

Terms of Reference (ToR)

Civil Engineers (2 positions on Consolidated Contract)

Background

The Energy Resource Development Division (ERDD) under the Department of Energy (DoE), Ministry of Energy and Natural Resources, is responsible for the development of Bhutan's renewable energy resources in keeping with national master plans, roadmaps and strategic plans. The Division conducts reconnaissance and pre-feasibility studies for hydropower projects; facilitates and prepares Detailed Project Reports (DPRs) and Feasibility Study Reports (FSRs) for utility-scale renewable energy projects; carries out techno-economic and socio-environmental vetting and appraisal of these reports; and manages bidding, tendering, and contract management for renewable energy projects.

To support these functions, the Civil Engineer will provide technical expertise in the investigation, planning, design review and implementation oversight of civil and structural components of hydropower and other utility-scale renewable energy projects, including associated civil-related infrastructure.

The Civil Engineer will contribute to the design, appraisal, construction supervision and management of civil engineering works under the ERDD's programs and projects and will ensure that all civil works are technically sound, safe, and compliant with national standards and guidelines supporting the energy security of the nation.

Duties and Responsibilities

The Civil Engineer shall carry out the following functions and responsibilities:

1. Investigation, Planning and Design

- 1.1 Conduct site visits, topographical, hydrological and geotechnical investigations for hydropower and other renewable energy projects, including reconnaissance and pre-feasibility studies.
- 1.2 Prepare and review civil and structural design drawings, layout plans, and detailed cost estimates for hydropower and utility-scale renewable energy projects.
- 1.3 Support the use of modern software and models for advanced engineering design of civil structures.
- 1.4 Develop technical specifications, bills of quantities (BoQs), and tender documents for civil works.

2. Project Appraisal and Technical Clearance

- 2.2 Carry out technical vetting and appraisal of the civil and structural components of DPRs and FSRs of hydropower and utility-scale renewable energy projects, including review of designs, quantities and cost estimates.

- 2.3 Review the environmental and social aspects of project reports from a civil engineering perspective, in keeping with standards and Guidelines.
- 2.4 Provide technical inputs to support the issuance of technical clearance or sanction of DPRs and FSRs.

3. Project Implementation and Supervision

- 3.1 Supervise civil construction works to ensure adherence to approved drawings, specifications, and quality standards.
- 3.2 Coordinate with electrical, mechanical, hydro-mechanical, geology and hydrology professionals to ensure integrated implementation.
- 3.3 Conduct quality control, safety checks, and progress monitoring at project sites.
- 3.4 Prepare site inspection reports, progress reports, and project completion documentation.

4. Technical and Administrative Support

- 4.1 Provide technical input for project proposals, feasibility studies, and concept notes.
- 4.2 Support the bidding, tendering and contract management of renewable energy projects, including the preparation and evaluation of tenders, EPC contracts, and consultancy proposals.
- 4.3 Review and endorse contractor submissions, test results, and as-built documentation.

5. Coordination and Capacity Building

- 5.1 Coordinate with other divisions of the Department, relevant agencies, local governments, and external stakeholders for project planning and implementation.
- 5.2 Participate in technical training, workshops, and knowledge-sharing activities related to renewable energy and infrastructure to enhance expertise in modern renewable energy technologies and systems.
- 5.3 Document lessons learned and contribute to the Division's knowledge repository and policy inputs.

6. Minimum Eligibility Criteria

The minimum eligibility criteria are as follows:

Education

- Bachelor's degree in civil engineering from a recognized Institute/University.

7. Mandatory Documents

The following documents must be submitted along with the application:

1. Curriculum vitae (CV)
2. Bachelor's degree certificate and transcripts (for the entire course)

3. Copy of a valid Citizenship Identity Card (both back and front)
4. A valid security clearance
5. Medical fitness certificate

8. Duration

For a period of one year from the appointment date.

9. Amendment

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

"End of Document – Terms of Reference"