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# Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 19-Dec-2025 | Report No: PIDIA01395

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## BASIC INFORMATION

### A. Basic Project Data

| Project Beneficiary(ies) | Region | Operation ID | Operation Name |
|---|---|---|---|
| Bhutan | SOUTH ASIA | P501271 | Dorjilung Hydroelectric Power Project |
| **Financing Instrument** | **Estimated Appraisal Date** | **Estimated Approval Date** | **Practice Area (Lead)** |
| Investment Project Financing (IPF) | 12-Dec-2025 | 20-Jan-2026 | Energy & Extractives |
| **Borrower(s)** | **Implementing Agency** | | |
| Bhutan | Dorjilung Hydro Power Limited | | |

Proposed Development Objective(s)

The Project Development Objective (PDO) is to increase hydropower capacity in Bhutan through private investments.

**Components**

Component A - Preparatory works
Component B - Dam, Powerhouse, and Electromechanical Works

## PROJECT FINANCING DATA (US$, Millions)

### Maximizing Finance for Development

| | |
|---|---|
| **Is this an MFD-Enabling Project (MFD-EP)?** | Yes |
| **Is this project Private Capital Enabling (PCE)?** | Yes |

### SUMMARY

| | |
|---|---|
| **Total Operation Cost** | **1,715.00** |
| **Total Financing** | **1,715.00** |
| **of which IBRD/IDA** | **515.00** |
| **Financing Gap** | **0.00** |

### DETAILS

**Private Sector Investors/Shareholders**



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| Equity | Amount | Debt | Amount |
|---|---|---|---|
| Government Contribution | 300.00 | IFI Debt | 515.00 |
| IDA | 300.00 | IBRD | 215.00 |
| Non-Government Contribution | 200.00 | IFC A Loan | 300.00 |
| Private sector Equity | 200.00 | Commercial Debt | 700.00 |
| | | Unguaranteed | 700.00 |
| **Total** | **500.00** | | **1,215.00** |

Environmental And Social Risk Classification

High

Decision

Other

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## B. Introduction and Context

Country Context

**1. Bhutan's hydropower resources are central to its economic development.** Bhutan is a small, landlocked country located in the Himalayas, characterized by steep mountains and deep river valleys and with a population of less than 800,000. Annual real Gross Domestic Product (GDP) growth was 5.9 percent on average from 2000 to 2024, driven by hydropower development and the strong performance of the services sector, including tourism. Hydropower is one of the main contributors to Bhutan's growth, estimated to contribute 12-15 percent of GDP. Electricity is the single largest export commodity in Bhutan. From 2018 to 2023, electricity revenues (US$310 million) accounted for about 40 percent of Bhutan's export revenues and 36 percent of its government revenues.

**2. The Dorjilung Hydroelectric Power Project (DHPP, the Project) is a national flagship investment.** With a planned capacity of 1,125 MW, DHPP is expected to generate over 4,500 GWh of clean electricity annually, significantly contributing to energy security in the region and enhancing Bhutan's export capacity. The importance of DHPP was underscored by His Majesty the King in the Royal Address to the Nation in December 2023, when it was highlighted as one of the highest national priorities. DHPP will complement Variable Renewable Energy (VRE) generation in Bhutan (solar) and fossil-fuel reliant countries like India (solar, wind), facilitating greater VRE penetration. DHPP will create

economic growth and job opportunities, strengthen institutions, and advance the vision of inclusive development, in alignment with Bhutan's Thirteenth Five Year Plan (2024-2029) and Bhutan's 21st Century Development Roadmap.

**3. DHPP is a transformational project that will deliver broad-based and equitable benefits.** Locally, it provides reliable electricity for households and firms, boosts development in Eastern Bhutan, and generates between 4,000 and 5,000 direct and indirect jobs per year (on average) across its construction and operation periods (2025-60). Nationally, DHPP will: (i) strengthen Bhutan's fiscal position through dividends, taxes, and support to its targeted and progressive electricity tariff subsidy policy, (ii) expand the hydropower sector's generation capacity and long-term income streams, (iii) enhance the energy sector's capacity through enhanced regulatory, technical, and operational expertise, and achievement of its energy security target. Regionally, DHPP will deliver firm clean power to India (reducing its reliance on coal and gas) and contribute to grid stability.

