

Job Description

Position Title: Engineer Trainee- Electrical

Indicative Roles & Responsibilities on Regularization:

- 1. Operations of Sub-Stations:** Monitoring of system parameters, Substation operation as per guidelines, Outage coordination, Coordination with RTAMC/RLDC, Maintaining operational formats as per norms, Issuance of permits for maintenance/testing/line maintenance.
- 2. Maintenance of Sub Stations:** Responsible for all proactive and breakdown maintenance activities of S/S, control room, protection PLCC, switchyard equipments etc. Maintenance as per AMP schedule, Procurement action for Inventories as per Norms, Procurement action for T&Ps and Consumables as per requirement, Maintaining AMP formats as per norms, Condition Monitoring of Switchyard equipment, Restoration of System within stipulated time during breakdown Maintenance.
- 3. Operations & Maintenance of Transmission Line:** Patrolling & maintenance of lines, Maintenance of Rectifier, Major re-protection work (insulator re-protection, Strengthening work etc.), Maintaining the spare and required T&P.
- 4. Testing & Commissioning:** Testing & Maintenance of C&P relays, Commissioning activities, Maintenance of Auxiliary system, SAS Healthiness Work, Ensuring healthiness of Communication equipment.
- 5. Construction: To manage construction activities at site in accordance with policy** Adherence to L2 network, Monitoring of availability of construction material and drawings as per schedule, Obtaining clearances, FQP adherence, Regular review meetings with executing agencies, Processing of Contractor payments in time, ROW cases.
- 6. Substation Engineering:** Detail design and engineering of HVDC S/S, Project Conceptualization - Preparation of FR SLD & BOQ, Pre-NIT Activities - Preparation of Pkg list, NIT BOQ, QR, Technical specification, Tender drawings BPS etc., Post NIT Activities - Technical clarification, Bid evaluation, Pre award discussion etc., Detailed Engineering of Various projects, Relay setting, Site Coordination & type test witnessing, Finalization of Qualifying requirement.
- 7. Transmission Line Engineering:** Detail design & engineering of TL, Pre-NIT & Post-NIT Engineering activities, Post-Award Engineering activities for

transmission line tower packages, Post-Award Engineering activities i.r.o. Hardware fittings & accessories for conductor/ earthwire, Post-Award Engineering activities i.r.o. Insulators, conductors, Vendor Development activities, Development of National/ International Standards.

- 8. CTU/System Studies:** Steady state and dynamic studies, Real Time Simulation, Transient simulation studies, Preparation of feasibility reports for new projects related with strengthening, augmentation of system or new generation linked evacuation system.
- 9. Store Management:** Monitoring of Inventory as per Norms, T&Ps monitoring as per Norms, Action for scrap Disposal, Entries in SAP/ERP, procurement work.
- 10. HVDC Work:** Operations & Maintenance of HVDC Stations & TL, Testing & Commissioning, Construction work, Design & engineering of HVDC system, System Studies, Store Management, Pre-award activities for HVDC projects, Detailed Engineering of HVDC projects, Validation Studies for HVDC projects / Studies conducted as per the requirement of AM /CTU/other dept.
- 11. PESM:** Project Management, Budgeting, Revised Cost Estimation, Environment and social Management, Statutory Clearances, Commercial work.
- 12. Cost Engineering:** Preparation of Schedule of Rates, Assessment of Project Feasibility upon receipt of scope of works, BoQ, Schedule, Funding etc, Preparation of Detailed Project Report (DPR), Preparation of NIT cost estimate based on BOQ given by indenting Department i.e. TL/SSTN/LD&C/CIVIL/ DMS, Vetting cost for R&M works at site, AM works, etc.
- 13. Business Development:** Marketing / Creating business opportunities, Participation in tenders/ submission of Offer, Delivery of agreed solutions to clients, Revenue Realization, Handing over of the project / Closure.
- 14. Commercial Work :** Filing POC Petition, Filing True-Up petitions, Hearing before CERC, Analysis of orders & preparation of briefs, Preparation of Billing advice, Preparation and filing rejoinder to the replies of respondents, Preparation of bills, Joint reconciliation with ISTS Licensee.
- 15. Contract Works:** Pre-requisites activities for initiating procurement, Finalization of Bidding Documents and Publication of NIT, Pre-Bid Conferences, Amendments & Clarifications to the Bidding Documents, Corrigendum publication, Bid Opening, Evaluation of Bids, Award Placement.

