



## Project Administration Memorandum

---

Project Number: 37399

Loan Number: 2463/2364-BHU(SF)

February 2009

## **BHUTAN: GREEN POWER DEVELOPMENT (Dagachhu Hydropower)**

The project administration memorandum is an active document, progressively updated and revised as necessary, particularly following any changes in project or program costs, scope, or implementation arrangements. This document, however, may not reflect the latest project changes.

Asian Development Bank



## **CURRENCY EQUIVALENTS**

(as of 1 September 2008)

Currency Unit – ngultrum (Nu)

Nu1.00 = \$0.023

\$1.00 = Nu43.95

## **ABBREVIATIONS**

|      |   |   |
|------|---|---|
| ACEF | – | Asian Clean Energy Fund   |
| ADB  | – | Asian Development Bank  |
| ADF  | – | Asian Development Fund  |
| BEA  | – | Bhutan Electricity Authority  |
| BPC  | – | Bhutan Power Corporation  |
| CDTA | – | capacity development technical assistance   |
| DGPC | – | Druk Green Power Corporation  |
| DHI  | – | Druk Holding and Investments  |
| DHPC | – | Dagachhu Hydro Power Corporation  |
| DOE  | – | Department of Energy  |
| EIA  | – | environmental impact assessment   |
| GDP  | – | gross domestic product  |
| EIA  | – | environmental impact assessment   |
| EMP  | – | environmental management plan   |
| ICB  | – | international competitive bidding   |
| IEE  | – | initial environmental examination   |
| IMF  | – | International Monetary Fund   |
| NCB  | – | national competitive bidding  |
| NEC  | – | National Environment Commission   |
| NPPF | – | National Pension and Provident Fund   |
| OCR  | – | ordinary capital resources  |
| OeKB | – | Oesterreichische Kontrollbank Aktiengesellschaft<br>(Austrian export credit agency) |
| PPA  | – | power purchase agreement  |
| PPP  | – | public–private partnership  |
| RED  | – | Renewable Energy Division   |
| TA   | – | technical assistance  |
| THPA | – | Tala Hydroelectric Project Authority  |
| TPC  | – | Tata Power Company  |
| TPTC | – | Tata Power Trading Company  |

## **WEIGHTS AND MEASURES**

|     |   |                       |
|-----|---|-----------------------|
| GWh | – | gigawatt-hour         |
| kV  | – | kilovolt, 1,000 volts |
| kWh | – | kilowatt-hour         |
| MW  | – | megawatt              |

## **NOTES**

- (i) The fiscal year (FY) of the Government ends on 30 June. The fiscal year of its companies ends on 31 December. FY before a calendar year denotes the year in which the fiscal year ends.
- (ii) In this report, "\$" refers to US dollars.

## CONTENTS

|  | Page |
|--|------|
| LOAN PROCESSING HISTORY                                | ii   |
| DESIGN AND MONITORING FRAMEWORK                        | iii  |
| I. PROJECT DESCRIPTION                                 | 1    |
| II. COST ESTIMATES AND FINANCING PLAN                  | 1    |
| III. IMPLEMENTATION ARRANGEMENTS                       | 4    |
| IV. CONSULTING SERVICES                                | 4    |
| V. PROCUREMENT   | 4    |
| VI. DISBURSEMENT PROCEDURES                            | 5    |
| VII. PROJECT PERFORMANCE MANAGEMENT SYSTEM             | 7    |
| VIII. ACCOUNTING, AUDITING AND REPORTING REQUIREMENTS  | 7    |
| IX. SAFEGUARDS   | 7    |
| X. MAJOR LOAN COVENANTS                                | 8    |
| XI. KEY PERSONS INVOLVED IN THE PROJECT                | 9    |
| XII. GOVERNANCE AND ANTICORRUPTION                     | 10   |
| XIII. CONCURRENCE                                      | 11   |
| APPENDIXES   |      |
| 1. Detailed Cost Estimates and Financing Plan          |      |
| 2. Organizational Structure for Project Implementation |      |
| 3. Project Implementation and Readiness Schedule       |      |
| 4. Procurement Plan                                    |      |
| 5. Procurement Process (ICB)                           |      |
| 6. Suggested Format of Progress Report                 |      |
| 7. Calculation Method of Project Progress              |      |
| 8. Copy of Audit Letter                                |      |
| 9. Major Loan Covenants                                |      |

## LOAN PROCESSING HISTORY

|  | <b>Date(s)</b>        |
|--|-----------------------|
| a. Approval of Project Preparatory Technical Assistance  | 29 January 2007       |
| b. Fact-Finding  | 5-23 February 2008    |
| c. Management Review Meeting (MRM)   | 1 July 2008           |
| d. Appraisal Mission   | 10-23 July 2008       |
| e. Staff Review Committee (SRC)  | 4 September 2008      |
| f. Loan Negotiations   | 15-17 September 2008  |
| g. Board Circulation   | 08 October 2008       |
| h. President's Consideration and Approval  | 29 October 2008       |
| i. Loan Agreement Signing  | 13 February 2009      |
| j. Loan Effectiveness, including Conditions  | at latest 13 May 2009 |
| <p>(i) the ADF loan agreement has been duly executed and delivered on behalf of the Borrower, and shall have become fully legally valid, binding and enforceable upon the Borrower in accordance with its terms</p> <p>(ii) the Project Agreement, shall have been duly executed and delivered on behalf of DGPC and DHPC respectively and shall have become fully legally valid, binding and enforceable upon DGPC and DHPC, respectively, in accordance with its terms;</p> <p>(iii) the PPA Addendum, the PPA and the Shareholders Agreement, in form and substance satisfactory to ADB, shall have been duly executed and delivered on behalf of each party thereto, and shall have become fully legally valid, binding and enforceable upon each party thereto, in accordance with its terms; and</p> <p>(iv) The DGPC subsidiary loan agreement and the DHPC subsidiary loan agreement, in form and substance satisfactory to ADB, shall have been duly executed and delivered on behalf of DGPC and DHPC, respectively, and shall have become fully legally valid, binding and enforceable upon DGPC and DHPC, respectively in accordance with their terms;</p> <p>(v) The Project Agreement has been duly authorized or ratified by, and executed and delivered on behalf of each party thereto and are legally binding upon such parties in accordance with their terms;</p> <p>(vi) The PPA Addendum, the PPA, the SHA, DGPC Subsidiary Loan Agreement and DHPC Subsidiary Loan Agreement have been duly authorized or ratified by, and executed and delivered on behalf of each party thereto and are legally binding upon such parties in accordance with their terms.</p> |                       |
| k. Physical Completion Date  | 30 Jun 2013           |
| l. Loan Closing Date   | 31 Dec 2013           |

## DESIGN AND MONITORING FRAMEWORK

| Design Summary  | Performance Targets/Indicators  | Data Sources/ Reporting Mechanisms   | Assumptions and Risks  |
|---|---|--|--|
| <p><b>Impact</b><br/>Sustained inclusive economic growth through promoting cross-border power trade and electricity access.</p> | <p>Increase in the energy sector share of GDP from 25% to 40% (2017) with annual GDP growth increased at least 2%–3% from 2012 to 2017</p> <p>Increase in the energy sector share of the government revenue from 45% to 75% (2020), through clean energy export to India with an additional 10,000 MW electricity (2020)</p> <p>Increase in use of electric lighting (to replace kerosene lamps or firewood), from 40% to 100% (2013) of rural households<sup>1</sup></p>   | <p>Government statistical and census reports</p> <p>UNDP human development report</p> <p>Economic reports of Government, ADB, IMF, and World Bank</p>  | <p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Political stability</li> <li>• Government's high policy priority to rural development and hydropower export</li> <li>• Stable economic growth in South Asia</li> <li>• Bilateral and multilateral assistance for rural electrification expansion</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>• Exogenous economic and political shocks</li> </ul>   |
| <p><b>Outcome</b><br/>Expanded coverage of clean power development</p>  | <p>Increase in access to electricity by rural and urban households, achieving a cumulative national electrification ratio from 60% to 84% (2012)</p> <p>Increase in hydropower export revenue of the total national account from 40% to 45% (2013)</p> <p>Increase in investment size from the public and private sectors to hydropower development projects with minimum additional 1,314 MW (2014)</p> <p>Annual reduction of emission gas equivalent CO<sub>2</sub> by 250,000 tons by 2012 and by 500,000</p> | <p>Quarterly project progress reports and completion report</p> <p>Audit financial accounts and reports</p> <p>National statistics</p> <p>Government's fiscal statements</p> <p>Economic reports of Government, ADB, IMF, and World Bank</p> | <p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Government's commitment to promote development for hydropower and rural electrification</li> <li>• Continuation of the existing investment program and regulatory framework</li> <li>• Promotion of a new policy for private participation</li> <li>• Strong demand and supply shortage in the Indian power market</li> <li>• Government's sustainable public debt management</li> <li>• Bilateral assistance from the Government of India for hydropower developments</li> <li>• Bilateral assistance from JBIC for rural</li> </ul> |

<sup>1</sup> The Government has revised the target year to achieve 100% electrification from 2020 to 2013.

| Design Summary  | Performance Targets/Indicators   | Data Sources/ Reporting Mechanisms  | Assumptions and Risks   |
|---|--|---|---|
|   | <p>tons in a cross-country basis after 2012 on onward</p> <p>Continued overall power system loss below 10% and power sector's financial health including sufficient debt service coverage (minimum 1.2) and net profit generation</p>  |   | <p>electrification</p> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>• Off-taker's serious default</li> <li>• Prolonged significant hydrological shortage because of natural disaster and climate change</li> </ul>  |
| <p><b>Outputs</b></p> <p>1. Dagachhu Hydropower Development</p> <p>2. Rural Electrification</p> <p>3. Attached CDTA: Promotion of Clean Power Export Development</p> <ul style="list-style-type: none"> <li>- Capacity Building for hydropower</li> <li>- Financial structuring study for medium-size hydropower projects</li> <li>- Preparation of documents for carbon finance</li> </ul> | <p>Construction of a 114 MW run-of-river Dagachhu hydropower plant by 2012</p> <p>Construction of a 19 km transmission line to evacuate to the grid system by 2012</p> <p>Clean and renewable energy export of additional 250 GWh to India by 2012 and 500 GWh after 2012</p> <p>Provision of reliable power supply and service to 8,767 rural households and 119 off-grid public institutions (schools, health clinics, and other community facilities) in seven subprojects by 2012</p> <p>Full operation of the Druk Green Power Corporation, through the corporate accounting policy (2009) and integrated management information system (2011)</p> <p>Implementation of the Hydropower Development Policy, through two sample projects with public and/or private investments</p> | <p>ADB review missions' aide memoires</p> <p>Quarterly project progress reports</p> <p>Project completion report</p> <p>Withdrawal applications, and disbursement and contract award records</p> <p>Audit of financial accounts and reports</p> <p>Government's fiscal statement</p> <p>CDM monitoring report</p> | <p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Government's commitment to carry out the Green Power Development Project</li> <li>• Timely mobilization of counterpart funds, equities, and cofinancing</li> <li>• Firm commercial agreement (i.e., power purchase agreement, emission reduction underwriting contract)</li> <li>• High quality of construction contractors and equipment</li> <li>• Accessibility to the development sites</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>• Unexpected cost increases in commodities and raw materials beyond contingencies</li> <li>• Construction delays due to slow procurement, natural disaster, or design changes</li> <li>• Lack of sufficient and appropriate human resources and expertise</li> </ul> |