**4. DHPP reflects a major shift toward a more fiscally sustainable development model.** Bhutan has an ambitious hydropower expansion plan (targeting installed capacity increase from 3,490 MW in 2025 to 25,000 MW in 2040) and its implementation requires a new financing approach. Historically, large hydroelectric power plants in Bhutan have been developed through a public sector led financing model. Given the significant scale up of investment, ensuring Bhutan's macroeconomic soundness is crucial. DHPP is structured as a Public-Private Partnership (PPP) which will mobilize significant amounts of private investment and limits the use of Bhutan's public finances by using a limited-recourse project financing structure (see Annex 2). The financing will be arranged in accordance with internationally accepted project finance principles, with fair risk allocation between the Project's main stakeholders and DHPL (Dorjilung Hydro Power Limited – DHPL, a Special Purpose Vehicle (SPV) incorporated in December 8, 2025 with the sole objective to implement the Project).

**5. DHPP is an example of how the World Bank Group (WBG) can mobilize resources across its institutions and balance sheets to optimize a project's financing mix for greater impact.** The Project combines different types of capital through a 'One WBG' (IDA, IBRD, and IFC) approach, with each playing a complementary role based on its specific mandate and financial capabilities. The integrated WBG financing and appraisal process, including the application of the Environmental and Social Framework (ESF) as the governing standard for all WBG facilities for the Project, will ensure that DHPP minimizes transaction costs for the commercial financiers as well as for Bhutan.

## Sectoral and Institutional Context

**6. Bhutan holds vast untapped hydropower potential, critical for long-term development and for meeting seasonal shortfalls in energy supply.** Bhutan's National Energy Policy 2025 identifies 33,000 MW of technically and economically feasible hydropower potential across 90 sites. As of June 2025, only 11 percent of this potential has been developed, with 3,490 MW of installed capacity. Tapping into the remaining potential offers a significant opportunity to expand exports and support infrastructure and socioeconomic development, particularly in less-developed parts like Eastern Bhutan. Bhutan's current generation capacity cannot meet the country's rapidly increasing domestic electricity demand year-round. Bhutan's electricity peak demand has more than doubled from 420 MW in 2021 to 1,026 MW in 2024[1], necessitating higher electricity imports from India during winter. Based on the currently expected supply and demand of electricity, the electricity deficit during winter is expected to continue at least until 2034 (Power Market

[1] BPC Data Book 2024



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Analysis, 2024, DGPC). DHPP, and other power projects in the Royal Government of Bhutan (RGoB)'s plan, would help meet this domestic electricity shortfall during winter while generating revenue and economic benefits for Bhutan through exports during summers.

**7. Bhutan's energy sector operates under a coordinated institutional framework, with clear mandates and ownership structures across policy, regulation, generation, transmission, and investment.** Key entities include:

a. *Policy design and execution:* The Ministry of Energy and Natural Resources (MoENR) is the primary policymaking authority, overseeing the development and implementation of policies such as the National Energy Policy (June 2025) and providing oversight of hydropower planning and cross-border power trades. Under the MoENR, the Department of Energy (DoE) oversees Bhutan's energy strategy and provides tariff-setting and power allocation guidelines.

b. *Regulation:* The Electricity Regulatory Authority (ERA) serves as the sector regulator, overseeing licensing, tariff determination (see Box 1), safety standards, and performance monitoring to ensure transparency and efficiency.

c. *State-owned enterprises in charge of project development and operations*: The commercial operations of the sector are led by state-owned enterprises under Druk Holding and Investments (DHI), the investment arm of RGoB. DHI is fully owned by the government and is mandated to hold and manage the RGoB's investments in strategic sectors, including energy, finance, telecommunications, and transport. Druk Green Power Corporation Limited (DGPC) is the sole generation utility and is responsible for the development, operation, and maintenance of Bhutan's hydropower plants. Bhutan Power Corporation Limited (BPC) is responsible for electricity transmission, distribution, and rural electrification across the country. BPC owns, constructs, and maintains Bhutan's transmission infrastructure, including interconnections with India for power exports. Both are fully owned by DHI. Bhutan Power System Operator (BPSO) is the grid operator and manages power system operations.

