



NATIONAL GRID COMPANY OF PAKISTAN LIMITED (NGC)

Formerly NTDC

Job Description			
Job title	Transmission Asset Management Consultant	Function	Asset Management
Reporting line	Board Restructuring and Technical Committee, National Grid Company (NGC)		
Project	Loan 4382: Pakistan Power Transmission Strengthening Project		

Job Overview
<p>The National Transmission & Despatch Company (NTDC) has undergone strategic restructuring leading to the transition of key operational functions into three distinct corporate entities: The National Grid Company (NGC), the Energy Infrastructure Development and Management Company (EIDMC), and the Independent System and Market Operator (ISMO). With the system operation function vested in the ISMO, NGC will focus exclusively on providing world-class grid operation and management services while project development and implementation will be assigned to EIDMC. However, to ensure continuity in transmission infrastructure development, NGC will provide transitional support to EIDMC until the new company achieves full operational independence.</p> <p>To support corporate restructuring during its transition period, the National Grid Company (NGC) intends to engage a qualified Asset Management Consultant to optimize the operations and maintenance (O&M) of NGC's grid stations and high-voltage transmission lines. The Consultant will focus on aligning NGC's asset management practices with global standards and ensuring full compliance with the guidelines and regulations established by the National Electric Power Regulatory Authority (NEPRA). By driving the adoption of industry best practices, the Consultant will enhance asset reliability, minimize operational risks, and improve cost efficiency across NGC's critical infrastructure.</p> <p>The Asset Management Consultant will be responsible for developing and implementing robust asset management frameworks that support regulatory, technical, and operational objectives during the transition period. This role requires close collaboration with internal teams and external stakeholders to ensure sustainable and efficient asset operations, while reinforcing NGC's capacity to meet evolving challenges and maintain long-term system performance in accordance with national and international benchmarks.</p>

Key Responsibilities
<p>1. Detailed Tasks</p> <p>a. Regulatory Compliance and Alignment</p> <ol style="list-style-type: none">Ensure comprehensive understanding and integration of NEPRA regulations, directives, and technical standards into NGC's asset management practices.Develop and implement compliance-driven policies, SOPs, and monitoring mechanisms embedded within ERP and GIS platforms.Prepare a compliance roadmap aligned with NEPRA standards and the Grid Code.Ensure adherence to NEPRA's Annual Safety Award documentation and support regulatory audits and corrective actions. <p>b. Asset Management Framework Review and Strategy</p> <ol style="list-style-type: none">Assess the current asset management framework for HVAC and HVDC assets, covering policies, structure, and technology.Identify gaps and inefficiencies through benchmarking against ISO 55000/55001, PAS 55, and CIGRÉ standards.Develop a restructuring plan and asset replacement/retirement models based on asset condition, risk, and performance. <p>c. Digital Integration and Performance Monitoring</p> <ol style="list-style-type: none">Integrate asset management workflows with ERP, GIS, and data governance systems.Establish an Asset Health Index and KPI framework aligned with NEPRA benchmarks and real-time dashboard visibility.



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- iii. Enable data-driven decision-making through digital tracking of asset condition, efficiency, and lifecycle performance.

d. Maintenance Optimization

- i. Implement predictive, preventive, and condition-based maintenance strategies.
- ii. Enhance reliability and minimize downtime across the transmission network.
- iii. Optimize planned outages in accordance with ISMO regulations and Grid Code.

e. Inventory and Procurement Management

- i. Develop a standardized approach for critical spares identification, inventory thresholds, and procurement planning.
- ii. Integrate inventory management with ERP and align procurement cycles with asset health and failure trends.

f. Capacity Building and Institutional Strengthening

- i. Identify skill gaps and design targeted training programs to build internal capacity in regulatory-compliant asset management.
- ii. Support the development of an Asset Directorate focused on lifecycle cost management and continuous improvement.

g. Risk Management and Stakeholder Engagement

- i. Design and implement a risk and EHS framework for transmission infrastructure.
- ii. Develop mitigation strategies for system failures and regulatory non-compliance.
- iii. Facilitate alignment of asset management initiatives with NEPRA, senior management, and other key stakeholders.
- iv. Support CapEx and OpEx forecasting for tariff petitions, aligned with regulatory benchmarks and asset management priorities.