| Design Summary   | Performance Targets/Indicators  | Data Sources/ Reporting Mechanisms | Assumptions and Risks   |
|--|---|------------------------------------|---|
|  | Financial structuring proposals of Nikachhu (210 MW) and Khomachhu (326 MW) development before 2011 |                                    |   |
| <b>Activities with Milestones</b> <ol style="list-style-type: none"> <li><b>1. Dagachhu Hydropower Component</b> <ol style="list-style-type: none"> <li>1.1 Endorsement and disclosure of the resettlement plan to affected people by June 2008</li> <li>1.2 Advance procurement by July 2008</li> <li>1.3 Endorsement and disclosure of the summary initial environmental examination by September 2008</li> <li>1.4 Completion of physical land acquisition and compensation with revised rates by the fourth quarter 2008</li> <li>1.5 Contract award by the first quarter 2009</li> <li>1.6 Physical construction by 2012</li> <li>1.7 Operation by the second quarter 2012</li> </ol> </li> <li><b>2. Rural Electrification Component</b> <ol style="list-style-type: none"> <li>2.1 Advance procurement by the fourth quarter 2008</li> <li>2.2 Contract award by the first quarter 2009</li> <li>2.3 Physical construction by 2012</li> </ol> </li> <li><b>3. Promotion of Clean Power Export Development (CDTA)</b> <ol style="list-style-type: none"> <li>3.1 Consultant selection process by the fourth quarter 2008</li> <li>3.2 Contract award by the first quarter 2009</li> <li>3.3 Consultant fielding by the first quarter 2009</li> <li>3.4 Completion of CDTA by the fourth quarter of 2010</li> </ol> </li> </ol> |   |                                    | <b>Inputs</b> <p><b>Dagachhu Hydropower Financing (\$ million)</b></p> <ul style="list-style-type: none"> <li>• ADB 80.0</li> <li>• Bhutan Public Sector 45.0</li> <li>• Cofinancing 55.5</li> <li>• Private sector 21.0</li> </ul> <p><b>Rural Electrification Financing (\$ million)</b></p> <ul style="list-style-type: none"> <li>• ADB 25.28</li> <li>• Government 6.70</li> <li>• ACEF 1.00</li> </ul> <p><b>Attached CDTA (\$ '000)</b></p> <ul style="list-style-type: none"> <li>• ADB 1,488</li> <li>• Government 24</li> </ul> |

ACEF = Asian Clean Energy Fund, ADB = Asian Development Bank, CDM = Clean Development Mechanism, CDTA = capacity development technical assistance, GDP = gross domestic product, GWh = gigawatt-hour, IMF = International Monetary Fund, JBIC = Japan Bank for International Cooperation, MW = megawatt, TA = technical assistance, UNDP = United Nations Development Programme.



## I. PROJECT DESCRIPTION

### A. Project Area and Location

1. The hydropower development project to be undertaken under the Project is located on the left bank of the Dagachhu River in Dagana District.

### B. Impact and Outcome

2. The impact of the Project is to sustain the country's inclusive economic growth in promoting cross-border power trade and electricity access. As an outcome, the coverage of power distribution will be improved, and the export of power expanded through clean power development in a sustainable manner.

### C. Project Components

3. The Project will provide separate financing for each of two major physical investments: (i) regional clean power trade, and (ii) renewable energy access for the poor.

#### A. Loan Nos. 2463-BHU (\$51.0 million) and 2464-BHU(SF) (SDR18.832 million equivalent to \$29.0 million) (Dagachhu Hydropower)

(i) The Dagachhu hydropower development will be a 114 MW run-of-river, with minimal adverse environmental and social impacts. Generated power will be sold to India through the existing grid connected to India. As the first undertaking of a commercial nature in Bhutan, the Dagachhu plant will be developed through PPP to leverage private capital and maximize the impacts of the government investment.

#### B. Grant 0119 - \$25.28 million - Rural Electrification (RE4) (On Grid Component) and Grant 0141 - \$1.0 million - Rural Electrification (Off Grid Component)

(ii) The rural electrification system will be extended to provide clean and reliable power supply to rural areas mainly in seven districts of Bhutan. *(These components will be discussed in detail in a separate PAMs).*

## II. COST ESTIMATES AND FINANCING PLAN

### A. Detailed Cost Estimates and Financing Plan

4. The project investment cost is estimated at \$234.45 million including all relevant costs. The Dagachhu hydropower development is estimated at \$201.47 million, including debt of \$121.47 (60%) and equity of \$80.0 million (40%). ADB will finance \$80 million as anchor money to take a lead in the financial structuring.

5. The Kingdom of Bhutan will be the borrower of the ADB loans from ordinary capital resources (OCR) and hard-term Asian Development Fund (ADF). Of the \$80 million, ADB will provide \$51 million (OCR) to the debt portion of the Dagachhu development, and \$29 million (hard-term ADF) to the equity portion through lending to the Government. The entire equity will be funded through Bhutan's public sector including the Government, DGPC, and National Pension and Provident Fund (NPPF); and the Indian private company, TPC. The debt balance is expected to be cofinanced by the Austrian Export Credit Agency (ECA) (\$55.46 million) and NPPF (\$15 million).

6. Cost estimates are summarized in Table 1, while financing plan is in Table 2. The detailed cost estimates and financing plan are attached as **Appendix 1**.

**Table 1: Project Investment Plan**  
(\$ million)

| Item   | Amount        |
|--|---------------|
| <b>A. Base Costs<sup>a</sup></b>                                       |               |
| <b>1. Regional Clean Power Trade (Dagachhu Hydropower)</b>             | <b>161.92</b> |
| a. Civil works   | 80.49         |
| b. Electrical and mechanical equipment                                 | 59.22         |
| c. Infrastructure development: road and power lines                    | 13.95         |
| d. Administration, supervision, and preoperative costs                 | 8.26          |
| <b>2. Renewable Energy Access for the Poor (Rural Electrification)</b> | <b>28.45</b>  |
| <b>a. On-grid component</b>  | <b>27.46</b>  |
| i. Materials   | 20.18         |
| ii. Civil works (delivery, erection, and installation)                 | 5.25          |
| iii. Tools, equipment, administrative, and overhead expenses           | 2.03          |
| <b>b. Off-grid component</b>   | <b>0.99</b>   |
| i. Materials   | 0.71          |
| ii. Administrative and overhead expenses                               | 0.06          |
| iii. Consulting services   | 0.22          |
| <b>Subtotal of Base Cost (A)</b>                                       | <b>190.37</b> |
| <b>B. Contingencies<sup>b</sup></b>                                    | <b>24.85</b>  |
| <b>C. Financing Charges<sup>c</sup></b>                                | <b>19.23</b>  |
| <b>Total Project Cost (A+B+C)</b>                                      | <b>234.45</b> |

<sup>a</sup> Include local taxes and duties of \$3.31 million which will be financed by the Government and the implementing agencies.

<sup>b</sup> Include physical and price contingencies (12.6% of the base costs for the Dagachhu hydropower component and 15.9% for the rural electrification component).

<sup>c</sup> Include interest, commitment fees, and guarantee fees; and interest during construction, which is computed at the London interbank offered rate (LIBOR) plus an Asian Development Bank spread and a currency swap market rate. Source: Asian Development Bank, Bhutan Power Corporation, and Dagachhu Hydro Power Corporation estimates.

**Table 2: Financing Plan**  
(\$ million)

| Source   | Dagachhu<br>Hydropower | Rural<br>Electrification | Total         | %          |
|--|------------------------|--------------------------|---------------|------------|
| <b>Asian Development Bank</b>                          |                        |                          |               |            |
| OCR loan   | 51.00                  |                          | 51.00         |            |
| Hard-term ADF Loan                                     | 29.00                  |                          | 29.00         |            |
| ADF grant  |                        | 25.28                    | 25.28         |            |
| ACEF under CEFPP <sup>a</sup>                          |                        | 1.00                     | 1.00          |            |
| <b>Subtotal</b>  | <b>80.00</b>           | <b>26.28</b>             | <b>106.28</b> | 45         |
| <b>Austrian Export Credit Agency</b>                   | 55.46                  |                          | 55.46         | 24         |
| <b>Government and its company and fund<sup>b</sup></b> | 45.01                  | 6.70                     | 51.71         | 22         |
| <b>Tata Power Company, India</b>                       | 21.00                  |                          | 21.00         | 9          |
| <b>Total</b>   | <b>201.47</b>          | <b>32.98</b>             | <b>234.45</b> | <b>100</b> |

ACEF = Asian Clean Energy Fund, ADF = Asian Development Fund, CEFPP = Clean Energy Financing Partnership Facility, OCR = ordinary capital resources.

<sup>a</sup> ACEF was established by the Government of Japan, and is administered by ADB.

<sup>b</sup> Includes the Government of Bhutan, Druk Green Power Corporation, and National Pension and Provident Fund.

Source: Asian Development Bank, Bhutan Power Corporation, and Dagachhu Hydro Power Corporation estimates.

7. The ADB loan of \$51.0 million (Loan 2463-BHU) will form as the debt portion of the Dagachhu hydropower development with Dagachhu Hydro Power Corporation (DHPC) while the \$29 million (Loan 2464-BHU(SF)) to Druk Green Power Corporation (DGPC) will form as the equity portion through lending to the Government. The debt balance will be provided by Austrian Export Credit Agency, the Govt. and its company and fund, and Tata Power Company, India.

8. The loan of \$51.0 million from ADB's OCR will have a 30-year term including a grace period of 5 years, an interest rate determined in accordance with ADB's LIBOR-based lending facility, a commitment charge of 0.15% per annum, and such other terms and conditions set forth in the draft loan and project agreements.

9. The loan of \$29,000,000 will be provided under terms for hard-term loans from the ADF and will have a 32-year term including a grace period of 8 years, a fixed interest rate of 3.15% per annum, and such other terms and conditions set forth in the draft loan and project agreements.

## B. Allocation of Loan Proceeds

10. The DHPC and DGPC will apply the proceeds of the loans to the financing of expenditures on the investment project in accordance with the Loan Agreement. The initial loan proceeds were allocated in categories as shown in Table 3 and Table 4.

**Loan 2463-BHU**  
**Table 3: Allocation and Withdrawal of Loan Proceeds**

| CATEGORY |                              |                        | ADB FINANCING  |
|----------|------------------------------|------------------------|--|
| Number   | Item                         | Amount Allocated<br>\$ | Percentage and Basis for<br>Withdrawal from the Loan Account |
| 1        | Works                        | 45,500,000             | 100 percent of total cost*                                   |
| 2        | Interest & Commitment Charge | 5,500,000              | 100 percent of total cost*                                   |
|          | Total                        | 51,000,000             |  |

\*Excluding taxes and duties imposed within the territory of the Borrower.

**Loan 2464-BHU(SF)**  
**Table 4: Allocation and Withdrawal of Loan Proceeds**

| CATEGORY |                           |                         | ADB FINANCING  |
|----------|---------------------------|-------------------------|--|
| Number   | Item                      | Amount Allocated<br>SDR | Percentage and Basis for<br>Withdrawal from the Loan Account |
| 1        | DGPC's investment in DHPC | 18,832,000              | 100 percent of total cost*                                   |
|          | Total                     | 18,832,000              |  |

\*Excluding taxes and duties imposed within the territory of the Borrower.