***Box 1. Electricity tariffs in Bhutan***

**In Bhutan, electricity tariffs are determined by the regulator, ERA, using cost-based methodology.** The final consumer tariffs reflect the balance between full cost recovery, social equity, and long-term sustainability. Rural domestic consumers receive the first 100 kWh/month entirely for free, while highlanders receive 200 kWh/month for free. For other consumers, electricity is sold at a higher tariff with a demand charge. This targeted subsidy policy is financed through two mechanisms: (i) by extending direct fiscal support (budgetary cash subsidy) and/or (ii) by applying the "Free Power" disposition (formerly known as "Royalties") under section 6.9 of the National Energy Policy. Current policy mandates all the medium, large and mega hydropower projects to provide thirteen percent (13%) of net electricity generated as Free Power and at no cost to the RGoB.

**8. The WBG is supporting the RGoB to develop resilient hydropower projects while also driving economic diversification and long-term growth**. The recently approved Development Policy Financing operations with a Catastrophe Deferred Drawdown Option or CAT-DDO have helped to strengthen the technical and institutional capacity of the RGoB to manage the risk of climate change and natural disasters. The Accelerating Transport and Trade Connectivity in Eastern South Asia (ACCESS) Project (P181278) is supporting an Integrated Geohazard Assessment (IGA) and study of the impact of climate change on hydrological flows of river basins. In addition to this, DHPP project design is being prepared with the help of Dam Safety Panel of Experts (DSPoE) and international consultants to mitigate risks from these aspects, while taking lessons from past experiences. Under the FY2025-29 Country Partnership Framework,

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the WBG will continue supporting Bhutan's commitment to harnessing its natural resources that aligns with long-term economic resilience which benefits its citizens. This includes analytical studies and technical assistance for developing a robust system for hydropower revenue management in line with the Bhutan Country Economic Memorandum (2024).[2]

## C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

1. **The Project Development Objective (PDO) is to increase hydropower capacity in Bhutan through private investments**.

Key Results

2. **The proposed key results indicators are listed below**.

(i) Renewable energy capacity enabled (GW)
(ii) Total private capital mobilized (US$ million)
   a. Private capital mobilized (US$ million)
   b. Number of additional hydropower projects by IPPs in Bhutan (Number)
(iii) Net GHG emissions per year (tCO2eq/year)

## D. Project Description

3. **The Project is a peaking, run-of-river hydropower plant on the Kurichhu river in Mongar Dzongkhag (district) in the Eastern part of Bhutan**. DHPP has a planned design capacity of 1,125 MW, expected annual energy generation of over 4,500 GWh, and 12.6 million cubic meters (MCM) of live storage, enabling peaking operation of up to eight hours.

4. **Power will be transmitted through a 35 km long, 400-kilovolt (kV) transmission line from DHPP to the pooling station at Durungri.** This line is considered an Associated Facility to the Project and will be developed and built by BPC as its own asset. BPC has extensive experience developing and maintaining similar transmission lines over the last several decades. BPC is already in discussion with JICA to mobilize financing for this line. Alternatively, BPC may also finance this from its own resources, given the limited capital expenditure required. In addition, in November 2025, the Government of India extended an INR25 billion line of credit to BPC, which may support this financing. The WBG will provide support to BPC throughout the implementation period of the transmission line, which is about two years. From Durungri, the export-oriented power will flow to India via Bhutan's national transmission and Indian grid which has sufficient spare capacity.

5. **The total cost (including estimated financing costs) of DHPP is estimated at US$1.7 billion**. The financing will support the following Project components:

**Component A. Preparatory Works – *US$100 million*** *would be financed by a mix of public and private capital (including IDA financing)*:

[2] As outlined in the Bhutan *Country Economic Memorandum: Maximizing Bhutan's Potential for Economic Diversification and Structural Transformation* (World Bank, 2024).