Position Title: Engineer Trainee - Electronics

Indicative Roles & Responsibilities on Regularization:

- 1. SCADA, WAMS and Communication inputs for RfP of TBCB projects & Connection Agreement:** Study of detailed scope of TBCB projects, Study of detailed scope of Connection Agreement, Study of Single line diagram of S/s, Study of existing and future Communication Network, Study of data communication protocols, Clarifications on RFP.
- 2. Engineering (Pre-Award)- SCADA, WAMS and Communication system of - LD&C Projects & Transmission System Projects:** Study of detailed scope of project, Study of Single line diagram of S/s, Study of existing and future Communication Network, Study of data communication protocols, Preparation of DPR and NIT BOQ, DPR and NIT BOQ entries in SAP/ERP, Preparation of Technical Specifications, Preparation of Bid Proposal Sheets (BPS), Coordination with CS Dept for NIT, Preparation of bid clarification to bidders, Bid Evaluation, Preparation of specific agreement.
- 3. Engineering (Post-Award)- SCADA, WAMS and Communication system of LD&C Projects & Transmission System Projects:** Study of detailed scope of project, Study of Single line diagram of S/s, Study of existing and future Communication Network, Study of Single line diagram (SLD) of S/s, Study of Qualifying Requirement (QR) and Technical Specifications (TS), Vendor Assessment, Approval of Data Requirement Sheets (DRS), Approval of BOQ. Approval of Equipment drawing, Support to CMG in finalizing L2 schedule, Calculation of link budget and its approval, Approval of Type Test, Factory Acceptance Test (FAT) and Site Acceptance Test procedure, Witnessing of Type Test and FAT, Approval of communication channel routing, Review and approval of Type Test and FAT reports Issuance of CIP/MICC, Review of amendment proposal from regions, Regular review meetings with vendors, Regular meeting with POSOCO and CEA Coordination with various departments of Corporate Centre, Preparation of technical approval, Reply to technical queries of vendors and regions, Monitoring and Coordination with regions during project implementation (Supply and Installation).

4. **Construction:** Adherence to L2 network, Witnessing of various survey and Pre-Installation testing, Supervision of construction activities, Coordination with various agencies like POSOCO, State utilities, transmission utilities, Regional Power Committees and various generating stations etc., Coordination with Corporate Centre, Issuance of MRHOV, FQP adherence, Processing of amendments, Timely completion of project activities, Maintenance of Hindrance Register, Regular review meetings with vendor, Processing of bills, Budget Utilization, Processing of RCE in coordination with PESM Dept., Contract Closing

5. **Testing & Commissioning:** Testing and commissioning of SCADA, WAMS and Communication system, Witnessing of Site Acceptance Test (SAT) and System Availability Test (SAVT), During testing and commissioning- coordination with various agencies like POSOCO, State utilities, transmission utilities, Regional Power Committees and various generating stations etc., Processing of TOC and Capitalization

6. **Operation and Maintenance:** Monitoring of SCADA/WAMS/Communication System ,For round the clock data and voice connectivity of each substations and generating stations, coordination with various agencies like POSOCO, state utilities, transmission utilities and generating stations, Monitoring of entire communication network over Network Management System (NMS), Outage coordination and restoration of System within stipulated time during breakdown, Manual calculation of communication system availability, Participation in regional O&M meetings, Procurement action for spares and other T&Ps, Maintenance as per AMC provisions, Coordination with LD&C and AM Department at CC.

