

To The CDM Executive Board UNFCCC Secretariat CDMinfo@unfccc.int

January 5<sup>th</sup> 2009

Dear CDM Executive Board Members,

# Re: Request for review of the request for registration for the CDM project activity "Budhil Hydro Electric Project, India (BHEP) "(Ref. no. 1844)

SGS has been informed that the request for registration for the CDM project activity "Budhil Hydro Electric Project, India (BHEP)"(Ref. no. 1844) is under consideration for review because three requests for review have been received from members of the Board.

The requests for review are based on the same reasons outlined below. SGS would like to provide a response to the issue raised by the request for review:

#### Request for Review, Issue 1:

Further clarification is required on how the DOE has validated the investment comparison analysis. The DOE is requested to substantiate that the alternatives considered will provide the similar level of services as that of the project activity.

### SGS' Response to Issue 1:

The investment comparison analysis was validated as per the sub step 2b; option II of version 04 of the tool for the demonstration and assessment of Additionality, which was used in the PDD. As per sub step 2b, option II IRR was used as a financial indicator as a most suitable decision making context.

LANCO's expected equity IRR from natural gas fired generation plants based on the performance of commissioned facilities is 15.3%. This natural gas power plant is Lanco's own power plant and the client is comparing the equity IRR of the project activity from its own fossil fuel based power plant. The client's expected equity IRR from coal fired generation plants that are under construction is 19.3%. The same was checked with the IRR calculation sheet for natural gas based power plant and coal based power plant. The project participant is comparing the projects IRR with his own gas and coal based power plant, and provides the excel sheet for the IRR calculation of gas based power plant (IRR = 15.3%) and coal based power plant (IRR = 19.3%) which was confirmed comparing with the project proponent's other registered project UNFCCC No. 0999. The IRR calculation sheet for the alternative scenario was checked along with the assumptions used in the calculation and the same was crosschecked with the registered project (UN No.0999). With regard of the guery regarding the similar level of services, the Budhil Hydro Electric Project and the coal and gas fired alternatives are all grid connected power projects. The electricity from all three projects will be managed by a Regional Load Dispatch Centre and sold and exported according to the terms of a Power Purchase Agreement. The project activity and the coal and gas fired alternatives will therefore deliver outputs (i.e. electricity) at comparable quality and with comparable properties to the Indian power system for consumption by end users.

PP is considering the IRR only for the 10 years for the alternative scenarios, but it is a conservative figure because if the IRR for the alternative would be calculated for 35 years (as in the case of the project activity) it will be much more than the calculated figure now. Hence comparing the IRR of the project activity for the alternative scenarios was found conservative as per EB 41 Annex 45 para 3.

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# Request for Review, Issue 2:

The DOE should clarify how it has validated that the parameters used in the investment comparison analysis were considered appropriate in line with the requirements of EB 41, Annex 45, para 6.

# SGS' Response to Issue 2:

The equity IRR of the BHEP used in the investment comparison analysis was calculated using an Excel financial model prepared for the project. Input values used in the financial model are contained in the assumptions worksheet of the model. These input values are shown in the table below together with an appropriate source of evidence for these values, which were valid and appropriate at the time of the project start date (October 3<sup>rd</sup> 2005, when pre-construction activities commenced).

The electricity tariff is not shown in the assumptions worksheet of the financial model or in the below table. The electricity tariff values however are taken directly from the Power Purchase Agreement which was valid and appropriate at the time of the project start date.

INPUT	VALUE		Evidence
No of units		2	Implementation Agreement (22 <sup>nd</sup> November 2005)
			Implementation Agreement (22 <sup>nd</sup>
installed capacity MW		70.00	November 2005)
Estimated cost per MW	Rs in millions	59.86	Calculated
Project Cost	Rs in millions	4190.00	Loan Agreement (13th March 2006)
Equity	20.05%	840.00	Loan Agreement (13th March 2006)
Senior Debt	70.17%	2940.00	Loan Agreement (13th March 2006)
Subordinate Debt	9.79%	410.00	Loan Agreement (13th March 2006)
Forex Debt	0.00%	0.00	Loan Agreement (13th March 2006)
Rupee Debt	100%	3350.00	Loan Agreement (13th March 2006)
Auxiliary consumption			
Underground hydroelectric with rotating exiters		0.40%	Detailed Project Report (28 <sup>th</sup> January 2005)
Plant Load Factor -			
Dependable Year		90%	Detailed Project Report (28 <sup>th</sup> January 2005)
units Generation in 90% dependable year ( MU)		313.33	Detailed Project Report (28 <sup>th</sup> January 2005)
Transformation losses		0.50% of energy generated	Detailed Project Report (28 <sup>th</sup> January 2005)
Royalty - Free energy to home state per year up to 12 years		12% of energy generated	Power Purchase Agreement (30th March 2005)
Royalty - Free energy to home state per year from 13th year		18% of energy generated	Power Purchase Agreement (30th March 2005)
O& M Expenses		1.50%of total project cost	Detailed Project Report (28 <sup>th</sup> January 2005)
Annual Escalation		4%	Detailed Project Report (28 <sup>th</sup> January 2005)
Working Capital Norms			
O&M Expenses	Months	1	Detailed Project Report (28 <sup>th</sup> January 2005)