11. **Relending Terms:** The Government will relend the ADB loans to DGPC and DHPC, pursuant to subsidiary loan agreements with terms and conditions acceptable to ADB. While the relending terms and conditions will be the same as the ADB loans, DGPC and DHPC will assume the foreign exchange risks.

### III. IMPLEMENTATION ARRANGEMENTS

#### A. Executing Agency and Implementing Agency

12. DGPC is the EA for the Dagachhu hydropower component, with overall responsibility for the execution and coordination of the Projects. DHPC will act as the implementing agency who will undertake day-to-day coordination, implementation and administration.

#### B. Project Management Unit

13. DHPC has established its project management unit (PMU) in Thimphu. The PMU is managed by a full-time Project Director and supported by competent full time personnel. The organization structure of the PMU is in **Appendix 2**.

#### C. Implementation Schedule

14. The hydropower component will be implemented over 5 years, inclusive of procurement and pre-construction activities and is expected to be completed by 31 Dec 2013. The development of the access roads, water and electricity facilities have started financed by the Government counter fund. The implementation and project readiness schedules are in **Appendix 3**.

### IV. CONSULTING SERVICES

15. To support DHPC (Dagachhu hydropower component) in preparing bidding documents and conducting bidding, bid evaluation, and negotiations for civil works and electromechanical contracts, the Austrian Government has provided with a technical assistance (TA) mainly for providing consulting services. The Austrian Government plans to provide subsequent TA to support construction and supervision works during construction.

### V. PROCUREMENT

16. The Dagachhu hydropower component has two contract packages through (a) the engineering, procurement, and construction (EPC) scheme to be financed by ADB and (b) for electromechanical works to be financed by the Austrian Export Credit Agency, OeKB. The civil works (EPC) will be procured by using international competitive bidding procedures in accordance with ADB's *Procurement Guidelines* (2007, as amended from time to time), and the electromechanical works will be procured in accordance with OeKB requirements.<sup>2</sup> It was agreed that in the event that the OeKB co-financing will not materialize, financing of the electromechanical works will be done by the Government. The procurement plan is in **Appendix 4**. ICB procurement process is shown in **Appendix 5**. The table below shows the ADB portion only.

---

<sup>2</sup> To coordinate these two procurement processes, the bidding documents for both packages were prepared based on ADB's Standard Bidding Documents for Plant and FIDIC Conditions of Contract for EPC/Turnkey Projects.

| Civil Works Contract No. | Description                       | Contract Amount (\$) | Contractor | Expected Start Date/ End Date | PCSS No. |
|--------------------------|-----------------------------------|----------------------|------------|-------------------------------|----------|
|                          | Civil Works – Dagachhu Hydropower | \$80.5 million       |            | 2009/2013                     |          |

17. Conditions for Award of Contract:

- (i) the Updated Resettlement Plan has been submitted to ADB for review /approval and disclosed to affected people;
- (ii) ADB has approved the EIA and EMP and Updated Resettlement Plan
- (iii) any land and rights to land, available free from encumbrances and has cleared the utilities, trees and any other obstruction from such land, required for commencement of construction activities;
- (iv) relevant requirements from the EMP have been included in any works contract;
- (v) minimum workplace occupational safety norms and core labor standards as identified by the fundamental International Labor Organization conventions are included in the works contract;
- (vi) requirements regarding the payment of wages to all workers including male and female workers in a timely manner and have been included in the civil works contract
- (vii) requirements regarding women's employment have been included in the civil works contract and provision for equal wages to be paid to women employees for work of equal value; and
- (viii) requirements regarding child labor in Project activities are included in the civil works contract.

18. **Advance Contracting.** To expedite the implementation of the hydropower component, at the request of the Government, DHPC and DGPC, ADB approved the advance procurement action. Bidding documents for the hydropower component have been approved by ADB and were issued in July 2008.

## VI. DISBURSEMENT PROCEDURES

19. The Loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2007, as amended from time to time). Since the disbursements under the Dagachhu hydropower component will mainly be for procurement of works, goods, and services, ADB's commitment letter, reimbursement, and direct payment procedures will be used.<sup>3</sup> The hard-term ADF loan will be disbursed through the Government to DGPC for its equity contribution.

20. Table below shows brief narrative description of each disbursement procedure to be used under the Project.

<sup>3</sup> The Dagachhu hydropower component will not require an imprest fund.

### Basic Requirements for Direct Payment, Reimbursement, Commitment Disbursement Procedures

| Responsible Person/Unit  | Activity   |
|--|--|
| <p><b>A. Direct Payment – The Borrower may request ADB to pay the supplier/contractor directly. Expenditure being claimed for ADB financing should be charged to Procurement Contract Summary Sheet (PCSS). Accordingly, before submitting the withdrawal application, please ensure that PCSS Number is obtained from ADB.</b></p>  |  |
| <p>DHPC</p> <p>ADB</p>   | <ul style="list-style-type: none"> <li>• Completes the withdrawal application, summary sheet and supporting documents and forwards them to ADB for processing.</li> <li>• Receives the completed forms, review and if in order, proceed with payment.</li> </ul>   |
| <p><b>B. Reimbursement – ADB pays the Borrower for eligible expenditures which have been incurred and paid for by the Project out of its budget allocation or its own resources. Expenditure being claimed for ADB financing should be charged to Procurement Contract Summary Sheet (PCSS). Accordingly, before submitting the withdrawal application, please ensure that PCSS Number is obtained from ADB.</b></p>                   |  |
| <p>DHPC</p> <p>ADB</p>   | <ul style="list-style-type: none"> <li>• Completes the withdrawal application, summary sheet and supporting documents and then forwards completed documents to ADB for processing.</li> <li>• Receives the completed forms, review and if in order, proceed with payment.</li> </ul>   |
| <p><b>C. Commitment – ADB, at the request of Borrower, provides an irrevocable undertaking to reimburse a commercial bank for payments to supplier against a letter of credit. Expenditure being claimed for ADB financing should be charged to Procurement Contract Summary Sheet (PCSS). Accordingly, before sending the application for issuance of commitment letter, please ensure that PCSS Number is obtained from ADB.</b></p> |  |
| <p>DHPC</p> <p>ADB</p>   | <ul style="list-style-type: none"> <li>• Completes application for issuance of commitment letter, summary sheet for issuance of commitment letter and supporting documents</li> <li>• <i>Supporting documents:</i> Together with application for commitment letter, the following should be submitted – two signed copies of the authenticated letter of credit and contract or confirmed purchase order (PO)</li> <li>• All these documents are to be submitted to ADB for processing.</li> <li>• Receives the completed forms, review and if in order proceed with the issuance of commitment letter.</li> </ul> |

**21. Conditions for Disbursement:**

- (a) **OCR Loan 2463-BHU:** Disbursement will be subject to the execution and delivery of cofinancing agreements for the OeKB Loan Agreement and NPPF Loan Agreement.
- (b) **ADF Loan 2464-BHU(SF):** Disbursement will be subject to the execution and delivery of shareholders agreement satisfactory to ADB.

22. The investment project is expected to be completed by 30 Jun 2013. No disbursement from the loan account will be requested or made later than 31 Dec 2013, or such other date as may from time to time be agreed between the Borrower and ADB.

## VII. PROJECT PERFORMANCE MANAGEMENT SYSTEM

23. The Government will ensure that DGPC develops a Project Performance Monitoring Evaluation System (PPMES) including baseline performance monitoring and systematic Project performance monitoring including benefits monitoring and evaluation in a form acceptable to ADB and other donors. DGPC shall carry out surveys (a) at the start of project implementation to establish baseline data, (b) at project mid-term, and (c) at the time of project completion and not later than six months after completion to evaluate the project benefits. Key indicators will be proposed by DGPC and acceptable to ADB.

### A. Inception Mission

24. A loan inception mission was fielded on 16-19 February 2009 to discuss this PAM, and to ensure that all administrative matters pertaining to the Project are properly in place and working relationships are established between concerned ADB staff, DHPC and DGPC staff. Details relating to report requirements, accounting system, compliance with loan covenants, disbursement procedures and withdrawal applications were clarified during the mission.

### B. Semiannual Review Missions

25. Semiannual review missions will be conducted to monitor overall progress of the Project, review expenditures, operation and maintenance and most importantly discuss problems and issues causing delays in project implementation. The first review mission will be conducted in the first half of 2009 and succeeding review missions will be fielded by ADB as and when required.

26. A mid-term review of the Project will be undertaken by ADB, the Government, DGPC and DHPC during the third year of implementation.

27. A project completion report will be submitted by DGPC and DHPC, within 6 months following completion of the DHPP project.

## VIII. ACCOUNTING, AUDITING AND REPORTING

28. **Accounting, Auditing and Reporting.** Quarterly progress reports will be prepared for review by ADB. The reports will include a description of physical progress, problems and a summary of financial accounts that will consist of loan expenditures during the period, year to date, and total to date. Progress on environmental and social compliance, overall progress and compliance with covenants under the loan and project agreements will also be reported in the progress reports. The progress reports will also include evaluation of issues or problems faced by DHPC/DGPC and recommended remedial actions. Suggested Format of Progress Report is attached as **Appendix 6**. Calculation Method of Project Progress was discussed and agreed during the loan inception mission in February 2009 and presented in **Appendix 7**. Within 6 months of the close of the financial year, DHPC/DGPC will submit audited project accounts and financial statements. An independent auditor acceptable to ADB will be hired by DHPC/DGPC to conduct the audit. A copy of the sample Audit Letter is attached as **Appendix 8**.

## IX. SAFEGUARDS

### A. Land Availability and Resettlement

29. The summary poverty reduction and social strategy and the summary resettlement plan are in Appendix 13 and Appendix 14 respectively. No indigenous peoples will be affected. No

resettlement of houses is required for either of the two project components. The land acquisition for the Dagachhu hydropower component will be mainly necessary due to the construction of access roads, not covered by ADB financing.

30. The Dagachhu hydropower component will have direct and indirect positive impacts on poverty. The local economy has already started developing as some of the civil works have been implemented. The development of access roads to the project site will improve accessibility of local communities to main roads. This is expected to stimulate the local economy, while improving quality of life. The Dagachhu development will indirectly support rural domestic customers, in particular under a lifeline tariff. The tariff policy requires the Government to subsidize electricity for lifeline consumers, using 12%–18% of the royalty revenue yielded from power export from the Dagachhu plant. Because alternative sources of energy, in particular kerosene, have become progressively more expensive, use of cheaper electricity will increase savings. Power exports will increase the Government's revenue base and enable the Government to make more resources available for socioeconomic development including health, education, and rural electrification.

## **B. Environmental**

31. ADB classifies the Project as environment category B. In accordance with ADB's *Environment Policy* (2002) and *Environmental Assessment Guidelines* (2003), a summary IEE (SIEE) was prepared, and reviewed by ADB, to provide a sound basis for project processing and implementation (Appendix 15 and Supplementary Appendix H). ADB's environmental due diligence covers all project-associated facilities including access roads and a transmission line from the Dagachhu plant.