2. Deliverables

The consultant will provide:

- a. **Asset Management Gap Analysis and Benchmarking Report:** A diagnostic assessment of NGC's HVAC and HVDC asset management framework, benchmarked against ISO 55000/55001, PAS 55, and CIGRÉ standards. Identifies regulatory, operational, and digital integration gaps, with prioritized recommendations to align with NEPRA regulations and global best practices.
- b. **Regulatory Compliance Alignment and Improvement Plan:** A structured roadmap to align asset management policies and workflows with NEPRA regulations, Grid Code, and performance standards. Includes draft SOPs, compliance tracking mechanisms, ERP/GIS integration needs, and implementation milestones to ensure accountability.
- c. **ERP-Integrated KPI and Performance Monitoring Framework:** A standardized framework for real-time monitoring of asset health and performance, featuring an Asset Health Index, KPIs aligned with NEPRA benchmarks, calculation methods, applicability matrices, and dashboard specifications for ERP integration.
- d. **Predictive Maintenance and Outage Optimization Plan:** A strategy integrating predictive, preventive, and condition-based maintenance models for bulk transmission assets. Optimizes outage scheduling per ISMO regulations, supported by digital tools and analytics to reduce downtime and boost grid reliability.
- e. **Critical Spares Inventory and Procurement Strategy:** A categorized inventory plan for critical spares, with defined thresholds, lead times, and risk mitigation protocols. Includes ERP-linked procurement workflows, storage standards, and alignment with condition monitoring and regulatory requirements.
- f. **Capacity Building and Institutional Strengthening Program:** A training and knowledge transfer program to enhance internal capabilities in asset management and compliance. Covers training needs assessment, tailored modules, reference materials, and a roadmap for establishing an Asset Directorate based on Total Cost of Ownership (TCO) principles.
- g. **Progress Reporting and Stakeholder Engagement Plan:** A plan for stakeholder engagement and milestone-based progress reporting. Includes templates for consultations, feedback documentation, and regular updates to ensure transparency and alignment with NEPRA.



<p>3. Reporting and Communication The consultant will report directly to the Board Restructuring and Technical Committee of NGC and will coordinate closely with Asset Management Department and the relevant technical operations teams to ensure alignment of recommendations with organizational objectives.</p> <p>4. Confidentiality and Intellectual Property The consultant shall maintain strict confidentiality regarding all NGC data and insights gathered. NGC shall retain ownership of all reports, frameworks, and intellectual property resulting from this engagement.</p>	
<p>Qualification and Experience</p>	<p>The candidate should have the following qualifications and experience:</p> <ol style="list-style-type: none"> A degree in Electrical Engineering, Power Systems Engineering, or a related field. Advanced qualifications in Engineering Management, Asset Management, Energy Systems, or Reliability Engineering will be an edge. Professional certifications (such as SAP, CAMMP, CMRP, CEM, IEEE, CEng, PE, or equivalent) from recognized institutions, as well as academic qualifications from high-ranking international universities, will be given preference. At least twenty [20] years of proven professional experience in the power or energy sector, including a minimum of ten [10] years in transmission asset management, lifecycle planning, and maintenance optimization for high-voltage ($\geq 132\text{kV}$) systems and infrastructure. Experience working with transmission system operators, utilities, multinational consulting firms, or regulatory bodies, with demonstrated familiarity with international standards and best practices (e.g., ISO 55000/55001, PAS 55, CIGRÉ, IEC, IEEE, ANSI) in asset management and operations, will be preferred. Experience in asset performance benchmarking, ERP/GIS integration, grid reliability improvement, or deployment of predictive maintenance strategies and digital tools in transmission networks will be an edge. Prior experience in leading or contributing to the development of asset management frameworks, technical specifications, procurement strategies, and stakeholder consultation processes in complex, regulated, or multi-stakeholder environments is essential. Additional qualifications or training in power systems planning, asset performance monitoring, risk and compliance management, or procurement practices in regulated environments will be given preference.
<p>Professional Skills & Competencies</p>	<ul style="list-style-type: none"> ▪ In-depth knowledge of international standards and codes applicable to high-voltage transmission equipment and grid systems, including IEC, IEEE, ANSI, ISO 55000/55001, PAS 55, CIGRÉ, and relevant regional Grid Codes. ▪ Proven ability to review, assess, and enhance asset management processes, technical specifications, standard bidding documents, and quality assurance protocols to ensure regulatory compliance and adherence to industry best practices. ▪ Demonstrated expertise in evaluating transmission equipment designs and asset management frameworks for technical robustness, lifecycle performance, and regulatory alignment. ▪ Strong analytical skills with a meticulous approach to reviewing complex technical documents, identifying gaps, and recommending optimization opportunities. ▪ Skilled in developing practical, standards-compliant solutions to improve asset management frameworks, procurement documentation, and operational workflows.