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(a) Preparatory works (US$93 million): This comprises construction and strengthening of about 20 km of access roads and bridges, offices, on-site housing, preparation of civil contractor infrastructure which would support early start of Component B implementation. In addition, this component also includes the construction of two diversion tunnels for the Kurichhu River, to facilitate the concrete dam construction. In addition, infrastructure for construction power will be completed early on to reduce the Project's implementation period.

(b) CLD-tailored investments (US$7 million): This comprises the development and implementation of a Community and Local Development Plan (CLDP) in Mongar and Lhuentse districts. The investments may include activities to support skilling and tailored training, enterprise development support, and seed finance for nano- and micro-enterprises (without intervention of financial intermediaries), community-prioritized last-mile infrastructure and services prioritized by communities in these two districts, all with the aim to ensure that rural communities, including women and vulnerable groups, gain sustainable benefits from the Project.

**Component B. Dam, Powerhouse, and Electromechanical Works – *US$1,600 million*** *would be financed by a mix of public (IDA and IBRD financing), private capital from Tata Power, and commercial debt (including IFC A loan)*:

(a) Construction of Main Hydraulic Structures – Civil and Hydromechanical Works *(US$1,300 million)*: This comprises civil works for the construction of the headworks structures (a 139.5-m high and 241-m long Roller-Compacted Concrete (RCC) dam), the 15 km long headrace tunnel, and the underground powerhouse complex, and installation of hydromechanical equipment for the headworks, powerhouse, and tailrace. A portion of the budget dedicated to this component will also be allocated towards financing costs.

(b) Power Generation Facility – Electrical and Electromechanical Works *(US$300 million)*: This comprises the design, supply, and installation of underground powerhouse equipment (turbines, generators, and control equipment), underground switchyard equipment, a centralized control system, general electrical equipment, control equipment for the headworks, and electrical and mechanical auxiliary equipment and systems. The power plant will have six units of 187.5 MW each. and electrical and mechanical auxiliary equipment and systems. The power plant will have six units of 187.5 MW each.

The project management and monitoring activities cost is accounted for under respective Components.

**6. Private Capital Mobilization (PCM) and Private Capital Enabling (PCE).** WBG will mobilize approximately US$900 million in private capital for the Project comprising US$200 million equity from the private sponsor Tata Power and US$700 million from commercial lenders. Further, the Project has also been tagged as PCE as the successful completion of DHPP is expected to demonstrate the commercial viability of developing large scale hydro projects in Bhutan through the PPP model. It is expected that the Project documents developed with the support of WBG (PPAs, concession agreement) will be used as standard agreements for other comparable large-scale IPP projects. To reinforce the institutional capacity building on private capital enabling, the World Bank (with PPIAF support) have also supported the design and delivery of high-level and technical training to officials from stakeholders in the energy sector on key financial, legal, and regulatory aspects of PPP structuring. DHPP is also an MFD Enabling Project (MFD-EP) that appropriately leverages the role and balance sheets of three WBG institutions (IDA, IBRD, and IFC) to combine public and private capital and thereby catalyzing large scale private investment into hydropower generation. Component A is required to start the construction of the hydropower plant and is verified as MFD-EP as it uses public financing and private equity to support capital-intensive preparatory works. Component B is also verified as MFD-EP for supporting the development of additional renewable energy capacity through public and private financing to construct a 1,125 MW hydropower plant. Accordingly, DHPP has been tagged as MFD-EP.