32. In accordance with the national legislation, an environmental impact assessment was completed for the Dagachhu component in July 2006, and the National Environment Commission granted the environmental clearance in June 2007. The Dagachhu component uses a run-of-river design and does not encroach on any protected areas. Mitigation measures included in the EMP are designed to assure the avoidance of any damage to the local environment or communities, or disturbance of important habitats. No human settlement relocation is required for project implementation. Some impacts will occur due to construction of an access road, but the road does not cross any protected areas or disturb local habitats in the 51 hectares of broadleaf and conifer forest and scrub for the whole development area. This is a small amount in relation to the very large areas of similar habitat present nearby. Impacts on biodiversity will be minimal.<sup>4</sup>

## **X. MAJOR LOAN COVENANTS**

33. In addition to the standard assurances, the Government, DHPC, DGPC and ADB agreed to the additional assurances and the summary on status of compliance is shown in **Appendix 9**.

---

<sup>4</sup> As per the EMP, DHPC will continue to monitor the air, soil, water quality baseline, and aquatic life and migratory fish species to determine the minimum ecological water flow and an optimal design for the civil works.

## XI. KEY PERSONS INVOLVED IN THE PROJECT

### A. Executing Agency

#### The Government of Bhutan:

##### Ministry of Finance:

Mr. Nim Dorji, Director,  
Department of Public Accounts  
Tel. No.: (+975) 2-324-346  
Fax No.: (+975) 2-323-154 & 334-994

##### Department of Energy, Ministry of Economic Affairs:

Mr. Yeshe Wangdi, Director General,  
Dept. of Energy (DOE), Ministry of  
Economic Affairs  
E-mail: [ywangdi@druknet.bt](mailto:ywangdi@druknet.bt)  
Tel. No.: (+975) 2- 328-279

Mr. Karma P. Dorji, Project Manager,  
Planning & Coordination Div. DOE  
E-mail: [karmapdorji@gmail.com](mailto:karmapdorji@gmail.com)  
Tel. No.: (+975) 2-328-279  
Fax No.: (+975) 2-328-279

##### Project Executing Agency:

Mr. Chhewang Rinzin,  
Managing Director, Druk Green Power  
Corporation (DGPC)  
E-mail: [chhewang@druknet.bt](mailto:chhewang@druknet.bt)  
Tel. No.: (+975) 2-336-339  
Fax. No.: (+975) 2-336-342  
P.O. 1351, Thimphu

##### Project Implementation Agency:

Mr. Kuenga Namgay,  
Chief Executive Officer, Dagachhu  
Hydro Power Corporation (DHPC)  
E-mail: [dhpc@druknet.bt](mailto:dhpc@druknet.bt)  
[kunnamgay@druknet.bt](mailto:kunnamgay@druknet.bt)

Mr. Karma Gayley,  
Dy. General Manager, DHPC  
E-mail: [dhpc@druknet.bt](mailto:dhpc@druknet.bt)  
[krmgayley@yahoo.com](mailto:krmgayley@yahoo.com)

Mr. Nim Dorji  
Senior Manager, AFD, DHPC  
E-Mail: [nimadhpc@druknet.bt](mailto:nimadhpc@druknet.bt)  
Tel. No.: (+975) 2-336-095  
Fax. No.: (+975) 2-336-093  
Thimphu

**B. ADB Staff**

Energy Division (SAEN)  
South Asia Regional Department  
(SARD)

Mr. Thevakumar Kandiah  
Director, SAEN  
Tel. No.: (63-2) 632-6301  
E-mail: [tkandiah@adb.org](mailto:tkandiah@adb.org)

Mr. Kaoru Ogino  
Finance Specialist (Energy)  
Tel. No.: (63-2) 632-5479  
E-mail: [kogino@adb.org](mailto:kogino@adb.org)

Mr. Hiroki Kobayashi  
Senior Energy Specialist  
Tel, No.: (63-2) 632-5021  
E-mail: [hkobayashi@adb.org](mailto:hkobayashi@adb.org)

Ms. Marietta L. Marasigan  
Project Officer  
Tel. No.: (63-2) 632-6800  
E-mail: [mmarasigan@adb.org](mailto:mmarasigan@adb.org)

Controller's Department  
Loan Administration Division  
(CTLA1)

Mr. Francis Mathews  
Financial Control Specialist  
Tel. No.: (63-2) 632-  
E-mail: [fmathews@adb.org](mailto:fmathews@adb.org)

Address & Fax No. (SAEN):

Asian Development Bank  
6 ADB Ave., Mandaluyong City, 1550  
Metro Manila, Philippines  
Fax No. (632) 636-2338 (SAEN)

**XII. GOVERNANCE AND ANTICORRUPTION**

34. The Borrower shall comply with, and shall cause DGPC and DHPC to carry out the Project in accordance with ADB's Anti-Corruption Policy (1998, as amended to date) and all applicable laws, including the Companies Act of the Kingdom of Bhutan. The Borrower acknowledges ADB's right to investigate, directly or through its agents, any alleged corrupt, fraudulent, collusive or coercive practices relating to the Project and shall ensure that DGPC and DHPC cooperate fully with any such investigation and extend all necessary assistance as may be necessary for successful completion of the investigation.

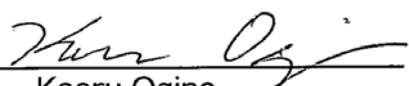
### XIII. CONCURRENCE

35. We have reviewed the Project Administration Memorandum and concur to implement the Investment Program according to the agreed requirements.



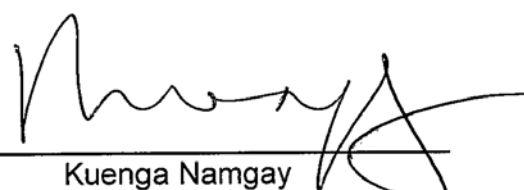
---

Chhewang Rinzin  
Managing Director  
Druk Green Power Corporation (DGPC)



---

Kaoru Ogino  
Energy Specialist/Mission Leader  
Project Officer for Loan 2463/2464-BHU  
Asian Development Bank



---

Kuenga Namgay  
Chief Executive Officer  
Dagachhu Hydro Power Corporation (DHPC)

Date: 19 February 2009

Table A5.2: Detailed Cost Estimate for Dagachhu Hydropower Development

(By Financier)  
(\$ million)

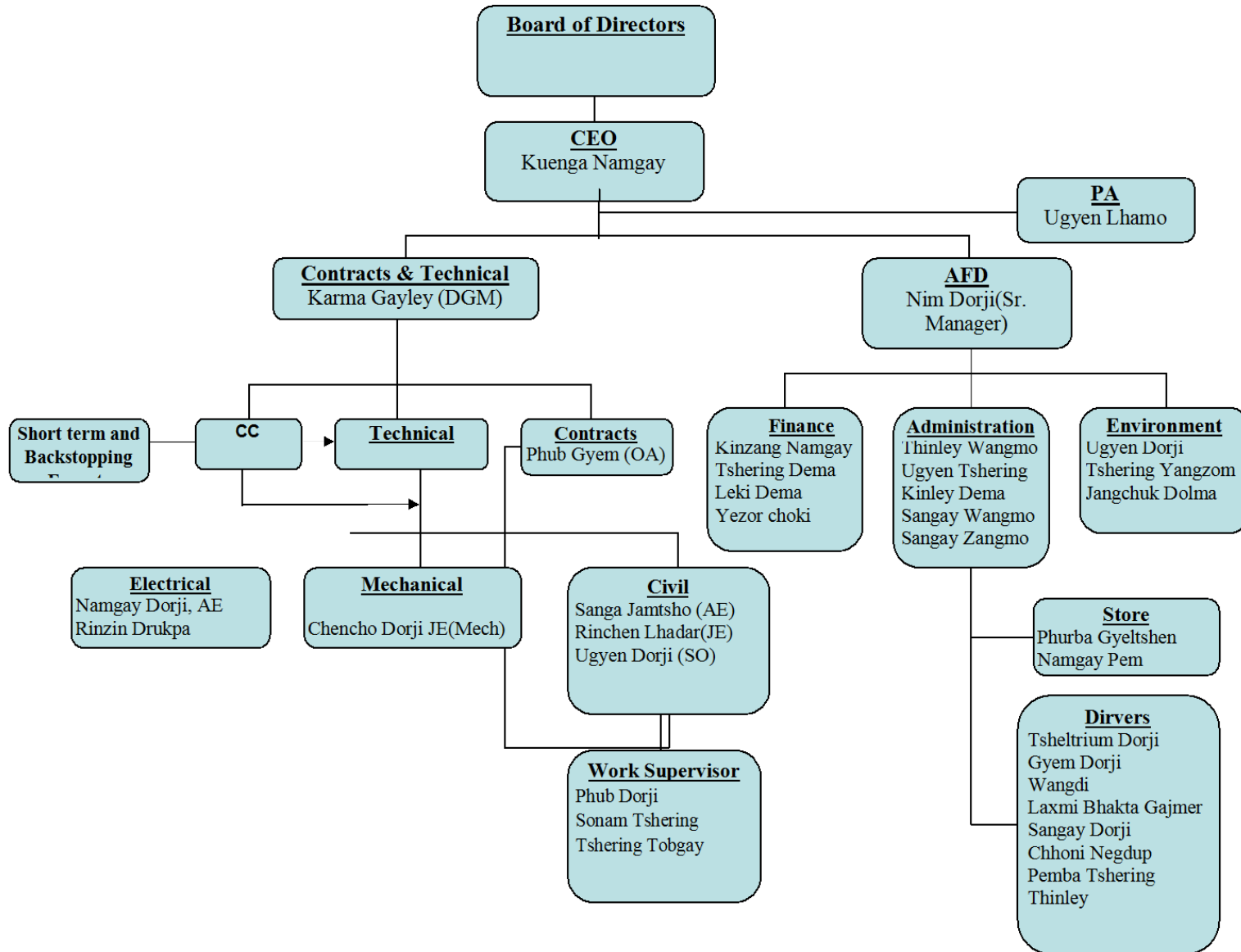
| Item  | Cost          | ADB          |           |              | OeKB               |              | Government/Others  |              |                    |
|---|---------------|--------------|-----------|--------------|--------------------|--------------|--------------------|--------------|--------------------|
|   |               | OCR          | Hard-Term | ADF          | % of Cost Category | Amount       | % of Cost Category | Amount       | % of Cost Category |
| <b>A. Investment Costs<sup>a</sup></b>                        |               |              |           |              |                    |              |                    |              |                    |
| 1. Civil Works  | 80.50         | 45.50        |           | 29.00        | 93                 | 0            | 0                  | 6.00         | 7                  |
| (a) Through DGPC equity                                       | 29.00         | 0.00         |           | 29.00        | 100                | 0            | 0                  | 0            | 0                  |
| (b) Through other sources                                     | 51.50         | 45.50        |           | 0            | 88                 | 0            | 0                  | 6.00         | 12                 |
| 2. Mechanical and Equipment                                   | 59.21         | 0            |           | 0            | 0                  | 50.33        | 85                 | 8.88         | 15                 |
| 3. Roads and power lines                                      | 13.95         | 0            |           | 0            | 0                  | 0            | 0                  | 13.95        | 100                |
| <b>Subtotal (A)</b>   | <b>153.66</b> | <b>45.50</b> |           | <b>29.00</b> | <b>48</b>          | <b>50.33</b> | <b>33</b>          | <b>28.83</b> | <b>19</b>          |
| <b>B. Recurrent Costs</b>                                     |               |              |           |              |                    |              |                    |              |                    |
| 1. Administration, Supervision, Pre-operative cost            | 5.85          | 0            |           | 0            | 0                  | 0            | 0                  | 5.85         | 100                |
| 2. EMP cost   | 2.41          | 0            |           | 0            | 0                  | 0            | 0                  | 2.41         | 100                |
| <b>Subtotal (B)</b>   | <b>8.26</b>   | <b>0</b>     |           | <b>0</b>     | <b>0</b>           | <b>0</b>     | <b>0</b>           | <b>8.26</b>  | <b>100</b>         |
| <b>Total Base Cost</b>  | <b>161.92</b> | <b>45.50</b> |           | <b>29.00</b> | <b>46</b>          | <b>50.33</b> | <b>31</b>          | <b>37.09</b> | <b>23</b>          |
| <b>C. Contingencies<sup>b</sup></b>                           | <b>20.32</b>  | <b>0.0</b>   |           | <b>0.0</b>   | <b>0</b>           | <b>0</b>     | <b>0</b>           | <b>20.32</b> | <b>100</b>         |
| <b>D. Financing Charges During Implementation<sup>c</sup></b> |               |              |           |              |                    |              |                    |              |                    |
| 1. Interests and Charges During Implementation                | 14.10         | 5.50         |           | 0.00         | 39                 | 0            | 0                  | 8.60         | 61                 |
| 2. Guarantee Premium  | 5.13          | 0            |           | 0            | 0                  | 5.13         | 100                | 0            | 0                  |
| <b>Subtotal (D)</b>   | <b>19.23</b>  | <b>5.50</b>  |           | <b>0.00</b>  | <b>29</b>          | <b>5.13</b>  | <b>27</b>          | <b>8.60</b>  | <b>45</b>          |
| <b>Total Project Costs (A+B+C+D)</b>                          | <b>201.47</b> | <b>51.00</b> |           | <b>29.00</b> | <b>40</b>          | <b>55.46</b> | <b>28</b>          | <b>66.01</b> | <b>33</b>          |
| <b>% Total Project Costs</b>                                  | <b>1.00</b>   |              |           |              | <b>40</b>          |              | <b>28</b>          |              | <b>33</b>          |

