project review meetings;
- Responsible for status of planned versus actual financial progress;
- Responsible for risk assessment report and mitigation mechanism;
- Expediting to ensure supply of all equipment/material in line with the agreed contract program;
- Monitor progress of contracts. Identify hold ups and required corrective actions and take up the same with Contractors for expeditious completion of the works;
- Reporting highlighting Delay, Catch-up plan, Work Ahead etc.;



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- Preparatory work, collection/compilation of details/data and submitting the same in the duly filled in requisite formats to BCGCL for preparation of the proposal for clearance, Right of Way Management, Crop compensation / Tree Compensation / PTCC/Railway Crossing Clearance / Road Crossings Clearance / NoC form mining authority, Transmission Line Crossing Clearance, any other work etc., coordinating with concerned Departments/ Authorities for obtaining all clearances / shutdown activities, required for timely completion of project.

3.11 Contract Management

The scope shall broadly include

- Measurement and verification of work quantities and certify contractors' invoices for payments;
- Assist contract payment group in assessing price variation payment to the contractors if any;
- Rate analysis and recommendation of rates to be applied for additional work carried out by contractors;
- Detailing and explaining any variation in project cost and implementation time from the originals;
- PMC to assist, coordinate and support in obtaining No Dues Certificate wherever required;
- Assisting BCGCL in completion of contract closeout checklist to be complied by contractors;
- Submission of contract close out report;
- Preparing format of no liability certificate to be furnished by contractors;
- Advise BCGCL in resolving disputes and claims raised by contractor;
- Detailing and explaining any variation in project cost and implementation time from the originals;
- Certification of measurement for the contractors / vendors, review the invoice / bills submitted by contractors / vendors and recommend for further processing by BCGCL;
- Development and / or review of schemes for safe lifting & installation of equipment;
- PMC shall prepare quantity deviation statements for all purchase orders and contracts, provide market analysis and justification for the recommended rates, review of extra items and provide recommendations, provide supporting documentation, review of extra claims, review of escalation of prices, review and recommend time extensions, final settlement of contracts and purchase orders;
- Tracking of upstream readiness for getting adequate power and assisting BCGCL in this aspect;
- Assisting BCGCL in handing over for regular maintenance of 220 KV line and 220 KV AIS Switchyard / GIS Substation to concerned agency;
- Implementation of adequate safety measures at site to ensure NIL reportable incidents during execution.

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3.12 Project Completion and Documentation

The scope shall broadly include

- Preparation of commissioning documentation;
- PMC shall manage and maintain records of all quantity and quality certification, vendor correspondence, tender document, vendor payment and other vendor documents done in project until commissioning and handing over;
- Drawings of all revisions from planning to As-built are to be made available with PMC and are to be shown whenever asked by BCGCL/PDIL;
- PMC with no further delay shall provide all necessary documents requested in as of Vigilance/Audit queries;
- PMC shall review the final document submitted by vendors before forwarding to BCGCL. PMC shall arrange to submit following documents and drawings in 6 Sets of hard copies and 2 soft copies to BCGCL and 2 Sets of hard copies and 1 soft copy to PDIL:
 - Design Calculations, documents & drawings
 - As-built drawings and documents
 - Final Engineering Drawings / approved from construction
- Compilation of final project documentation;
- Project closure activities.

3.13 Warehousing

- PMC shall keep track of every equipment and material related to the project entering into site/stores.;
- PMC shall also assist to manage related inventory.

3.14 Safety



The scope shall broadly include

- PMC to monitor Safety Compliance at all working locations;
- PMC shall make note of safety deviations at working locations and levy appropriate penalties for safety violations;
- HSE guidelines which to be followed in this job shall be prepared by PMC inline with OPTCL/BCGCL/TPWODL requirements;

A dedicated Safety Officer is to be appointed to manage safety pre-talks and to ensure safety systems.

3.15 Any other requirement for completeness of this job, but not specifically mentioned shall be in PMC's scope.

3.16 Payment of any statutory fees, if required, shall be paid by BCGCL directly.

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4. DEPLOYMENT OF PMC PERSONNEL

PMC shall depute a dedicated site team during project construction, installation, erection, testing, pre-commissioning, commissioning phase for successful execution of this assignment, headed by a Project Head. The site team shall be supported by back-end team of experts at PMC Corporate Office.