Position Title: Engineer Trainee - Civil

Indicative Roles & Responsibilities on Regularization:

1. **Pre award activities-Substation Civil:** Preparation of DPR & BOQ, Cost Estimation as per the S/S input, Developing project specific section project & scope of the work, Developing project specific concept drawing & tender drawings, Pre-Bid queries and amendment
2. **Post award activities-Substation Civil:** Site leveling & finalization of FGL, Fixing project specific design philosophy & parameter, In-house structural design and drawing preparation, Review and approvals of the vendor submitted designs and drawings
3. **Standardization of Technical specification, drawings & documents:** Technical specifications for substation civil works, structures & site leveling, General guidelines for the system improvement, Standardizing tower & equipment structures, Standardizing Control room buildings & other residential & non-residential structures, Standard drawings for the civil works pertaining to CSR, Empanelment of the structural & architectural consultant
4. **Substation construction-Civil Works:** Land selection & Acquisition, Soil investigation, Contour Survey & site leveling, Construction activity & supervision as per SFQP, Measurement of actual quantities of the work, Billing work as per the measured quantities, Witnessing Testing of the soil, aggregates, cement & concrete cubes
5. **Operation & Maintenance:** Residential & non- Residential building maintenance works, Road & Drainage Maintenance, Admin works, Horticulture & Landscaping of the Substation
6. **Resolution of site related works & issues:** Site visits specific to construction issues, Land selection committee, Site visit for the FGL finalization & Requirement of retaining wall, Site visit for the Drain layout
7. **Pre-NIT Engg activities for transmission line tower packages, conductor packages, insulator packages, etc:** Preparation of BOQ based on site inputs and Uploading of BOQ on SAP, Preparation of Package list, Preparation of Cost Estimate in association with Cost Engg/ TBCB & Finance, Preparation of Qualifying requirements, Preparation of Technical Specifications
8. **Post-NIT Engg activities for transmission line tower packages, conductor packages, insulator packages:** Participation in Pre-bid conference, Clarification

of bidders' queries, Participation as Bid Opening Committee member, Review/ Evaluation of technical and price bids, Specific Agreement/ Post Bid discussions with successful bidder

9. **Post-Award Engg activities for transmission line tower packages:** Release of applicable drawing/ documents/ BOM of applicable towers and foundations, Development works for Location specific requirements viz. new towers & foundations, raised chimney foundation, special foundations, Cross arm strengthening, Tower strengthening, Auxiliary crossarm, etc, Review of tower accessory drawings, stringing chart, etc, Review of site specific proposals i.r.o. power line crossings, railway crossings, rectification cases, etc.
10. **Vendor Development activities:** Review of proposals of existing/ new vendors for assessment/ approval/capacity enhancement of their manufacturing units, Visit of the manufacturing units/ works for assessment
11. **Development of National/ International Standards:** Participation in technical committees of IEC and BIS for development/ formulation/ modification of National/ International standards for transmission lines/ items.

Position Title: Engineer Trainee- Computer Science

Indicative Roles & Responsibilities on Regularization:

1. **Development of Processes in ERP/IT applications:** Understanding Business Requirement, Designing of Process flow mapping, Functional Specification creation, System Configuration, Technical Specification creation, ABAP/.NET/JAVA ...etc. development, Solution Deployment, User Manual creation.
2. **Testing of Processes in ERP/IT applications:** Testing Strategy creation, Master and Transaction Data creation, Unit Testing, Integrated Testing, User Acceptance Testing, Test result Analysis and feedback
3. **Operation & Maintenance of Existing Solutions:** Monitoring logs, Deploying Upgrades and patches, Modifications in existing solutions based on feedback, Roles and Authorizations for Solutions, Procurement activities for existing solutions and License Management.
4. **End user Support and Training:** Support to POWERGRID users, Support to POWERGRID Vendors and Customers, End user/ POWER user Training, Training to New recruits, SOP creation and circulation, Coordination for OEM escalations.
5. **Innovations and Technological adoption:** Consistent market evaluation for latest Technologies, POC of new Technologies for usability, Interaction with other companies, Interaction with POWERGRID Business users for feedback, Business Analytics.
6. **Master Data Management:** Creation of Master Data on day-to-day basis, Modification of Master Data, Data sanitization.
7. **IT-Infrastructure:** Procurement activities, 24 x 7 Operation of all infra, Data Backup and Archiving, DC-DR Synchronization Management, User support, Mail service Management, Storage space Management, OEM & DB upgradations, Monitoring of Temperatures and Server Logs.
8. **Information Security:** User Authentication and security Management, Security Audits and Compliances, GRC (Governance Risk and Compliances), Access Management and VPN, Implementation of Govt. directions and policies.