DGPC = Druk Green Power Corporation, EMP = environment management plan.

<sup>a</sup> Include local taxes and duties of \$3.07 millions which will be financed by the Government and the Implementing Agency.<sup>b</sup> Computed on the manufacturer's unit value index (World Bank, 2008) for foreign exchange component and ADB forecasted inflation rate for Bhutan (ADB, 2008).<sup>c</sup> Interest charges during construction is computed at LIBOR plus a ADB spread and a currency swap market rate, commitment fees, and guarantee fees is computed on OeKB (Austria)'s guidance and its formula.

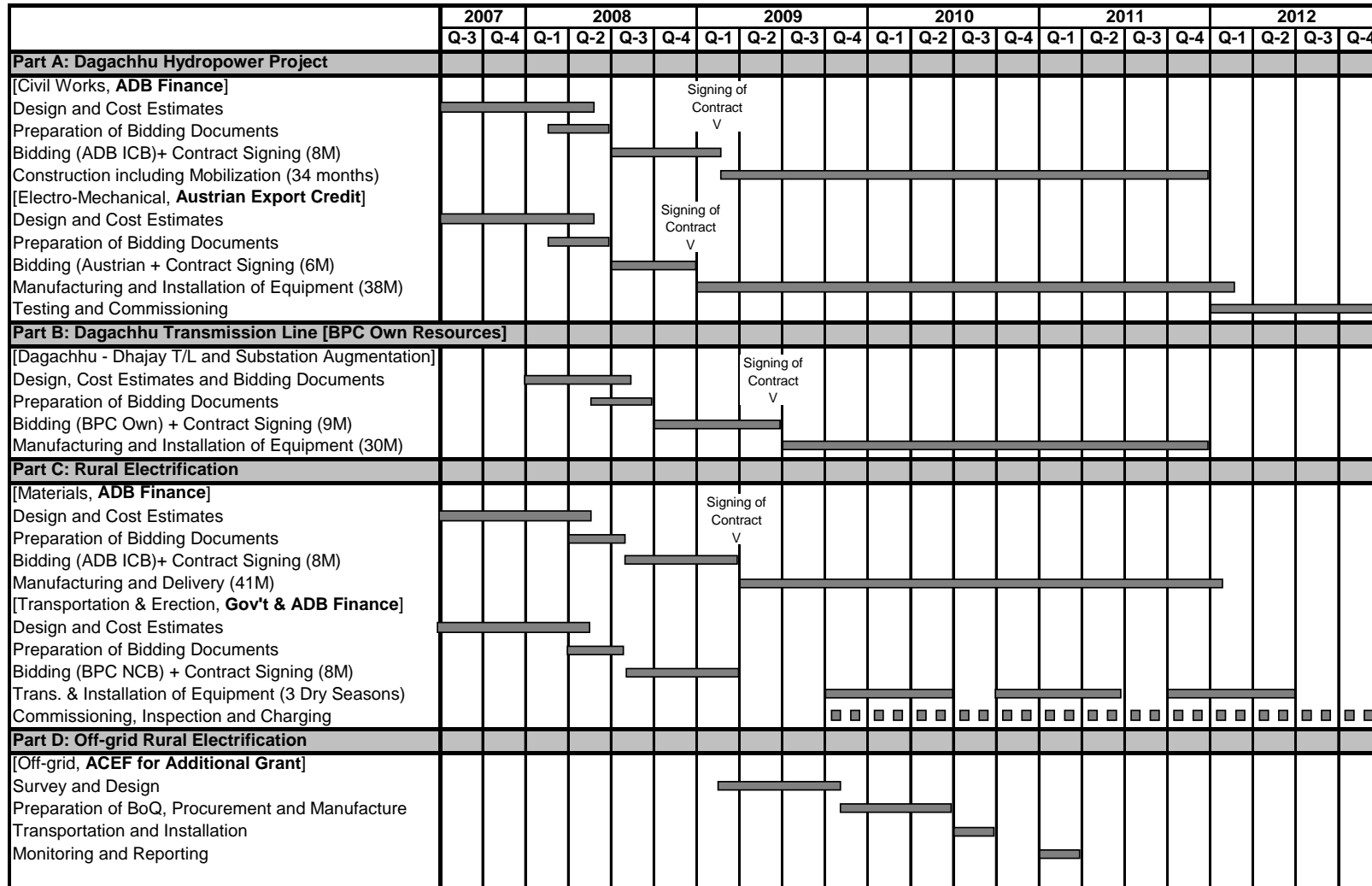
Sources: Dagachhu Hydropower Corporation and ADB

**DHPC ORGANOGRAM**



# PROJECT IMPLEMENTATION AND READINESS SCHEDULES

## Implementation Schedule



ADB = Asian Development Bank, ACEF = Asian Clean Energy Fund established by the Government of Japan and administered by the Clean Energy Financing Partnership Facility, BoQ = bill of quantities, BPC = Bhutan Power Corporation, ICB = international competitive bidding, NCB = national competitive bidding.  
Sources: Bhutan Power Corporation, Dagachhu Hydro Power Corporation and ADB staff estimate

### Project Readiness

| Readiness Criteria  | Target Date | Status     | Responsibility      |
|---|-------------|------------|---------------------|
| <b>A. Core:</b>   |             |            |                     |
| 1. Government Project Approval  |             | Done       | Government          |
| 2. Project Management   |             |            |                     |
| • Project management units established  |             | Done       | BPC, DHPC           |
| • PMU core staffing   |             | Done       | BPC, DHPC           |
| • PMU full staffing   |             | Done       | BPC, DHPC           |
| 3. Allocation of Counterpart Funding  |             |            |                     |
| • Rural electrification   |             | Done       | Government          |
| • Dagachhu hydropower   |             | Done       | Government,<br>DGPC |
| 4. Recruitment Plan of Consultants  |             |            |                     |
| i. Rural Electrification (off-grid component)   | Apr 2009    | Expected   | DOE                 |
| • Dagachhu hydropower   |             | Done       | DHPC                |
| (Austrian government committed TA for implementation support)   |             |            |                     |
| 5. Procurement  |             |            |                     |
| • Procurement plan prepared   |             | Done       | DHPC, BPC           |
| • Issuance of bidding documents   |             | Done       | DHPC, BPC           |
| • Award of contract(s)  | Mar 2009    | Expected   | DHPC, BPC           |
| Financial Management and Auditing   |             |            |                     |
| • BPC (Rural electrification)   |             | Done       | BPC                 |
| • DHPC (Dagachhu hydropower)  | Dec 2009    | Expected   | DHPC                |
| (Attached capacity development TA project will support financial management policy and systems.)  |             |            |                     |
| 6. Project Performance Management System and Project Administration Memorandum  | May 2009    | Expected   | BPC, DHPC, ADB      |
| <b>B. Project-Specific:</b>   |             |            |                     |
| 1. Land Acquisition   |             | Done       | DHPC                |
| 2. Resettlement Plan(s)   |             | Done       | DHPC                |
| 3. Environmental Clearances   |             |            |                     |
| • Rural electrification   |             | Done       | BPC                 |
| • Dagachhu hydropower   |             | Done       | DHPC                |
| 4. Cofinancing  |             |            |                     |
| • Austrian ECA (Dagachhu hydropower)  | May 2009    | In process | DGPC                |
| (The governments of Bhutan and Austria including its ECA have had three negotiations, and will finalize a financing agreement once the bidder is selected.) |             |            |                     |
| ▪ Asian Clean Energy Fund (Rural Electrification)   |             | Done       | ADB                 |
| (The funding is subject to approval from the Government of Japan.)  |             |            |                     |

ADB = Asian Development Bank, BPC = Bhutan Power Corporation, DGPC = Druk Green Power Corporation, DHPC = Dagachhu Hydro Power Corporation, ECA = Export Credit Agency, TA = technical assistance  
Source: Asian Development Bank assessment.

## PROCUREMENT PLAN

### Project Information

|  |   |
|--|---|
| Country  | Government of Bhutan  |
| Name of Borrower                                 | Government of Bhutan  |
| Project Name                                     | Green Power Development Project                                 |
| Loan or TA Reference                             | Loans 2463 & 2464-BHU (Dagachhu)<br>Grants 0119 & 0141-BHU (RE) |
| Date of Effectiveness                            | Target: March 2009  |
| Amount US\$ (total from all financiers)          | \$201,470,000 (Dagachhu) and \$32,980,000 (RE)                  |
| Of which Committed by ADB, \$                    | \$80,000,000 (Dagachhu) and \$26,280,000 (RE)                   |
| Executing Agency                                 | DGPC (Dagachhu), DOE (RE)                                       |
| Approval Date of Original Procurement Plan       | 1 July 2008   |
| Approval of Most Recent Procurement Plan         | 18 February 2009  |
| Publication for Local Advertisement <sup>a</sup> | 15 July 2008  |
| Period Covered by this Plan                      | 2008–2013   |

<sup>a</sup> General procurement notice, invitations to prequalify and to bid, calls for expressions of interest.