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**7. DHPP is a PPP project, with DGPC partnering with a leading Indian firm and a longstanding partner – Tata Power.** Tata Power, India, has 14,700 MW of installed capacity in operation, and is part of Tata Group, India's largest conglomerate with a market capitalization of approximately US$436 billion. Tata Power has a long-standing relationship with DGPC, which started in 2008 with the joint development of the 126 MW Dagachhu hydropower plant and continued in 2024 with the 600 MW Khorlochhu Project. In November 2024, DGPC and Tata Power signed an MOU to develop 5 GW of renewable energy projects, including DHPP

**8. Structure of DHPP PPP.** DHPP is being developed by an SPV, Dorjilung Hydro Power Limited (DHPL), jointly owned by DGPC and Tata Power through a 60:40 shareholding. Tata Power would play a significant role in construction and management. This arrangement is in line with the National Energy Policy, which mandates "*Foreign and domestic investors/entities may participate in medium, large and mega hydropower projects through public-public or public private partnerships (PPP), with ownership capped at 49 percent. The RGoB authorized agency shall hold at least 51 percent ownership in any such PPP.*" A Shareholders' Agreement between DGPC and Tata Power was signed on November 21, 2025.

**9. The Project's US$1.7 billion cost will be financed by 70 percent debt and 30 percent equity.** DHPP follows a financing strategy developed pursuant to advice from a competitively selected international financial advisor to ensure the competitiveness of the Project tariff and to support financial close for the Project. The tariff was set at a level greater than the levelized cost of energy (LCOE) based on sponsors agreed plans, as calculated for the term of the concession period. The scale of the Project will unlock economies of scale and improve long-term fiscal returns for Bhutan. To maximize private capital mobilization while preserving financial viability, the WBG will extend concessional financing (through IDA and IBRD facilities) combined with other instruments.

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**10. The WBG financing leverages Bhutan's fiscal space and raises significant commercial capital (see Annex 2):**

(a) **IDA funding of US$300 million, consisting of an IDA grant of US$150 million and an IDA credit of US$150 million (from the IDA21 GROW Window):** IDA funding finances DGPC's equity contribution in DHPL.

(b) **An IBRD financing of US$ 215 million (a Loan to DHPL of US$200 million and a loan of US$ 15 million to Bhutan):**

i. *IBRD funding is structured as an enclave loan, based on DHPP's ability to earn revenues from exports of electricity to India.* The enclave loan of US$200 million would be provided to DHPL with an RGoB guarantee. It will form part of the overall debt for the Project, with balance debt mobilized by IFC, and share in the security structure designed for all Project lenders.

ii. *The enclave loan benefits from the IBRD Framework for Financial Incentives (FFI)*. The DHPL enclave loan will benefit from a FFI tenor incentive that extends the final maturity of the proposed IBRD enclave loan to up to 50 years, subject to the average maturity of the loan not exceeding 25 years. With FFI, the operation secures a more robust financing structure, enabling Bhutan to advance one of its flagship low-carbon, regional hydropower projects.

iii. *For Bhutan to avail of the IBRD enclave loan as an IDA country, additional credit enhancements and security arrangements in support of the IBRD loan are envisaged*. In line with IBRD enclave loan requirements, the World Bank has assessed the financial viability of DHPP and determined the sustainability of the Project for the RGoB and will secure appropriate credit enhancement.

(c) **An IFC-led debt financing package consists of (i) an IFC A Loan of up to US$300 million, as well as (ii) mobilization of commercial debt by IFC of up to US$700 million from parallel lenders.** IFC has been mandated as the lead arranger for the senior debt financing package. IFC's loan and the remainder of the project's commercial debt would be provided in INR to match the main currency of Project revenue.

**11. Proposed IFC Investment.** The proposed IFC investment consists of an IFC A Loan of up to US$300 million equivalent in INR to Dorjilung Hydro Power Limited.

| Legal Operational Policies | Triggered? |
|---|---|
| Projects on International Waterways OP 7.50 | Yes |
| Projects in Disputed Area OP 7.60 | No |

Summary of Screening of Environmental and Social Risks and Impacts

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**12. The Policy on Projects on International Waterways (OP 7.50) applies to the Project because Project activities involve use of the Kurichhu River, a tributary of the Brahmaputra River, which is shared among Bangladesh, Bhutan, China, and India.** The notifications to riparian states required under the World Bank's Operational Policy on Projects on International Waterways (OP 7.50) were issued to China in March 2025 and to Bangladesh and India in April 2025. China and India communicated their no-objection to the Project in April 2025 and November 2025, respectively. Bangladesh sought clarifications, which Bhutan provided, and sent teams for site visits. Since a response was not available, the Bank conducted an independent and concluded that the DHPP is not expected to cause appreciable harm to Bangladesh. Accordingly, the Project has been processed under paragraph 8 (c) of OP 7.50, and the necessary approval was obtained on December 19, 2025. Similar to IFC's reliance on the WB ESF, IFC will rely on the riparian notification process under OP 7.50.

