

Terms of Reference

Financial Advisory Services to Druk Green Power Corporation for Dorjilung Hydropower Project

1. Introduction

This document describes the terms of reference for a firm or consortium of firms to provide financial advisory services to the Royal Government of Bhutan (RGoB) regarding its sovereign and commercial interests through an appointment by the Druk Green Power Corporation (DGPC). The role of the financial adviser is to undertake planning, due diligence, design of financing scenarios, market testing, and development of related deliverables and services that specify how the planned Dorjilung Hydropower Project in Bhutan (the Project) can achieve Bhutan's objectives and reach financial close.

2. Background

Bhutan is a small landlocked country nestled deep in the Himalayas between India and China. Bhutan is characterized by steep mountains and deep valleys, with a scattered, small population of 754,396. The favourable physical conditions marked by steep mountains and an abundance of water resources, make the projected average cost of hydropower lower than for other countries in the region. Bhutan's "Power System Master Plan 2040", last updated in 2019, estimates the overall techno-economically feasible hydropower potential at 32.6 Giga Watt (GW). In 2022 total installed capacity stood at 2,335 Mega Watt (MW) with 6 large hydropower plants installed.

Access to electricity is universal in Bhutan, however outages are relatively frequent and widespread. Total electricity demand in 2021 was 2.47 GWh, with industrial demand representing 73 percent of the total annual demand. Although the present installed capacity is 2,335 MW from large hydro alone, the corresponding firm power capacity is around 400 MW due to the seasonality of hydropower in Bhutan. This level does not meet the growing domestic peak load throughout the year. The load forecast shows that Bhutan will continue to face power shortages in lean seasons even with the commissioning of under-construction hydropower projects. For the first time, Bhutan had to import around 1,000 MWh from December 2022 to April 2023 from India.

The hydropower sector has been the main growth driver through direct export earnings and its spill-over effects on the construction sector and power intensive industries. The revenues from hydropower through taxes, dividends and royalties are expected to reach Nu 26 billion (or USD 312 million)¹, or 36 percent of the total RGoB revenues by the end of the 12th Five-Year-Plan (2018 - 2023). Most hydropower projects under operation or construction are under contracts with the Government of India (GoI), stipulating long-term power-purchase agreements (PPA) for the concession period (often 30 years).

The Department of Energy (DoE), under the Ministry of Energy and Natural Resources (MoENR), is the main governmental authority responsible for hydropower development in Bhutan. DGPC is a holding company that is responsible for harnessing and sustaining Bhutan's hydropower resources. It was established in January 2008 through the merger of the three hydropower corporations of Basochhu, Chhukha and Kurichhu. It is the largest wholly owned corporate entity (with almost 1,800 employees) of Druk Holding and Investments (DHI) where Ministry of Finance is the sole shareholder. DGPC currently has 2,335 MW total installed generation capacity with 1,020 MW Tala HPP as its largest plant. An addition of 2,938 MW is under construction and scheduled to be completed by 2029/2030.

¹ Based on the BTN:USD exchange rate of November 9, 2023.

3. The Dorjilung Hydropower Project (DHPP)

The DHPP, with an expected capacity of 1,125 MW, is poised to be one of Bhutan's largest hydropower facilities, harnessing the substantial yet mostly untapped hydropower resources of the nation. Situated in the eastern Lhuentse and Mongar districts, the project is anticipated to feature a 136.5 m-high gravity dam and a 15 km headrace tunnel, impounding a reservoir with approximately $44 \times 10^6 \text{ m}^3$. The DHPP is located on the Kurichhu river, a tributary of the Drangmechhu that flows into India. The run-of-river plant in Dorjilung, Mongar Dzongkhag, includes a transmission line of some 40 km to the Yangbari substation, with an estimated construction cost, excluding financial expenses, of US\$1.4 billion as of 2022. The project has small footprints from social and land acquisition aspects, compared to hydropower projects of similar magnitude.