DGPC= Druk Green Power Corporation, DOE = Department of Energy, RE = Rural Electrification

### Procurement Thresholds, Goods and Related Services, Works, and Supply and Install

| Procurement Methods                                   | To be used above/below (\$) |
|---|-----------------------------|
| International competitive bidding (ICB) works         | At least \$1,000,000        |
| ICB goods   | At least \$500,000          |
| National competitive bidding (NCB) <sup>a</sup> works | Less than \$1,000,000       |
| NCB <sup>2</sup> goods royalty                        | Less than \$500,000         |
| Shopping works  | Less than \$100,000         |
| Shopping goods  | Less than \$100,000         |

<sup>a</sup> The summary requirements are given as the NCB Annex in Supplementary Appendix K.

### Procurement Thresholds, Consultant Services

| Procurement Methods                        | To be used above/below (\$) |
|--|-----------------------------|
| Quality- and cost-based selection (QCBS)   | At least \$200,000          |
| Consultants qualifications selection (CQS) | Less than \$200,000         |
| Least-cost selection (LCS)                 | Less than \$100,000         |

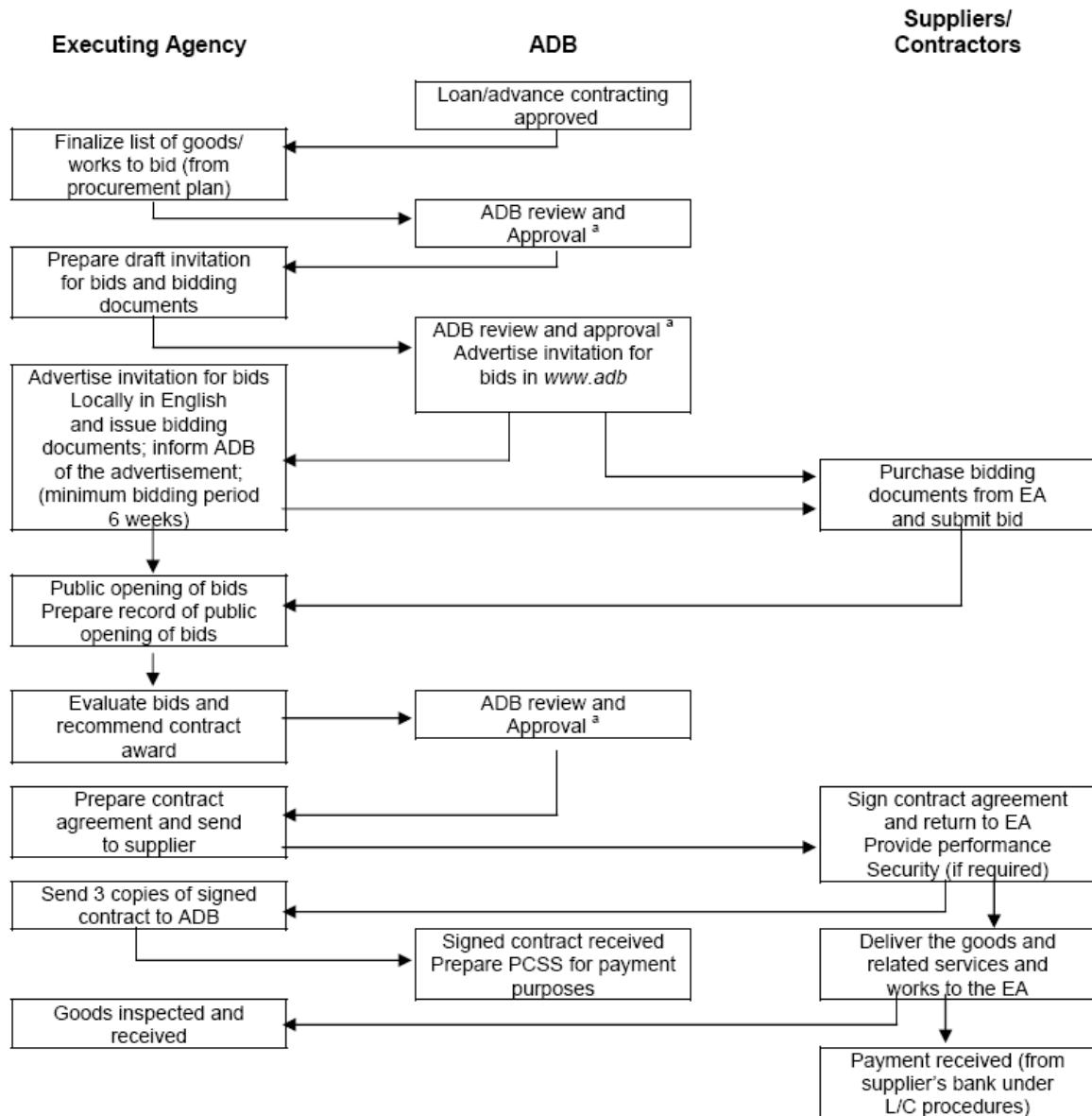
### List of Contract Packages in Excess of \$100,000, Goods, Works, and Consulting Services

| Ref No. and Contract Description      | Estimated Cost (\$ million) | Procurement Method | Expected Date of Advertisement | Prior Review | Financing Sources |
|---------------------------------------|-----------------------------|--------------------|--------------------------------|--------------|-------------------|
| <b>A. Dagachhu Hydropower (loans)</b> |                             |                    |                                |              |                   |
| 1. Civil works                        | 80.5                        | ICB (EPC)          | 3rd quarter '08                | Yes          | ADB               |
| 2. Electric and mechanical works      | 59.2                        | OeKB Own           | 3rd quarter '08                | No           | OeKB              |
| 3. Transmission line                  | 4.8                         | BPC Own            | 4th quarter '08                | No           | BPC               |
| 4. Augmentation of related substation | 6.0                         | BPC Own            | 4th quarter '08                | No           | BPC               |

| Ref No. and Contract Description                 | Estimated Cost (\$ million) | Procurement Method    | Expected Date of Advertisement | Prior Review | Financing Sources  |
|--|-----------------------------|-----------------------|--------------------------------|--------------|--------------------|
| <b>B. On-Grid Rural Electrification (grant)</b>  |                             |                       |                                |              |                    |
| 1. Poles   | 6.9                         | ICB (Goods)           | 3rd quarter '08                | Yes          | ADB                |
| 2. Pole fitting and accessories                  | 2.2                         | ICB (Goods)           | 3rd quarter '08                | Yes          | ADB                |
| 3. Conductors                                    | 2.0                         | ICB (Goods)           | 3rd quarter '08                | Yes          | ADB                |
| 4. Insulators                                    | 0.9                         | ICB (Goods)           | 3rd quarter '08                | Yes          | ADB                |
| 5. Cables  | 3.6                         | ICB (Goods)           | 3rd quarter '08                | Yes          | ADB                |
| 6. Earthing equipment                            | 0.3                         | ICB (Goods)           | 3rd quarter '08                | Yes          | ADB                |
| 7. Transformers                                  | 2.3                         | ICB (Goods)           | 3rd quarter '08                | Yes          | ADB                |
| 8. Conductor fittings and accessories            | 1.0                         | ICB (Goods)           | 3rd quarter '08                | Yes          | ADB                |
| 9. Switching equipment and accessories           | 0.6                         | ICB (Goods)           | 3rd quarter '08                | Yes          | ADB                |
| 10. Energy meters                                | 0.1                         | ICB (Goods)           | 3rd quarter '08                | Yes          | ADB                |
| 11. Tools and equipment                          | 0.3                         | ICB (Goods)           | 2nd quarter '09                | Yes          | ADB                |
| 12. 1–3 phase converter                          | 0.1                         | ICB (Goods)           | 1st quarter '10                | Yes          | ADB                |
| 13. Vehicle                                      | 0.1                         | NCB (Goods)           | 3rd quarter '09                | Yes          | ADB                |
| 14. Transportation and erection works            | 5.7                         | NCB (Works)           | 1st quarter '09                | Yes          | Government and ADB |
| <b>C. Off-Grid Rural Electrification (grant)</b> |                             |                       |                                |              |                    |
| 1 Capacitor, controller and LED                  | 0.6                         | ICB (Goods)           | 2nd Quarter '10                | Yes          | ACEF               |
| 2 Photovoltaic module and accessories            | 0.1                         | NCB (Goods)           | 2nd Quarter '10                | Yes          | ACEF               |
| 3 Transportation and installation                | 0.1                         | NCB (Works)           | 2nd Quarter '10                | Yes          | ACEF               |
| 4 Consulting services                            | 0.2                         | Individual (Bio-data) | 1st Quarter '09                | Yes          | ACEF               |

ACEF = Asian Clean Energy Fund established by the Government of Japan, BPC = Bhutan Power Corporation, EPC = engineering-procurement-construction, OeKB = Oesterreichische Kontrollbank Aktiengesellschaft (Austrian Export Credit Agency).

**Procurement under International Competitive Bidding**  
 (with no prequalification)



## **SUGGESTED FORMAT OF PROGRESS REPORT**

### **Pro Forma of the Executing Agency's Project Progress Report**

#### **A. Introduction and Basic Data**

Provide the following:

- ADB loan number, project title, borrower, executing agency(ies), implementing agency(ies);
- total estimated project cost and financing plan;
- status of project financing including availability of counterpart funds and cofinancing;
- dates of approval, signing, and effectiveness of ADB loan;
- original and revised (if applicable) ADB loan closing date and elapsed loan period based on original and revised (if applicable) loan closing dates; and
- date of last ADB review mission.

#### **B. Utilization of Funds (ADB Loan, Cofinancing, and Counterpart Funds)**

Provide the following:

- cumulative contract awards financed by the ADB loan, cofinancing, and counterpart funds (commitment of funds to date), and comparison with time-bound projections (targets);
- cumulative disbursements from the ADB loan, cofinancing, and counterpart funds (expenditure to date), and comparison with time-bound projections (targets); and
- reestimated costs to completion, need for reallocation within ADB loan categories, and whether an overall project cost overrun is likely.

#### **C. Project Purpose**

Provide the following:

- status of project scope/implementation arrangements compared with those in the report and recommendation of the President (RRP), and whether major changes have occurred or will need to be made;
- an assessment of the likelihood that the immediate development objectives (project purpose) will be met in part or in full, and whether remedial measures are required based on the current project scope and implementation arrangements;
- an assessment of changes to the key assumptions and risks that affect attainment of the development objectives; and
- other project developments, including monitoring and reporting on environmental and social requirements that might adversely affect the project's viability or accomplishment of immediate objectives.

#### **D. Implementation Progress**

Provide the following:

- assessment of project implementation arrangements such as establishment, staffing, and funding of the PMO ;

- information relating to other aspects of the EA's internal operations that may impact on the implementation arrangements or project progress;
- progress or achievements in implementation since the last progress report;
- assessment of the progress of each project component, such as,
  - recruitment of consultants and their performance;
  - procurement of goods and works (from preparation of detailed designs and bidding documents to contract awards); and
  - the performance of suppliers, manufacturers, and contractors for goods and works contracts;
- assessment of progress in implementing the overall project to date in comparison with the original implementation schedule—quantifiable and monitorable target, (include simple charts such as bar or milestone to illustrate progress, a chart showing actual versus planned expenditure, S-curve graph showing the relationship between physical and financial performance, and actual progress in comparison with the original schedules and budgets, the reference framework or guidelines in calculating the project progress including examples are shown in Appendix 13); and
- an assessment of the validity of key assumptions and risks in achieving the quantifiable implementation targets.

