



Bhutan: Second Green Power Development Project

Project Name	Second Green Power Development Project	
Project Number	44444-013	
Country	Bhutan	
Project Status	Active	
Project Type / Modality of Assistance	Grant Loan Technical Assistance	
Source of Funding / Amount	Grant 0421-BHU: Green Power Development Project II	
	concessional ordinary capital resources lending / Asian Development Fund	US\$ 25.25 million
	Loan 3225-BHU: Second Green Power Development Project	
	Ordinary capital resources	US\$ 70.00 million
	Loan 3226-BHU: Second Green Power Development Project	
	concessional ordinary capital resources lending / Asian Development Fund	US\$ 25.25 million
	TA 8791-BHU: Acceleration of Hydropower Trading Development	
	Technical Assistance Special Fund	US\$ 1.00 million
	Loan: Second Green Power Development Project	
State Bank of India	US\$ 41.66 million	
Export-Import Bank of India	US\$ 17.16 million	
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth Regional integration	
Drivers of Change	Governance and capacity development Knowledge solutions Partnerships Private sector development	
Sector / Subsector	Energy - Large hydropower generation	
Gender Equity and Mainstreaming	Some gender elements	
Description	<p>ADB and the Government of Bhutan are working together to export clean energy while supporting social services and providing electricity to the poor. The Second Green Power Development Project is building a run-of-the-river hydropower plant in central Bhutan through a partnership with several private companies. Clean power generated by the plant will be sold to India and will help reduce carbon emissions. The clean energy from Bhutan will allow India to eliminate around 460,000 tons of carbon dioxide emissions every year that it would otherwise have generated through fossil fuels. The revenue generated from exporting power to India will be used to finance social services in Bhutan such as health, education and rural development. The planned 118-megawatt plant will be located on the Nikachhu River in a narrow valley in the central Trongsa District. As a run-of-the-river plant, it does not need a large reservoir for water storage, but comprehensive safeguard management plans are provisioned for the project implementation.</p>	

Project Rationale and Linkage to Country/Regional Strategy	Bhutan is the only South Asian country with a surplus of power for export. About 75% of the power it generates is exported to India, which contributes to one-fifth of the Bhutan's gross domestic product and accounts for one-third of government revenue. The money generated from power exports to India is the primary source for government spending on social services such as health, education, and rural development. Hydropower is the principal source of energy in Bhutan and as a result it is the foundation of the economy and social services system in the country. As Bhutan's expansion of hydropower has increased in recent years, the quality of life and social services have improved. Continued hydropower development is critical to sustaining government revenue, social services investment and keeping electricity prices low.
Impact	Expanded cross-border power trading

Project Outcome

Description of Outcome	Increased clean hydropower generation in Bhutan
Progress Toward Outcome	Ongoing.

Implementation Progress

Description of Project Outputs	<ol style="list-style-type: none"> Hydropower plant constructed DGPC and THyE project management and implementation capacity enhanced Hydropower development and trading framework improved
Status of Implementation Progress (Outputs, Activities, and Issues)	<p>The main two procurement packages (civil works and equipment) were floated in early December 2014. Their bids were opened in early April 2015 and ADB issued non-objection letter for contract awards in early November 2015. The contract for electro-mechanical package was signed on 30 December 2015. The contract for civil and hydro-mechanical works was signed on 20 April 2016.</p> <p>The civil work at the project site is ongoing.</p> <p>Land acquisition activities have been implemented in compliance with all applicable laws and regulations of the government and the resettlement plan. For monitoring activities, the panel of experts was all appointed.</p>

Geographical Location

Safeguard Categories

Environment	A
Involuntary Resettlement	B
Indigenous Peoples	C

Summary of Environmental and Social Aspects

Environmental Aspects	Provided in draft environmental impact assessments disclosed.
Involuntary Resettlement	Provided in a draft resettlement plan disclosed.
Indigenous Peoples	Not applicable.

Stakeholder Communication, Participation, and Consultation

During Project Design	A series of consultations with affected persons and communities have been conducted by the project implementing agency for project preparation, and they will be continued.
During Project Implementation	A series of consultations with affected persons and communities will be continued throughout project implementation.

Business Opportunities

Consulting Services	The consultants financed by ADB for the attached TA will be recruited according to ADB's Guidelines on the Use of Consultants. An estimated 40 person-months (25 international, 15 national) of consulting services are required to strengthen the power sector's key frameworks and systems to enhance Bhutan's hydropower development and trading by using ADB TA. Consulting firms will be engaged using the quality and cost based selection (QCBS) method.
Procurement	Procurement is expected to be in accordance with ADB Procurement Guidelines.

Responsible Staff

Responsible ADB Officer	Kurimoto, Satoshi
Responsible ADB Department	South Asia Department

Responsible ADB Division	Energy Division, SARD
Executing Agencies	Department of Hydropower & Power Systems, Ministry of Economic Affairs Thimphu, Bhutan Druk Green Power Corporation * Bhutan Tangsihji Hydro Energy Limited Thori Lam, Thimpu, Bhutan

Timetable

Concept Clearance	10 Oct 2011
Fact Finding	08 Jul 2014 to 25 Jul 2014
MRM	01 Oct 2014
Approval	15 Dec 2014
Last Review Mission	-
Last PDS Update	08 Mar 2017

Grant 0421-BHU

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
15 Dec 2014	04 May 2015	26 Jun 2015	30 Jun 2020	-	-

Financing Plan			Grant Utilization			
	Total (Amount in US\$ million)		Date	ADB	Others	Net Percentage
Project Cost	44.11		Cumulative Contract Awards			
ADB	25.25	15 Dec 2014	25.88	0.00		102%
Counterpart	18.86		Cumulative Disbursements			
Cofinancing	0.00	15 Dec 2014	0.40	0.00		2%

Loan 3225-BHU

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
15 Dec 2014	04 May 2015	26 Jun 2015	30 Jun 2020	-	-

Financing Plan			Loan Utilization			
	Total (Amount in US\$ million)		Date	ADB	Others	Net Percentage
Project Cost	70.00		Cumulative Contract Awards			
ADB	70.00	15 Dec 2014	44.31	0.00		63%
Counterpart	0.00		Cumulative Disbursements			
Cofinancing	0.00	15 Dec 2014	11.21	0.00		16%

Loan 3226-BHU

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
15 Dec 2014	04 May 2015	26 Jun 2015	30 Jun 2020	-	-

Financing Plan		Loan Utilization			
	Total (Amount in US\$ million)	Date	ADB	Others	Net Percentage
Project Cost	25.25	Cumulative Contract Awards			
ADB	25.25	15 Dec 2014	24.50	0.00	104%
Counterpart	0.00	Cumulative Disbursements			
Cofinancing	0.00	15 Dec 2014	0.40	0.00	2%

TA 8791-BHU

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
15 Dec 2014	07 Jan 2015	07 Jan 2015	31 May 2017	31 May 2018	-

Financing Plan/TA Utilization						Cumulative Disbursements		
ADB	Cofinancing	Counterpart				Total	Date	Amount
		Gov	Beneficiaries	Project Sponsor	Others			
1,000,000.00	0.00	0.00	0.00	0.00	0.00	1,000,000.00	15 Dec 2014	551,924.23

Project Page	https://www.adb.org/projects/44444-013/main
Request for Information	http://www.adb.org/forms/request-information-form?subject=44444-013
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