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	<ul style="list-style-type: none"> ▪ Excellent communication, interpersonal, presentation, and report-writing skills, with the ability to effectively engage, influence, and build consensus among technical and non-technical stakeholders across organizational levels. ▪ Proven ability to collaborate effectively with multidisciplinary teams, internal departments, regulators, and external stakeholders to ensure alignment and stakeholder buy-in. ▪ Adept at quickly understanding project-specific requirements and adapting review and implementation approaches to meet defined technical and strategic objectives. ▪ Proficiency in project management methodologies and digital tools relevant to engineering consultancy and asset management, including ERP, SAP, GIS, and data analytics platforms. ▪ High level of professionalism, integrity, and adaptability when working in dynamic, cross-functional, and multi-stakeholder environments.
Remuneration & Tenure	<p>Daily rate is a maximum of \$800 for an international consultant and \$400 for a local consultant.</p> <p>Contract duration: 132 person-days to be charged over a maximum of 9 months. The initial contract may be extended for an additional period based on the performance of the contract and through mutual consent of NGC and the consultant.</p> <p>Payment: Monthly upon submission of timesheets and approved deliverables.</p> <p>Travel, communication, and other reimbursable expenses, if applicable, shall be covered as per ADB Loan policy.</p>
Performance Management Clause	<p>The contract is subject to performance evaluation review. The review shall be based on achievement of assignment specific outputs on time and on budget. Any changes in stated outputs need to be approved by NGC. NGC reserves the right to terminate the contract i) if outputs are not achieved on time and at quality level acceptable to NGC; ii) services are no longer required or iii) for any other reasons in the interest of the company. Pre-termination of the contract is subject to 2-weeks' notice.</p>
Evaluation Criteria for Selection	<p>The selection will be based on:</p> <ul style="list-style-type: none"> ▪ Proven expertise in developing, reviewing, and implementing asset management frameworks in a complex and regulated environment. ▪ Advanced academic qualifications in electrical or power engineering and relevant professional certifications (e.g., CEng, PE, SAP, CAMMP, CMRP, IEEE). At least 20 years of extensive experience in power system engineering, asset management, grid operations, and regulatory compliance. Strong skills in report writing, stakeholder consultation, and training delivery. ▪ Proven experience integrating asset management workflows with ERP, GIS, and data governance platforms. Ability to develop and implement real-time asset health indices, KPIs, and dashboards for enhanced performance monitoring and data-driven decision-making. Expertise in predictive, preventive, and condition-based maintenance strategies aligned with regulatory outage management requirements to improve reliability and reduce downtime. ▪ Capability to design and implement critical spares inventory and procurement strategies linked with asset condition and regulatory requirements. Experience conducting skills gap assessments and delivering targeted training programs to build organizational capacity. Proven track record in supporting the establishment or strengthening of Asset Directorates focusing on lifecycle cost management and continuous improvement. ▪ Strong stakeholder engagement skills to align technical teams, management, regulators, suppliers, and other key parties.