**13. Environmental and social: E&S risks are considered high for the Project due to the inherent environmental, social, health and safety risks associated with large-scale hydropower development in an ecologically sensitive, vulnerable, and remote area, and the limited capacity of DHPL**. Sexual exploitation and abuse and sexual harassment (SEA/SH) risks is rated high considering large labor influx and remote communities. Building on the extensive preparatory work done over the past 3 years, the Project will be implemented under the World Bank's ESF. All ESF standards are applicable to the Project, except for ESS 7 and ESS 9. A comprehensive E&S assessment has been carried out by DHPL to assess, minimize, mitigate, and offset the potential direct, indirect and cumulative E&S risks and impacts of the Project. A draft ESIA, including an Environmental and Social Management Plan (ESMP), has been prepared, consulted upon, disclosed locally on August 14, 2025, and at WBG's websites on August 15, 2025. Based on the assessment of the Project's biodiversity risks and impacts, a draft Biodiversity Management Plan (BMP) has been prepared, which includes a preliminary biodiversity conservation strategy, aiming to achieve no net loss (NNL) of natural habitat and net gain (NG)



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for critical habitats to offset/compensate for residual impacts, as required by ESS 6. Proposed biodiversity compensation/offset measures, supported by an agreed implementation arrangement and budget, include enhancing forested habitats within the Biological Corridor (BC) 7, reafforestation and fish conservation, and providing capacity support to protected areas and conservation initiatives through the Department of Forests and Park Services (DoPFS). The draft BMP will be finalized based on supplemental studies and stakeholder consultations that are being carried out, which include (i) supplemental habitat and risk assessments for BC7, restricted-range and migratory fish species, (ii) residual impact assessment and development of biodiversity compensation/offset strategy; and (iii) refinement of the NNL and NG strategies based on feasibility studies. To address potential impacts on the aquatic habitat and associated ecology, an environmental flow (Eflow) will be instituted to maintain habitats within the dewatered river section downstream of the Project dam. This will be implemented alongside other measures included in the Environmental Flow Management Plan (EFMP) to address downstream community safety, sedimentation, water quality and cultural heritage concerns. In addition, a CIA addendum was developed to supplement the 2018 Kuri-Gongri Basin CIA (supported by the World Bank), considering the findings of the Project ESIA, current E&S conditions, as well as planned and ongoing developments in the basin including hydropower, road infrastructure, industrial infrastructure, renewable energy (solar) developments, hospitals, agriculture, sand and gravel extraction, and mining, as well as external factors such as climate change and natural hazards. The main recommendation to manage cumulative impacts is to develop a program focused on aquatic and fish species, to complement the Project's E&S mitigation plans and contribute to broader basin-level and/or state-wide strategies for aquatic habitat management. DHPL will update the ESIA, ESMP, and BMP (incorporating the EFMP), as well as the CIA Addendum, and disclose them as per the timelines defined in the ESCP. Additionally, DGPC will conduct a comprehensive update of the 2018 CIA and prepare an extensive conservation strategy for aquatic biodiversity. This strategy will assess the technical, financial, and political feasibility of all possible options to achieve no net loss (NNL) and net gain (NG). One such option includes the maintenance, conservation, protection, and enhancement of at least one river, river segment, or tributary within Bhutan as a free-flowing watercourse to offset potential impacts to migratory and resident aquatic biodiversity resulting from the Project**.**