The model developed by Bhutan with the Financial Advisor for the DHPP is expected to set a precedent for financing future hydropower endeavours in the country. By establishing such a precedent, Bhutan aims to establish a new standard for financing its remaining hydropower potential, fostering energy independence and sustainable economic growth.

4. World Bank Support

The World Bank is supporting Bhutan through an active US\$4.3 million technical assistance grant “the Sustainable Hydropower Development Project”, which is client executed by DGPC (Client). The grant supports upgrading of technical feasibility (Detailed Project Report) and ESIA studies of the 1,125 MW Dorjilung Hydropower Plant and its associated transmission line to bring them up to World Bank bankability. The grant also supports capacity building and became effective in May 2022.

As further support for Bhutan, in February 2023, the RGoB requested the World Bank to help convene the financing for the Dorjilung Hydropower Project. While the RGoB has stated that due to the strategic nature of the project a public financing is preferred, this should be balanced with the availability of public financing and strategic considerations relating to regional trade.

DHPP team with the World Bank support is undertaking a preliminary assessment on financial structuring options for the DHPP, including identifying suitable project modalities, financial and risk-mitigation instruments, and financing options (the Preliminary Assessment). This work aims to optimize Bhutan's fiscal benefits from the export hydropower component while also maximizing domestic supply cost-effectiveness. The outcomes are expected to contribute as inputs to and integrate with the Financial Advisor's work.

The Financial Advisor will be appointed by the DGPC (responsible for implementing the SHDP). The Financial Advisor's remuneration will be financed through funds allocated for the SHDP.

5. Objectives

The Financial Advisor's primary objective is to develop a financial plan consistent with Bhutan's strategic objectives and that can be implemented efficiently and cost-effectively to achieve Project financial closure. The financial plan is to be aimed at allowing Bhutan to maximize the country's fiscal benefits from export hydropower while also supplying cost-effective local electricity. To support a synergistic approach to project structuring and financing, the Financial Advisor will

collaborate closely with the main stakeholders of the Project, including DGPC, DHPS, MoENR, the Ministry of Finance and other relevant arms of the RGoB.

6. Scope of Work

The Financial Advisor will complete the following to meet the Deliverables requirements in Section 7 within the specified timeframes:

A) Undertake preparatory work and due diligence, including but not limited to:

- (i) Carry preparatory work leading up to a market confirmation of alternative investment structures and packages, notably building upon the World Bank's Preliminary Assessment, which includes to:
 - Identify all available and relevant studies regarding the development of the Project. The Financial Advisor will review such studies, including the existing feasibility reports to develop a broad technical understanding of the project;
 - Review applicable policies, laws, institutional arrangements and various technical materials, including issues relating to Bhutan and in the context of the electricity market of South Asian countries. The Financial Advisor will interview related stakeholders to identify their objectives and concerns;
 - Undertake discussions with staff of DGPC and others where applicable regarding proposed technical dimensions of the Project and associated transmission system to assess the overall cost structure of the proposed development;
 - Set out a proposed work program for the entire assignment - including proposal for consultations with (a) DGPC, DoE, MoENR, Ministry of Finance, and other RGoB agencies; (b) the World Bank and Bhutan's other development partners, (c) prospective off-taker(s); (d) potential key financiers and guarantors, and (e) other stakeholders;
- (ii) Carry out a sub-regional electricity trade analysis, focusing on renewable-generated electricity trade dynamics in the South Asian market, laying out the import and export price elasticities in the domestic Bhutanese market, and presenting some potential offtake arrangements in the context of this project.
- (iii) Undertake review of similar projects, devise investment structures, and recommend optimal approach for financial closure, including:
 - Reviewing other multi-country regional projects (private and public), and large-scale hydropower projects, to distil lessons for implementation and financing; and
 - Qualitatively defining alternative investment structures for public and public-private partnerships for the Project, taking onboard the outcomes of the above-mentioned reviews and discussions.
 - From these options, the Financial Advisor will recommend the structure that best satisfies the Objectives and outline the path to implement the recommended approach through to financial closure.

