



Terms of Reference (ToR) for Chief Engineer, PSMD

Position Title/Level : Chief Engineer (Electrical), P1A

Employer : Power System and Market Division (PSMD), Department of Energy

Work Station : Ministry of Energy and Natural Resources, Thimphu

Employment Type : Regular

Reporting to : Director General, Department of Energy, MoENR

Supervises : Engineers, technical professionals and other personnel assigned to the Division

1. Background

The Power System and Market Division (PSMD) under the Department of Energy is responsible for national power system planning, grid development, power system analysis, energy security assessment, renewable energy integration, and power market and electricity trade-related functions.

The Chief Engineer shall provide technical and strategic leadership to the Division in ensuring the safe, reliable, adequate, efficient, and secure development of Bhutan's power system, while supporting the development of the domestic power market and facilitating cross-border electricity trade.

2. Position Details

The Chief Engineer shall lead and provide strategic, technical and managerial leadership for the planning, analysis, development, and coordination of Bhutan's national power system and electricity market. The position shall ensure effective delivery of the Department mandates through sound technical planning, efficient management of human and financial resources, capacity development, performance management, inter-agency coordination and advice on power sector development of the Department of Energy.

3. Key Duties, Responsibilities and Accountabilities

The Chief Engineer shall:



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- I. Lead and oversee national power system planning, analysis and development, including generation, transmission, system adequacy, reliability, security, and long-term system requirements, including periodic updating of the National Transmission Grid Master Plan;.
 - II. Design and approval of power evacuation systems of all generation plants including expansion/augmentation plans, grid enhancement plans, and other strategic energy-sector planning documents;
 - III. Direct and oversee power-system studies and analyses, including load forecasting, generation forecasting and adequacy, power flow, short-circuit, system impact assessments, stability, and contingency analyses, and seamless integration of new generation and loads;
 - IV. Assess the technical and economic implications of emerging energy technologies and resources, including hydropower, solar, wind, battery energy storage systems, electric mobility, distributed generation, smart grid, and other technologies relevant to evolving power systems;
 - V. Provide technical leadership of national electricity market development, including market structures, market mechanisms and system flexibility;
 - VI. Review the technical submissions, DPRs/feasibility studies reports, planning reports and project proposals relating to power-system development, and provide technical recommendations;
 - VII. Coordinate and provide technical oversight on cross-border power system planning and electricity trade, including interconnection requirements, transfer capability, transmission development, and coordination with relevant bilateral and multilateral agencies and counterparts;
 - VIII. Provide technical advice to the Department on strategic power-sector issues, investment priorities, system development, long-term energy security, electricity reliability, emerging technologies, electricity trade, electricity markets, and related policy matters.
 - IX. Development and review of technical standards, regulatory frameworks, guidelines, planning criteria and grid-related policy and regulatory provisions, including reliability indices and targets, grid balancing and discipline mechanisms, right of way (RoW);
 - X. Promote the application of advanced analytical tools, modelling techniques, digital technologies and data-driven approaches in power-system planning, market analysis and decision-making;
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- XI. Coordinate with relevant government agencies, utilities (BPC and DGPC), Regulator (ERA), System Operator (BPSO), and other stakeholders on matters relating to national power system planning, electricity market, grid development and energy security;
 - XII. Serve as the Member Secretary to the Bhutan Power System Coordination Committee (BPSCC), for power sector coordination on power system/sector issues;
 - XIII. Undertake any other strategic and technical assignments entrusted by the Department or Ministry in relation to the development and sustainable management of Bhutan's electricity sector;
 - XIV. Guide and supervise professional staff responsible for power-system planning, modelling, analysis, electricity market developments and related technical assignments. Provide coaching and mentoring of the staff under the Division.
 - XV. Provide overall management and direction to the Division, ensuring effective monitoring of approved work plans and timely delivery of outputs, while identifying current and future human-resource requirements, including promotion of success planning, coaching, mentoring, knowledge transfer to strengthen division capacity;
 - XVI. Support and implementation of the transmission RoW Guidelines through effective inter-agency coordinations, including planning of transmission RoW requirements;
 - XVII. Provide power allocation services in coordination with BPSO and BPC including formulation and update Standard Operating Procedure (SOP);

4. Minimum Qualification/Experience

- **Qualification:** Bachelor's degree in Electrical Engineering, Power Engineering, or a related field from a recognized university.
- **Experience:** Currently serving at P2 level and completed a minimum of two years of active service in current Position Level at the time of promotion effective date.

5. Amendment

- The above responsibilities shall be reviewed and amended from time to time by the agency.

"End of Document – Terms of Reference"