PMC shall deploy qualified and experienced personnel (Degree in Engineering with minimum 3 to 5 years or Diploma with 7 years relevant experience in Project execution) depending on project requirement at various stage of execution and progress of work:

- Electrical Engineer (Switchyard / Substation / Cabling)
- Transmission Line Engineer
- Civil Engineer
- Quality Engineer
- Testing & commissioning Engineer
- Safety Engineer

Site Deployment Schedule : To be submitted along with Bid.



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SCHEDULE OF RATES

FOR CONSULTANCY SERVICES

FOR

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FOR BCGCL COAL TO AMMONIUM NITRATE PROJECT**

AT LAKHANPUR, JHARSUGUDA (ODISHA)

0	01.06.2026	01.06.2026	ISSUED FOR TENDER	SS/RP	SKB	SKB
P	14.05.2026	14.05.2026	ISSUED FOR CLIENT'S REVIEW	SS/RP	SKB	SKB
REV.	REV.DATE	EFF. DATE	PURPOSE	PREPD.	REVWD.	APPD.

ITEM NO.	DESCRIPTION	UNIT	Qty	UNIT RATE WEIGHT (UPTO 10 DECIMAL POINT)	DERIVED QUOTED UNIT RATE in INR (TOTAL QUOTED PRICE * UNIT RATE WEIGHT)	DERIVED TOTAL QUOTED AMOUNT in INR (QUANTITY*DERIVED QUOTED UNIT RATE)
1	<ul style="list-style-type: none"> • Carrying out tower spotting and preparation of Tower schedule of Transmission Line Route. • Soil Investigation • Design of 220 kV Transmission Line, 220 kV Cabling System, Extension of 220 kV AIS Switchyard / GIS and associated System • Statutory Approvals and Clearances • Right of Way (ROW) Facilitation • Tendering services including preparation of technical specifications and scope of work, preparation of complete bid documents (including commercial part) and BOQ, Detailed cost estimates with basis, clarification of bidder's queries, techno-commercial evaluation of bids and preparation of Techno-commercial Recommendation, price bid evaluation and recommendation to BCGCL for award of contract, Preparation of Work Order / Contract for issuance to successful Contractor. • Engineering review including review of route alignment, Tower schedule, foundation design, sag-tension calculations, drawings and engineering documents of 220 kV Transmission Line, 220 kV Cabling System, Extension of 220 kV AIS Switchyard / GIS and associated System but not limited to, submitted by the contractor to ensure compliance with project specifications and standards. • Inspection and quality monitoring including witnessing factory acceptance tests (FAT), review of inspection reports, monitoring contractor quality assurance procedures and verification of materials and equipment compliance with specifications • Project Monitoring and Reporting • Contract Management • Project Documentation • Warehousing 	Lump Sum	1	0.5377207063		
2	Construction supervision and monitoring of 220 kV Transmission Line, 220 kV Cabling System, Extension of 220 kV AIS Switchyard / GIS and associated System including foundation works, tower erection, conductor stringing, earthing & lightning protection; Equipment installation, Busbar erection, Cable laying, Control and protection panel installation, testing & commissioning of transmission line and Switchyard / Substation Equipment & Systems and all other works and associated works to ensure compliance with approved drawings, specifications and project schedule .	Man month	48	0.0096308186		

Note :

- A. The price shall remain firm and fixed till completion of the Contract.
- B. Schedule of Rate shall be read in conjunction with Scope of Work.
- C. Any other requirement for completeness of this job, but not specifically mentioned in Scope of Work or Schedule of Rates shall be in PMC's scope and shall be performed by PMC within the Price quoted against Sl. No. 1 of Schedule of Rate. No additional payment shall be made, on any account.
- D. The Contract Value covers entire consideration payable to PMC for all obligation of PMC. The Value of Contract is fixed and firm and not subject to any escalation during the Contract Period unless otherwise specified in the Contract document.
- E. In the event that the actual requirement during project execution (within and beyond the stipulated 24 months – Construction phase) exceeds the tentative estimate of 48 man-months, PMC shall be entitled to additional payment for the extra man-months deployed, at the unit rates quoted in the bid subject to approval of BCGCL. The extra man-month deployed payment will only be admissible if the delay is not attributable to PMC.
- F. Unit Price shall be inclusive of all taxes, duties, Cess etc. excluding GST.