Task A) will conclude when Inception, Offtake Arrangements Options and Investment Structures and Financing Options reports have been delivered and accepted by the Client to its reasonable satisfaction.

B) Develop a financial model considering several financing scenarios, including but not limited to:

- (i) To quantitatively assist Task A and, to the greatest extent practicable, work in parallel with that task to conduct measurable financial viability analysis and propose financing scenarios for the Project, notably by:
- Developing and evaluating different contractual/corporate structures for the Project;
 - Constructing a financial model for the Project, based on the proposed financing plan of the project and an assessment of an appropriate tariff regime;
 - Identifying a suitable financing plan for the Project;
 - Building on the findings of Task A, analysing different off-take arrangements that could possibly be entered into and willingness to pay of such off-takers;
 - Assessing the level of royalties & income taxes that may accrue to Bhutan, as well as overall financial returns to various project participants from the Project;
 - Assessing the availability of public (multilateral and bilateral) and donor financing for the various components of the project; and the circumstances under which such support may be available.
 - Examining the availability of risk-mitigation tools for obtaining commercial funding, such as those provided by export credit agencies and multilateral and bilateral development partners;
 - Subject to the outcome of Task A and directions from DGPC, assessing the availability of commercial debt financing, and the circumstances under which such support may be available;
 - Subject to the outcome of Task A and directions from DGPC, evaluating commercial equity interest in the Project and identify equity finance providers, particularly in terms of their strategic value;
 - Proposing an implementation structure for the project on the basis of the above assessment, including the legal², policy, regulatory, fiscal and institutional framework necessary to facilitate efficient regional power supply of power from the Project to one or more neighbouring countries;
 - Analysing the interplay between financing arrangements, off-take arrangements, tariffs and allocation of power to different customers (including domestic vs. export markets);

² The RGoB intends to employ a legal advisor to complement the work of the Financial Advisor and to advise on agreements to which Bhutan will be a party, particularly in relation to power purchase and in leading the development of a concession agreement as a foundational project agreement.

and

- Assessing the detailed financial viability of the proposed project.
- (ii) Propose a work program to conduct market testing of the proposed financing structure with potential public and commercial financiers.
- (iii) Prepare a preliminary marketing memorandum and an indicative “roadshow” work program setting out which sponsors/lenders (including International Finance Institutions, Development Finance Institutions and Export Credit Agencies) it intends to consult with and an indicative schedule/timing for consultations. It is anticipated that a significant portion of the “road show” could be carried out through two distinct sessions, one focused on financiers in Asia, and South Asia specifically, and the second addressing American/ European based financiers. This phase will conclude with a briefing in Bhutan of DGPC and other RGoB representatives. In addition, the Financial Advisor will consult with civil society and NGO representatives, as agreed upon with the Client;

Task B would be completed when a Financial Analysis Report and a Market Test & Recommendations Report are completed. The Financial Advisor would combine the substance of these reports with the essence of the Task A reports to create a comprehensive overall project presentation for the Client.

C - Prepare a comprehensive Information Memorandum and RfP for financier proposals

- (i) Subject to directions from DGPC and to the extent necessary information is available, the Financial Advisor shall complete an Information Memorandum and financing Request for Proposals (RfP) to be put to identified prospective financiers;
- (ii) The Information Memorandum and RfP will detail: the project's objectives, economic, technical and financial feasibility; legal and regulatory settings; government support package and concession terms; ownership, governance, and management arrangements; key contracting parties and the terms of their contracts; detailed financial projections; and, qualitative and quantitative risk analysis that demonstrate the Project is fully market ready for recipients to provide formal finance proposals and, if selected, commence detailed due diligence and other aspects regarding implementation of the Project's financing;
- (iii) Upon receipt of those proposals, the Financial advisor shall assist the Client's review of proposals such that selection of financiers can be made.

Task C shall be completed when the Financial Advisor finalizes and distributes a detailed Information Memorandum to potential financiers, assists in reviewing received proposals, and aids in selecting suitable financiers for the project.