#### **E. Compliance with Covenants**

Provide the following:

- the borrower's compliance with policy loan covenants such as sector reform initiatives and EA reforms, and the reasons for any noncompliance or delay in compliance;
- the borrower's and EA's compliance with financial loan covenants including the EA's financial management, and the provision of audited project accounts or audited agency financial statements; and
- the borrower's and EA's compliance with project-specific loan covenants associated with implementation, environment, and social dimensions.

#### **F. Major Project Issues and Problems**

Summarize the major problems and issues affecting or likely to affect implementation progress, compliance with covenants, and achievement of immediate development objectives. Recommend actions to overcome these problems and issues (e.g., changes in scope, changes in implementation arrangements, and reallocation of loan proceeds).

## **FRAMEWORK AND GUIDELINES IN CALCULATING PROJECT PROGRESS**

### **A. Introduction**

1. To ensure that all implementation activities are reflected in measuring implementation progress against the project implementation schedule, the term "physical completion" in the PPR has been changed to "project progress."
2. Physical and pre-commencement activities are considered in calculating project implementation progress. These activities, which may include recruitment of consultants, capacity building, detailed design, preparation of bid and prequalification documents, etc., could constitute a significant proportion of overall implementation and therefore should be counted.
3. Each activity in the implementation schedule will be weighted according to its overall contribution (using time as a reference) to progress of project implementation. These weights will then be used to calculate the percentage of project progress along the entire time span of the project. This is to provide a holistic view of the pace of implementation.

### **B. Framework for Compiling Activity List and Assigning Weights**

4. As implementation activities (with corresponding weights) will vary in terms of project, sector, and country, SAEN will be responsible for incorporating them in the project administration memorandum. The actual project implementation progress of these activities should be reported regularly through the EA's quarterly project progress report. To ensure ADB-wide consistency, the following framework has been established. The application of this framework will be monitored through the PPR.

#### **1. Compilation of Activity List**

5. SAEN should identify and include major implementation activities in the implementation schedule. The implementation schedule should follow the critical path of the project's major activities in project implementation taking account of various country, sector, and project constraints.

#### **2. Assignment of Weights**

6. Corresponding weights for each activity should be assigned to ensure that "project progress" measures the percentage of achievement (non financial except when the project has credit components) for all events during the entire duration of the implementation schedule. To avoid disproportionate assignment of weights, to the extent possible these should be evenly distributed along the implementation schedule. When activities are concurrent, avoid "double counting."

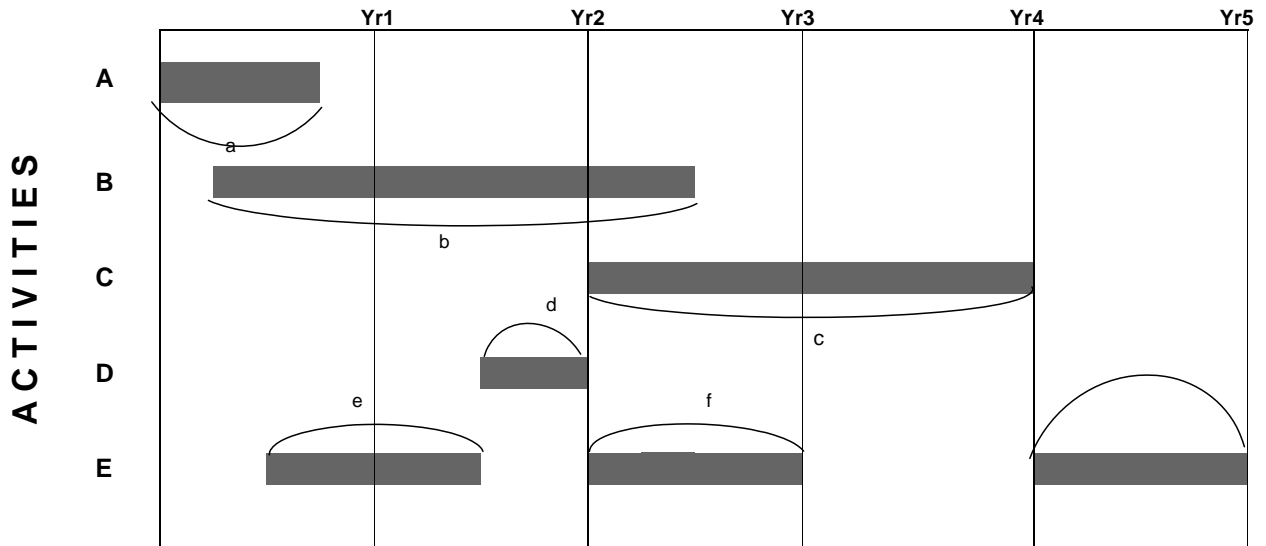
#### **3. Computation of Project Progress**

7. Once all activities are identified and corresponding weights assigned, project progress should be calculated using the following steps:

- (i) Determine the actual percentage progress (non-financial) of each activity.
- (ii) Multiply these percentages by the assigned weight of each activity to arrive at the weighted progress.
- (iii) Add up the resulting weighted progress of all activities to determine the project progress.

Below is an illustration of this calculation using a generic sample implementation schedule, and the Appendix 14 shows a specific schedule for this Project.

**Implementation Schedule with Activities and Weights**



1. Sum of all weights should equal 100 percent ( $a+b+c+d+e+f+g = 100\%$ )
2. When calculating the percentage of "project progress," all completed activities should be counted as accomplished, regardless of when they were scheduled to be completed. For example, when calculating the percentage of "project progress" after year 3, if activity D is completed in year 3 rather than in year 2, it should still be included in the computation.
3. Total weight of each activity is as follows: Activity A—a; Activity B—b; Activity C—c; Activity D—d; and Activity E—e + f + g
4. Project progress of a project is the summation of the actual percentage of progress for each activity multiplied by the total weight of each activity.

**L2463&2464-BHU - Green Power (Dagachhu): Percentage of Project Implementation Progress**

[As of 13 February 2009]

| No. | Description                                  | Weight (a)   |             | Progress (b) % |       | Weighted Progress (a)x(b)/100 |
|-----|--|--------------|-------------|----------------|-------|-------------------------------|
| I.  | Initial Activities [6]                       |              |             |                |       |                               |
|     | a- Establish and Staffing of PMO             | 3.0          |             | 50             |       | 1.50                          |
|     | b- Loan Negotiations /Signing /Effectiveness | 3.0          |             | 50             |       | 1.50                          |
| II  | Projects (\$ 80M) [94]                       | \$M          | Weight      |                |       |                               |
|     | Dagachhu HPP 114MW (Civil Works)             | 80.00        | 94.0        | 30             | 80.00 | 22.56                         |
|     |  |              |             | 70             | 0.00  |                               |
|     |  |              |             |                |       |                               |
|     |  |              |             |                |       |                               |
|     |  |              |             |                |       |                               |
|     |  |              |             |                |       |                               |
|     | <b>Total Weight and Progress</b>             | <b>80.00</b> | <b>94.0</b> |                |       | <b>25.56</b>                  |

## A. Establishing and Staffing of PMO [I-a]:

20%: Initial Set-up, ....., 100%: Full Staff

## B: Loan Negotiation/ Signing/Effectiveness [I-b]:

20%: Negotiation; 50%: Signing; Effectiveness: 100%

## C: Procurement of Civil Works [II]

30%: Bidding Process

(20%: Draft Bid Doc. Sub.; 40%: Bid Doc. Issu.; 50%: Bid Close; 65%: Tech, BER Sub.; 80%: Fin. BER Sub.;&amp;

70%: Contract Implementation (%: (Disbursement) / (Contract Amount)) 100%: Signed Contract Sub.)

## Asian Development Bank

DRAFT

22 February 2009

Mr. Nim Dorji  
Director  
Department of Public Accounts  
Ministry of Finance  
Thimphu, Bhutan

Dear Mr. Dorji:

**Subject: Loan 2463/2464-BHU: Green Power Development Project  
Grant 0119-BHU: Green Power Development Project (ADF)  
Grant 0141: Green Power Development Project (ACEF)  
- FINANCIAL REPORTING AND AUDITING REQUIREMENTS**

This letter is to ensure your timely compliance with the loan/grant covenants and the quality of financial information as required by ADB. ADB's *Handbook on the Financial Management and Analysis of Projects* (the Booklet) is enclosed to guide you.

ADB, by its Charter, is required to ensure that the proceeds of any loan/grant made, guaranteed, or participated in by ADB are used for the purposes for which the loan/grant was approved. ADB requires accurate and timely financial information from its borrowers to be assured that expenditure was for the purposes stated in the loan/grant agreements.

For these particular loan/grant, the requirements are stipulated Section 2.09, (a) and (b) of the Project Agreement dated 13 February 2009 between ADB and DGPC, DHPC, DOE and BPC. Limited copies of the Loan/Grant and Project Agreements are enclosed for onward transmission by your office to your EA and the auditor(s), together with a copy of this letter.

The following are the main requirements:

- ADB requires the EA to maintain separate project accounts and records exclusively for the Project to ensure that the loan/grant funds were used only for the objectives set out in the Loan/Grant or Project Agreements.
- The first set of project accounts to be submitted to ADB by covers the fiscal year ending *31 December 2009* for Druk Green Power Corporation, Limited (DGPC), Dagachhu Hydropower Corporation, Limited (DHPC) and Bhutan Power Corporation (BPC) and *30 June 2009* for Department of Energy (DOE). As stipulated in the Project/Grant Agreements, they are to be submitted up to six (6) months after the end of the fiscal year. For this loan/grant, the deadline is by ***30 June 2010*** for DGPC, DHPC and BPC and ***31 Dec 2010*** for DOE. A sample report, format with explanatory note, is attached as Annex A.
- The accounts and records for the project are to be consistently maintained by using sound accounting principles. Please stipulate that your external auditor is to express an opinion on whether the financial report has been prepared using international or local generally accepted accounting standards and whether they have been applied consistently.

- ADB prefers project accounts to use international accounting standards prescribed by the International Accounting Standards Committee. Please advise your external auditor to comment on the impact of any deviations, by the DGPC, DHPC, DOE and BPC, from international accounting standards.
- Please ensure that your external auditor specifies in the Auditor's Report the appropriate auditing standards they used, and direct them to expand the scope of the paragraph in the Auditor's Report by disclosing the key audit procedures followed. Your external auditor is also to state whether the same audit procedures were followed for all supplementary financial statements submitted.
- ADB wishes that auditors conform to the international auditing standards issued by the International Federation of Accountants. In cases where other auditing standards are used, request that your external auditor to indicate in the Auditor's Report the extent of any differences and their impact on the audit.
- The external auditor's opinion is also required on whether:
  - the proceeds of the ADB's loan/grants have been utilized only for the project as stated in the Loan/Grant and Project Agreements,
  - the financial information contains data specifically agreed upon between DGPC, DHPC, DOE and BPC and ADB to be included in the financial statements;
  - the financial information complies with relevant regulations and statutory requirements; and
  - compliance has been met with all the financial covenants contained in the Loan/Grant or Project Agreements.
- The Auditor's Report is to clearly state the reasons for any opinions that are qualified, adverse, or disclaimers.
- Actions on deficiencies disclosed by the external auditor in its report are to be resolved by DGPC, DHPC, DOE and BPC within a reasonable time. The external auditor is to comment in the subsequent Auditor's Report on the adequacy of the corrective measures taken by DGPC, DHPC, DOE and BPC.