		1% of capital	Detailed Project Report (28 <sup>th</sup>
Maintenance Spares	%	costs	January 2005)
Annual escalation of maintenance	70	00313	Detailed Project Report (28 <sup>th</sup>
spares		6%	January 2005)
		2 (of fixed	Detailed Project Report (28th
		charges for	
		sale of energy.	
		Calculated on	
		normative	
Receivables	Months	capacity index)	
			Short term Prime Lending Rate of
			State Bank of India
			March 2005 (Detailed Project
			Report – Financial and Economic
			Analysis -Assumptions).
Interest on working capital	%	10.50%	
Financial Assumptions			
			Exchange rate
			In April 2009
			(It was around 44 during Quarter
			Jan 06 to March 06 and was
			envisaged 46 for COD, i.e., April
			09)
Exchange rate at COD		46	**
			Detailed Project Report (28th
Annual O&M Cost escalation		4%	January 2005)
Long Term Repayment schedule	Quarters		
Rupee Loan Repayment	Quarters	60	Loan Agreement (13th March 2006)
Moratorium	Quarters	2	Loan Agreement (13th March 2006)
Dollar Loan Repayment	Quarters	60	Loan Agreement (13th March 2006)
Moratorium	Quarters	2	Loan Agreement (13th March 2006)
Installments per year		4	Loan Agreement (13th March 2006)
Interest on term loan			
Interest on Senior debt		9.00%	Loan Agreement (13th March 2006)
Interest on Subordinate debt		10.50%	Loan Agreement (13th March 2006)
upfront fees on rupee debt		1%	Loan Agreement (13th March 2006)
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Depreciation as per Income Tax			
Act Under IT Act(WDV)- Equipment		25%	Income Tax Act
Under IT Act(WDV)- Buildings and			Income Tax Act
civil works		10%	
			Income Tax Act for the assessment
Depreciation for P&M - Hydro Electric		3.40%	year 2003-2004
Depreciation Rate as per Electricity			Electricity Act 2003
Act			
Vide Annexure II		2.57%	Electricity Act 2003
Income Tax Rate			Income Tax Act
			Income Tax Act for the assessment
Basic Rate		35.00%	year 2003-2004
			Income Tax Act for the assessment
Surcharge		2.50%	year 2005-2006
Education cess		2.00%	Income Tax Act for the assessment



		year 2005-2006
Corporate Tax With Surcharge and		Income Tax Act
cess	36.59%	
Minimum Alternate Tax (MAT)	7.50%	Income Tax Act for the assessment year 2005-2006
MAT with Surcharge and cess	7.84%	Income Tax Act
Dividend Distribution Tax	12.50%	Income Tax Act for the assessment year 2005-2006
Dividend Distribution Tax with Surcharge and Cess	13.06%	Income Tax Act
Benefits Under Section 80(I)A of the IT Act for 10 years out of 15 years after commencement of Operations	100%	Income Tax Act for the assessment year 2005-2006
	0.04	
tonnes of CO2/MWh (Northern Grid)	0.81	CEA Baseline version 03
Rate per CDM in US \$	8	Estimated
Exchange Rate 1 US \$	46	'Estimated exchange rate in April 2009'

We apologize if the initial validation report has been unclear and hope that this letter and the attached information address the concerns of the members of the Board.

Nikunj Agarwal (+91 9871794661) will be the contact person for the review process and is available to address questions from the Board during the consideration of the review in case the Executive Board wishes.

Yours sincerely

Siddharth Yadav

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Enclosures:

Annex 1: Gas Plant IRR sheet Annex 2: Budhil IRR calculation sheet Nikunj Agarwal

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