The above tasks will assist the Client's preparation toward a financial implementation phase regarding the following activities financiers can be expected to undertake: kick-off discussions; due diligence; legal reviews; negotiating detailed terms; approval procedures; lender technical review and insurance procedures; activities supporting completion and execution of credit agreements and related documentation; meeting drawdown conditions; completing the first drawdown; and therefore achieving financial closing for the Project.

7. Deliverables, Reporting Requirements and Anticipated Duration

Following the appointment of the Financial Advisor, the following deliverables, timelines, and scope of reports to be presented to the Client are expected:

An Inception Report: This report will identify and examine all important project studies, including feasibility reports to understand technical elements, before the end of the first month. Policies, legislation, and institutions related to Bhutan and the South Asian power market will be reviewed. This will involve discussions with DGPC staff and others to examine the planned development's cost structure, taking other stakeholder concerns into account. A work program will be proposed, including consultations with key stakeholders and agencies. For clarity, the Inception Report will include at least those elements specified in Task A(i) in Section 6.

An Offtake Arrangements Options Report: By the end of the second month, this report will analyse the sub-regional electricity trade, specifically focusing on the dynamics of renewable electricity trade in South Asia. It will consider import and export price elasticities in the Bhutanese market and explore potential offtake arrangements. Lessons from regional projects and large-scale hydropower developments will be distilled to aid implementation and financing. To be precise, the Offtake Arrangements Options Report will include at least the items mentioned in Section 6 Task A(ii).

An Investment Structures and Financing Options Report: due by the end of the third month, this report will consider alternative investment structures for public and commercialised projects will be defined and analysed qualitatively, recommending the most suitable path(s) to financial closure. Specifically, the Investment Structures and Financing Options Report must include at least the items listed in Section 6 Task A(iii).

A Financial Analysis Report: This report, due by the end of the third month, will use a financial model developed by the Financial Advisor with assistance from the Client to quantitatively assess the various financing scenarios indicated for further consideration in the Investment Structures and Financing Options Report. For each modality, the report will consider: economic and financial viability; contractual structures; an appropriate financing strategy; offtake dynamics; fiscal and financial returns; and the availability of public and commercial financing (as potentially augmented with risk-mitigation instruments). The report will build on the Investment Structures and Financing Options Report to recommend which offtake arrangement, modality, fiscal benefits package and financing plan is most quantitatively supported to meet Bhutan's Objectives. At least the components stated in Section 6 Task B(i) must be included in the Financial Analysis Report.

A Market Test & Recommendations Report: To be finalized by the fourth month, this report will bring together all previous reports and describe the results of market testing of the financing structure(s) emerging from the Financial Analysis Report with potential financiers. Building on the Financial Analysis Report, this report will recommend the most achievable financing plan to accomplish Bhutan's Objectives such that the Client is able to proceed with implementation should the recommendations be adopted. The Market Test & Recommendations Report must include at least the components listed in Section 6 Task B(ii) and (iii).

An Information Memorandum and RFP Documentation: Following adoption by the Client of the recommendations in the Market Test & Recommendations Report and subject to the Client's further directions, the Financial Advisor shall complete the deliverables articulated in Task C of Section 6.

Note: The Contractor shall ensure that all reports, including interim and final deliverables, are submitted to DGPC within the timelines specified in the contract. Any delays in submission should be communicated promptly to DGPC, along with the reasons for the delay

8. Skills Required on the Financial Advisor's Team

The Financial Advisor's team should include transaction and financial specialists with recent project experience in developing public and public-private financing approaches for large hydropower projects in developing countries, with a preference for projects exporting the bulk of their production. Experience in advising public sector clients on financing major infrastructure projects in the South Asia Region, and structuring, negotiating, and closing complex fully publicly financed and public-private partnerships of significant power and hydro-power operations is preferred. It would be preferable for some or all of the Financial Advisor's staff be available in Bhutan during key periods at least.

