Bhutan: Promoting Clean Energy Development in Bhutan

Project Name: Promoting Clean Energy Development in Bhutan
Project Number: 47275-001
Country: Bhutan
Project Status: Active
Project Type / Modality of Assistance: Technical Assistance

Source of Funding / Amount:
TA 8630-BHU: Promoting Clean Energy Development in Bhutan
ATF - Norway TA Grant
US$ 5.67 million

Strategic Agendas:
- Environmentally sustainable growth
- Inclusive economic growth

Drivers of Change:
- Governance and capacity development
- Partnerships
- Private sector development

Sector / Subsector:
Energy - Energy sector development and institutional reform

Gender Equity and Mainstreaming:
No gender elements

Description:
The technical assistance (TA) aims to support hydropower and other renewable energy resources development in Bhutan by providing assistance in (i) investment projects preparation; (ii) policy formulation and enabling environment development; and (iii) institutional capacity strengthening for the implementing agencies of the TA.

Project Rationale and Linkage to Country/Regional Strategy:
Hydropower is the backbone of Bhutan’s economy, generating 99% of the country’s electricity supply, and accounting for 18% of total national revenue and 20% of gross domestic product in 2013. At present, only 5% of hydropower potential in Bhutan has been developed. The government recognizes hydropower’s central role in Bhutan’s development and set out in its Eleventh Five Year Plan to accelerate expansion of hydropower capacity. The excessive dependence on the single resource of hydropower imperils Bhutan’s energy security. Bhutan will, according to its Alternative Renewable Energy Policy (2013), develop alternative renewable energy resources to enhance energy security, alleviate overdependence on hydropower, reduce conventional fuels consumption and minimize greenhouse gas emissions. From the demand side, it is necessary to formulate a strategic national energy efficiency policy to promote the use of efficient technologies, processes, and products throughout the energy supply and consumption chains.

Impact:
Enhanced clean and sustainable energy development in Bhutan.

Project Outcome:
Description of Outcome:
Improved enabling environment for the development of hydropower and other renewable energy resources.

Progress Toward Outcome:
Implementation is on track. A review mission was held in November 2017. All the envisaged outputs and outcome have been achieved within the original TA period. The TA scope has been expanded and the TA closing has been extended to 30 June 2019.

Implementation Progress:
Description of Project Outputs:
1. Investment projects prepared.
2. Policy formulated and enabling environment developed.
3. Institutional capacity strengthened.

Status of Implementation Progress (Outputs, Activities, and Issues):
Four consulting firms have been engaged by ADB to undertake distinct sets of activities: (i) Package 1: Prefeasibility Study of 3 Hydropower Projects; (ii) Package 2: Renewable Energy Master Plan; (iii) Package 3: Energy Efficiency Policy; and (iv) Package 4: Measurement, Reporting, and Verifications (MRV). Given the complexity of the TA, 3 individual consultants have been engaged to assist in project implementation.

Geographical Location:
Summary of Environmental and Social Aspects:
Environmental Aspects
- Involuntary Resettlement
- Indigenous Peoples

Stakeholder Communication, Participation, and Consultation:
During Project Design:
Bhutan government agencies, such as Ministry of Finance, Department of Renewable Energy and Department of Hydropower and Power Systems under the Ministry of Economic Affairs, and the National Environment Commission, have involved in identifying or conceptualizing the assistance. The donor of this grant, the Government of Norway has been consulted during the project design.

During Project Implementation:

Business Opportunities
The TA will be implemented over 3 years from the date of effectiveness. It will require 262.25 person-months of consulting services from both firms and individuals, comprising 183.25 person-months from international consultants and 79.00 person-months from national consultants. The consultants will have expertise in such areas as hydropower engineering; geology; hydrology; electromechanical design engineering; economic and financial analysis; renewable energy; energy efficiency; climate change; public private partnership; energy law, regulation and standards, environmental and social safeguards; project coordination; and project implementation. Due to the complexity of the assignments, four consulting firms will be engaged using the quality- and cost-based selection approach with a 90:10 quality cost weighting based on a full technical proposal. Individual consultants will be required for specialized and country-specific expertise. ADB will engage all consultants in accordance with its Guidelines on the Use of Consultants (2013, as amended from time to time).

**Procurement**

**Responsible ADB Officer**: Hongwei Zhang  
**Responsible ADB Department**: South Asia Department  
**Responsible ADB Division**: Energy Division, SARD  
**Executing Agencies**: Department of Renewable Energy, Ministry of Economic Affairs, Thimphu, Bhutan

### Timetable

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<td>Concept Clearance</td>
<td>13 Dec 2013</td>
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<tr>
<td>Fact Finding</td>
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<td>MRM</td>
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<td>Approval</td>
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<td>Last Review Mission</td>
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<td>Last PDS Update</td>
<td>21 Sep 2018</td>
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### TA 8630-BHU

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### Financing Plan/TA Utilization

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**Project Page**: https://www.adb.org/projects/47275-001/main  
**Request for Information**: http://www.adb.org/forms/request-information-form?subject=47275-001  
**Date Generated**: 03 September 2019