Compliance with these ADB requirements will be monitored by review missions and during normal project supervision, and followed up regularly with all concerned, including the external auditor.

Yours sincerely,

Thevakumar Kandiah  
 Director, Energy Division  
 South Asia Department

Attachments  
 Loan/Grant and Project Agreements  
 Handbook on Financial Management and Analysis of Projects  
 Sample Report Format (Project Account)

## Loan 2463/2464-BHU: Green Power Development Project

### Major Loan Covenants

| Covenants   | Reference            | Responsible Agencies | Compliance Status   |
|---|----------------------|----------------------|---|
| DGPC shall be the Project Executing Agency and shall be responsible for the overall execution and supervision of the Project. DHPC will be the Implementing Agency and shall be responsible for day to day coordination, implementation and administration of the Project.  | (LA, Sch 5, para 1)  | DGPC/DHPC            | Complied  |
| Counterpart Funding: The Borrower and DGPC shall ensure and cause DHPC to ensure that (a) all local and foreign counterpart financing necessary for the Project shall be provided in time, (b) additional counterpart funding will be provided, if necessary and (c) counterpart financing for compensation and entitlements under the Resettlement Plan are fully provided to affected people prior to their displacement from housing and land. | (LA, Sch 5, para 4)  | DGPC/DHPC            | Being complied. Counterpart funding will be provided as and when necessary.   |
| Subsidiary Loan Agreements: The Borrower shall execute subsidiary loan agreement with DGPC and the DHPC Subsidiary Loan Agreement, with DHPC each upon terms and conditions acceptable to ADB. The Borrower shall obtain all necessary approvals to enter both such subsidiary loan agreements and make any subloan thereunder, and shall have executed and validly entered into such subsidiary loan agreements.                                 | (LA, Sch 5, para 5)  | DGPC/DHPC            | Will be complied. The draft subsidiary loan agreements have been prepared and expected to be submitted by March 2009. |
| Co-Financing: The Borrower and DHPC shall keep ADB informed of any proposed financing arrangements with other public, commercial, bilateral and multilateral financial institutions on the Project and provide ADB with opportunity to comment on any resulting proposals.  | (LA, Sch 5, para 6)  | DHPC                 | To be complied.   |
| Corporate Governance: The borrower shall cause DGPC to ensure to the satisfaction of ADB that: (a) DGPC retains the majority shareholding and majority representation on the Board of Directors of DHPC and a majority representation of DGPC is required for a quorum for any meeting of DHPC's Board of Directors; and (b) no material changes are made to the shareholders agreement without consultation with ADB.                            | (LA, Sch 5, para 7)  | DGPC/DHPC            | Being complied.   |
| Debt Service Ratio: DGPC and DHPC shall maintain a debt service ratio of a minimum of 1.2 from the date commercial operations commence.   | (LA, Sch 5, para 8)  | DGPC/DHPC            | Not yet due.  |
| Hedging: DGPC shall cause DHPC to and DHPC shall (a) deliver a proposal to ADB for currency hedging or an alternative proposal that serves the purpose of hedging the Loan; and (b) arrange currency hedging or an alternative proposal that serves the purpose of hedging the Loan in a form satisfactory to ADB.  | LA, Sch 5, para 9    | DGPC/DHPC            | Will be complied.   |
| Commercial Agreement: The Borrower, DGPC and DHPC shall consult ADB before making any changes to the Power Purchase Agreement, the Shareholders Agreement or to authorize new capital of DHPC.  | (LA, Sch 5, para 10) | DGPC/DHPC            | Being complied.   |
| No later than 28 Feb 2009, the TATA ER Underwriting Agreement shall have been executed and delivered and all conditions precedent to its effectiveness shall be fulfilled (except for the condition that it has achieved registration with CDM  | (LA, Sch 5, para 11) | DGPC/DHPC            | Not yet due. Preliminary discussions ongoing.   |

|  |                      |           |  |
|--|----------------------|-----------|--|
| executive board) and a legal opinion in a form acceptable to ADB stating the same shall have been provided.  |                      |           |  |
| The Borrower shall cause DGPC and DGPC shall cause DHPC to use its best effort to achieve validation and registration of the Project under the Clean Development Mechanism of the Kyoto Protocol as soon as possible.  | (LA, Sch 5, para 12) | DGPC/DHPC | Discussions ongoing.   |
| Licensing: Within 60 days of the effective date, the Borrower shall cause DHPC to and DHPC shall obtain all necessary construction licenses for the Project from the Bhutan Electricity Authority.   | (LA, Sch 5, para 13) | DHPC      | Already applied and currently application is under review.                     |
| The Borrower shall cause DGPC and DHPC to, and DGPC and DHPC shall apply a new corporate accounting policy, satisfactory to ADB, by no later than 31 Dec 2009.   | (LA, Sch 5, para 14) | DGPC/DHPC | Not yet due.   |
| The Borrower shall cause DGPC and DHPC to, and DHPC shall prepare the design for an integrated management information system, satisfactory to ADB by 31 Dec 2010, and install such integrated management system by 2011.   | (LA, Sch 5, para 15) | DGPC/DHPC | Not yet due.   |
| The Borrower, DGPC and DHPC shall each ensure that the Project is implemented in accordance with all environmental safeguard measures. DGPC and DHPC shall adequately supervise the construction works carried out by private contractors to ensure compliance with these environmental safeguard measures.  | (LA, Sch 5, para 16) | DGPC/DHPC | Being complied.  |
| The Borrower, DGPC and DHPC shall each ensure that the Project is undertaken and all facilities and associated equipment are assessed, operated and maintained in accordance with applicable laws of the Govt., ADB and internal environmental policies and safeguard operational rules of DGPC and DHPC.  | (LA, Sch 5, para 17) | DGPC/DHPC | Being complied   |
| The Borrower, DGPC and DHPC shall each ensure that the outcomes of the EIA, SIEE, and IEEs and mitigation measures identified in the EMP and relevant government agencies are complied with during design, construction and operation of the Project. The Borrower shall and cause DGPC and DHPC to monitor and audit the implementation of EMP and provide reports to ADB twice a year on the implementation of EMP.  | (LA, Sch 5, para 18) | DGPC/DHPC | Being complied.  |
| The Borrower, DGPC and DHPC shall each ensure that construction (a) does not take place within national parks, wild and planted forests and wildlife sanctuaries without prior environmental clearances obtained from all relevant government agencies and (b) avoids monuments of cultural or historical importance.  | (LA, Sch 5, para 19) | DGPC/DHPC | Complied. Environmental clearances obtained from relevant government agencies. |
| The Borrower shall cause DGPC and DHPC to (a) monitor the air, soil, and water quality baseline and the minimum ecological water flow for a minimum of 2 years, (b) update the EMP and revise and update EMP if any unanticipated environmental impacts arise.   | (LA, Sch 5, para 20) | DGPC/DHPC | Being complied.  |
| The Borrower, DGPC and DHPC shall ensure that (a) sufficient budgetary resources are made available to cover all such compensation and associated costs (b) all such compensation will be paid at the applicable rates for the implementation of the Project as per Resettlement Plan, (c) rates will be revised by 30 Sep 2008 (d) payments are made in timely manner (e) all people affected are compensated fairly. | (LA, Sch 5, para 22) | DGPC/DHPC | Complied. Reports already submitted to ADB in October 2008.                    |

|  |                              |           |  |
|--|------------------------------|-----------|--|
| The Borrower, thru DHPC shall conduct monthly monitoring of the implementation of RP. DHPC shall submit progress and completion reports on land acquisition and resettlement under the quarterly progress reports of the Project, and each of the Borrower, DGPC and DHPC shall ensure that the compensation completion report is submitted to ADB within 3 months of completion of implementation of the RP.  | (LA, Sch 5, para 23)         | DGPC/DHPC | Mostly complied except for the transfer of ownership.              |
| If any changes are made to the design of the Project that affect the land to be acquired or used for the Project, the RP should be updated based on detailed design, disclosed to affected persons, and submitted to ADB for review and approval prior to award of civil works contracts. The Borrower, DGPC and DHPC shall ensure that prior to land acquisition and any resettlement under the Project, the updated RP including its update based on consensus of affected peoples is disclosed with all necessary information made available to persons affected by the Project and confirm that it is uploaded onto ADB's website. | (LA, Sch 5, para 24)         | DGPC/DHPC | Will be complied.  |
| DGPC/DHPC shall ensure that construction contracts contain binding requirements for construction contractors to (a) fully reinstate pathways, other local infrastructures, and agricultural land to at least their pre-project condition upon the completion of construction; and (b) adequately record the condition of roads, agricultural land and other infrastructure prior to transport of material and construction commencement.   | (LA, Sch 5, para 25)         | DGPC/DHPC | Complied. Included in the conditions of the contractor's contract. |
| Labor and Health: The Borrower through DGPC and DHPC shall ensure that all civil works contracts require contractors to incorporate minimum workplace, provide timely payment of wages to workers, provide women's employment and pay equal wages to women, do not employ child labor, etc.  | (LA, Sch 5, para 26)         | DGPC/DHPC | Complied. Included in the conditions of the contractor's contract. |
| The Borrower through DGPC and DHPC shall cause the contractors to disseminate information on risks of socially and sexually transmitted disease including HIV/AIDS and malaria to their employees.   | (LA, Sch 5, para 27)         | DGPC/DHPC | Being complied   |
| Governance and Anti-Corruption: The Borrower shall comply with and shall cause DGPC and DHPC, to carry out the Project in accordance with ADB's Anti-Corruption Policy (1998, as amended to date) and all applicable law.  | (LA, Sch 5, para 28)         | DGPC/DHPC | Being complied   |
| Disbursement and Performance Audits: The Borrower shall ensure that DHPC reviews invoices from firms engaged in implementing the Project, and makes payments within 30 days of receipt or inform the contractors of any shortfalls in its ability to make payments of the invoices.<br><br>The Borrower shall allow and facilitate ADB's representatives to conduct spot and random checks on (i) flow of funds and their use for the Project (ii) work-in-progress and (iii) Project implementation.  | (LA, Sch 5, paras 29 and 30) | DHPC/ADB  | Being complied.  |
| Project Performance Monitoring and Evaluation System: During Project implementation, the Borrower shall cause DHPC, thru DGPC, to develop a PMMES including baseline monitoring and systematic Project performance monitoring, including benefits monitoring and evaluation acceptable to ADB and the other donors.  | (LA, Sch 5, para 31)         | DGPC/DHPC | Will be complied   |
| Annual Budget Plan: By 31 Dec of each year of Project implementation, the Borrower shall cause DGPC to, and DGPC shall cause DHPC to, and DHPC shall, provide ADB with an  | (LA, Sch 5, para 32)         | DGPC/DHPC | Being complied   |

|  |                      |                   |                  |
|--|----------------------|-------------------|------------------|
| annual budget plan for the following fiscal year.  |                      |                   |                  |
| Semiannual Reviews: The Borrower and ADB shall carry out semiannual reviews of the Project during Project implementation.  | (LA, Sch 5, para 33) | DGPC/DHPC/<br>ADB | Will be complied |
| Midterm Review: The Borrower and ADB shall jointly carry out a midterm review of the project during the third year of project implementation or at any other time as may be agreed upon by the Borrower and ADB. | (LA, Sch 5, para 34) | DGPC/DHPC/<br>ADB | Not yet due      |