**14. On social risk management, a Stakeholder Engagement Plan (SEP) and Grievance Redress Mechanism (GRM) have been prepared, consulted and disclosed.** The GRM was established in March 2025, through a transparent, culturally appropriate system, and operating on two levels (Gewog and Project). A Land Acquisition and Livelihood Restoration Plan (LALRP) was prepared, reviewed by the WBG and disclosed on 7 April 2025. Other detailed plans, including a Cultural Heritage Management Plan (CHMP), a Gender Action Plan, a Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) Action Plan, Labor Management Procedures (LMP), and a CLDP, are under preparation and will be finalized at early stage of the Project implementation, prior to the start of construction, as per the timeline defined in the ESCP. The CLDP will include an operational manual – specifying eligibility criteria (both the type of beneficiaries and the types of activities to be supported), exclusion list, screening mechanism, target-setting for vulnerable groups, implementation arrangements, fund flow, and monitoring and reporting requirements -- to guide the implementation.

**15. Dam safety risk will be further assessed and addressed in a comprehensive manner considering all potential failure modes and resulting downstream consequences.** DGPC had established an independent Engineering and Dam Safety Project Review Panel (EDSPRP or the Panel) for DPR review and will re-establish and maintain the Panel throughout the project implementation period for reviewing the detailed design and construction quality, as well as the first reservoir filling and commissioning, in a manner acceptable to the WBG. As per ESS 4, four dam safety plans (DSPs) will be prepared and implemented, i.e., the Construction Supervision and Quality Assurance Plan (CSQAP),

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Instrumentation Plan (IP), Operation and Maintenance Plan (O&MP), and Emergency Preparedness Plan (EPP). The framework versions of these plans have been prepared and reviewed by the WBG.

**16. Common World Bank-IFC E&S framework and Working Modalities between WB and IFC for E&S Risk Management.** Currently, IFC's Policy on Environmental and Social Sustainability (IFC's Sustainability Policy) requires IFC to undertake E&S Due Diligence (ESDD), monitoring and supervision for the projects it finances directly and does not contemplate scenarios in which it would rely on ESDD, monitoring and supervision conducted by the WB. On the other hand, the WB allows for reliance on IFC's Performance Standards (PS) and ESDD in its Operational Manual (OP 4.03). Similarly, MIGA's Policy on Environmental and Social Sustainability (MIGA's Sustainability Policy) explicitly provides for reliance on IFC's PS, ESDD and monitoring. In line with ongoing efforts to move towards a "One World Bank Group" E&S approach, IFC intends to expressly address the issue of reliance on the WB and MIGA in joint WBG projects in the ongoing review and update of IFC's Sustainability Policy. For the purposes of this Project, IFC and the World Bank have agreed to apply ESF to this Project. Accordingly, IFC and the World Bank have jointly undertaken ESDD and developed an ESRS and ESCP for the Project, based on ESF.

## E. Implementation

### Institutional and Implementation Arrangements

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**17. DHPP will be implemented by Dorjilung Hydropower Project Limited (a special purpose vehicle owned by DGPC and Tata Power).** In the interim, DGPC and Tata Power have established a Project Steering Committee to take key decisions and established a dedicated multi-disciplinary PIU to prepare DHPP. The DHPP PIU comprises experienced staff who have worked on other hydropower projects in Bhutan and collaborated with the Bank and other Development Finance Institutions (DFIs) such as the ADB and JICA. The PIU is working on DHPP preparatory activities in close coordination with the WBG. As the Project progresses, this PIU staff will become DHPL staff, complemented by personnel from Tata Power and additional hiring. To support implementation, the Bank is providing Hands-on Expanded Implementation Support (HEIS) for both E&S and procurement aspects upon request from DGPC, and dedicated experts are working closely with the DGPC PIU to develop local capacity, in coordination with relevant entities (such as the Department of Local Governance and Disaster Management). CLD investments will be implemented by DHPL in partnership with government and non-government agencies with specialized technical expertise in proposed key areas.