The degree of expertise each team member possesses in relation to the project's scope will play a significant role in the selection of consultants. Each of the team members is anticipated to exhibit strengths in the electricity sector, the hydropower subsector, electricity trade, and preferably South Asia region. Additionally, members of the Financial Advisor's team should have at least the following key professional staff and qualifications:

International Team Leader: The team leader should have appropriate academic qualifications and at least 15 years transaction related experience in public and limited recourse financing of major infrastructure/ power projects in developing countries in a leading position. Ideally, the consultant will have demonstrated experience in advising governments and direct experience from a public perspective of the financing of major hydropower projects. Exposure to the procedures and financing instruments used by the multilateral development banks and familiarity with utility financing would be an advantage.

International Hydropower Expert: The international hydropower expert should have at least 15 years of international experience in the area of hydropower project development with strong understanding of financing and risk allocation issues in the development of publicly financed and public-private partnerships for similar projects. They should have in-depth experience of Concession Agreements and PPAs for hydropower projects, and hydro specific procurement procedures.

International Electricity Trade Expert: The international power trade expert should have at least 15 years of international experience in the area of electricity trade, ideally in the South Asia region. Knowledge of the electricity trade protocols between India and Bhutan and experience working on the Indian and Bhutanese electricity market is a strong asset. They should also have in-depth experience of Concession Agreements and PPAs (together with other revenue models as appropriate) for hydropower projects, and hydro specific procurement procedures.

Financial Modeller: The financial modeller should have at least a master's degree in economics, finance or other relevant disciplines and have at least 4 years' experience in developing and reviewing project finance models, running scenarios and sensitivity analyses.

Macroeconomist: The macroeconomist should have at least a master's degree in macroeconomics, with a strong focus on public finances, sovereign debt, and fiscal analysis (including optimisation of fiscal benefits from export hydropower). The macroeconomist should

have at least 4 years' experience in reviewing and analysing national accounts, running partial or computable general equilibrium models and sensitivity analysis. An understanding of corporate finance and financial models is a strong asset.

9. Supervision

DGPC shall have the right to oversee, supervise, and direct the execution of the services outlined in the contract. This includes the authority to review and evaluate all reports, documents and deliverables produced by the Financial Advisor.

The Financial Advisor shall submit all interim and final reports to DGPC for review. DGPC shall be provided with a reasonable period to thoroughly review the submitted documents and to provide comments. The Financial Advisor shall agree to consider all comments provided by DGPC and make reasonable efforts to incorporate such comments. In case the comments are not incorporated, the Financial Advisor shall provide explanations thereof.

10. Conflicts of interest

The Financial Advisor must not have any actual or perceived conflicts of interest while performing services exclusively for the benefit of the Client. The Financial Advisor is required to offer professional, objective, and impartial advice, prioritizing the Client's interests above all else, including considerations for future work. This commitment extends to avoiding any conflicts arising from other assignments or the Financial Advisor's own corporate interests. The Financial Advisor shall not undertake any engagement that conflicts with their prior or current commitments to other clients, or that might compromise their ability to perform the assignment in the best interest of the Client. Specifically, the Financial Advisor shall not engage in activities or have interests in activities other than the consulting services provided under these terms of reference that conflict with the consulting services provided to the Client. Additionally, the Financial Advisor must not have, or appear to have, any business or familial relationships with personnel of the Client or related entities, which could influence or appear to influence their professional judgment or objectivity in performing the services. This requirement is in place to ensure that all advice and services rendered are conducted with the utmost integrity, transparency, and dedication to the Client's best interests.

11. Confidentiality

The selected Financial Advisor will be expected as part of their contract conditions to maintain any information received from the Client, RGoB, or third parties confidentially. The Financial Advisor will use received material strictly for the assignment described in these terms of reference. Public domain information is excluded from confidentiality obligations. The Financial Advisor will only provide need-to-know access to received materials within its organization and its sub-consultants associated with the assignment. The Financial Advisor, its sub-consultants, and their employees must not disclose any proprietary or confidential project information without the Client's written consent during the term or for a period to be agreed after the assignment is completed.