**18. Procurement. DHPP will be implemented by DHPL (a joint venture of DGPC and Tata Power).** Hence, and the procurement of goods, works, non-consulting or consulting services for DHPP will be carried out by DHPL, in accordance with the Bank's core procurement principles, with due attention to value for money, economy, and efficiency, and will be conducted in a transparent and competitive manner. Such procurement will be subject to the Bank's Anticorruption Guidelines. These conditions will be reflected in relevant project and financing agreements that will maintain the Bank's right to audit and sanction and will ensure that the Bank's fiduciary responsibilities are discharged. As described in the Project Procurement Strategy for Development (PPSD), DHPL will carry out procurement in accordance with its procedures that comply with the RGoB laws and regulations. These have been reviewed and found broadly acceptable by the Bank. DHPL will employ good international industry practices, including the bidding documents and contract templates. The Bank will discharge its fiduciary responsibilities through the Royal Audit Authority (RAA) of Bhutan. The Bank will strengthen RAA to carry out the procurement audit**.**



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**19. The procurement approach for DHPP balances the country's strategic context with fiduciary safeguards to preserve competition.** RGoB and DGPC undertook market sounding that identified Tata Power as the most suitable strategic partner, reflecting the nature of the Bhutan-India hydroelectric market and the longstanding DGPC-Tata engagement. Downstream, DHPL will ensure competition through competitive procurement of works, goods, and services, in compliance with RGoB regulations and good industry practice, with oversight by the RAA and WBG supervision to safeguard fiduciary standards. The selection of Tata Power is grounded in risk mitigation for cross-border power trading, where Tata Power's established trading capabilities, distribution presence, and resilience in honoring lender obligations reduce execution risk. Tata Power's clean energy portfolio exceeds 7 GW with further growth planned, and DHPL's contractual framework will fix trading margins and share upside with Bhutan, ensuring value-for-money while maintaining competitive procurement for downstream contracting.

**20. Implementation and Supervision**. DHPL will retain an Owner's Engineer to support implementation. Project supervision (including procurement) will be conducted by the WBG as the leading lender within the financing consortium. As per the standard practice for PPPs, the lenders will retain an independent Lenders' Technical Advisor (LTA) to ensure that monitoring of the Project's progress and technical performance, relevant to the loans, are performed independently of DHPP during project implementation.

**21. Environmental and Social (E&S) Management.** An E&S capacity assessment was conducted during Project preparation, resulting in a detailed E&S staffing and capacity building plan as outlined in the Environmental and Social Commitment Plan (ESCP). DHPL will establish and maintain a multi-layered E&S monitoring and supervision structure. This includes that DHPL will: (i) establish and maintain throughout the Project an environmental, social, health, and safety division (ESHSD), headed by a Manager, and consisting of environmental, social, occupational health and safety, and biodiversity units with adequate staff, supported by international and national consultants for ongoing capacity building; ; (ii) maintain a Panel of Experts (ESPoE) throughout the Project lifecycle to advise on critical E&S compliance issues and adaptive management; (iii) engage an Independent E&S Advisor (IESA), reporting to the WBG, to support monitoring of the Project E&S performance and ESCP implementation; (iv) establish and maintain a functional environmental and social management system; and (v) ensure sufficient E&S capacity is included in the Owner's Engineer and Contractors as a contract obligation. Additionally, DHPL is also committed to building sufficient E&S management capacity through professional certification and on-the-job training with support from experienced E&S consultants. The WB mobilized E&S HEIS during Project preparation, and such HEIS will continue during implementation.

## CONTACT POINT

### World Bank

Sunil Kumar Khosla
Lead Energy Specialist

### Borrower/Client/Recipient

**Bhutan**

### Implementing Agencies



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**Dorjilung Hydro Power Limited**

## FOR MORE INFORMATION CONTACT

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## APPROVAL

| | |
|---|---|
| Task Team Leader(s): | Sunil Kumar Khosla |

### Approved By

| | | |
|---|---|---|
| Practice Manager/Manager: | Rahul Kitchlu | 15-Dec-2025 |
| Country Director: | Jean Denis Pesme | 19-Dec-2025 |

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