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Att: CDM Executive Board

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Your ref.:	Our ref.:	Date:
CDM Ref 2025	BRINKS/KCHA	22 December 2008

Response to request for review
"Chutak Hydroelectric Project" (CDM Reference No. 2025)

Dear Members of the CDM Executive Board,

We refer to the issues raised in the requests for review by three Board members concerning DNV's request for issuance for the project activity "Chutak Hydroelectric Project" (CDM reference number 2025) and we would like to provide the following response to the issues raised by these requests for review.

Comment 1: *The DOE should clarify how it has validated the input values in the investment analysis in line with EB 41, Annex 45, paragraph 6.*

DNV's response:

DNV would like to state that all the input values used in the investment analysis have been validated in line with EB41 Annex 45, paragraph 6.

The investment cost of the project at INR 621.26 crores was taken from the detailed project report, issued in February 2004. The investment was confirmed from the cost estimate abstract dated November 2006[1]. The project investment cost was also crosschecked with the management approval letters dated 24 August 2006 for 30% equity[2] and 23 November 2006 for the sub–ordinate loan (INR 364 crores). The documents also states that the rest of project funding would be arranged by National Hydro Power Corporation (NHPC) through commercial bank loan.

The depreciation charges, return on equity, interest on working capital and operational and maintenance charges were computed based on the Central Electricity Regulatory Commission (CERC) guidelines of 26 March 2004[3]. The CERC guidelines remain in force in five years or until revised. DNV was able to confirm from the CERC website that there were no updates on the tariff between March 2004 and November 2005. The interest rate on loan has been considered at 8% and is in line with the Rural Electrification Corporation limited applicable for all public sector projects[4]. The electricity generation used in the IRR calculations has been sourced from the salient features report[5].

[1] Annex 1
[2] Annex 2 and Annex 3
[3] Annex 4
[4] Annex 5
[5] Annex of PP response

The tariff used in the financial calculation has been calculated as stated in the Power Purchase Agreement (PPA) for the proposed project, signed in October 2005[6], and should hence be valid at the time of the development of the investment analysis
In conclusion, DNV was able to confirm that the input values in the financial analysis were applicable and appropriate at the time of the investment decision.

Comment 2: *Taking into consideration that a common practice analysis should compare the project to "similar" projects (assuming a capacity range of +/- 50%, i.e. 20 - 65 MW would have been appropriate), the DOE should clarify how many similar activities were assessed in the common practice analysis and the essential distinction between them and the project activity.*

DNV's response :

The project activity has been compared with both other run-of-river plants (below 50 MW) in Jammu & Kashmir as well as connected to the northern grid of India, and it was found that run-of-river based capacity in Jammu & Kashmir is only 73.55 MW, constituting around 3.17%[7] of the total installed capacity and all these plants were commissioned before 2002. Considering the increasing trends of raw material prices and inflation, a comparison of the project activity with these plants is not deemed appropriate.
The Chutak hydroelectric project is constructed in the remote area of the Kargil district which is at a high altitude of 4 000 meters above sea level. The construction of a hydro project of 44 MW capacity is not a common practice at such a high altitude area in India. Hence, it can be concluded that this project is a distinct project when compared to any other hydro projects in India.

Considering the EB's concern DNV has further evaluated the Hydro projects of capacity in the range of 20-65 MW (i.e. ±50% of the proposed project activity) in the state of Jammu and Kashmir, where the project is located, as well as in the Northern Region to which the project activity is connected, and one plant[8] was found in this range apart from those which were already considered for common practise analysis. This plant was however built in 1971, and considering the increasing trends of raw material prices and inflation, a comparison of these units with project activity is deemed not appropriate.

Comment 3: *The DOE should explain how the CDM prior consideration for the project activity has been validated in line with EB 41 Annex 46, para. 5.*

DNV's response:

As per EB 41, Annex 46 proposed project activities with a start date before 2 August 2008, for which the start date is prior to the date of publication of the PDD for global stakeholder consultation, are required to demonstrate that the CDM was seriously considered in the decision to implement the project activity.

In the context of the above, DNV would like to confirm the following:

i) The start date of the project activity has been identified as 23 September 2006, which is the date of construction agreement of the project activity. Construction agreement copies provided by NHPC in support of the start date have been verified by DNV[9].

[6] Annex 6
[7] The following power plants: GANDHARBA - 15 MW, MOHARA – 9 MW, STAKNA – 4 MW and SEWA-III – 9MW) Annex 7
[8] (CHENANI-I &II) (annex 7)
[9] Annex of PP response - Chutak construction

ii) That NHPC was aware of the CDM prior to the project activity start date is evident from the fact that the project proponent had started a task force on CDM, (proposal by Executive director (R&D) of NHPC dated 17 October 2005 which clearly mentions four hydro power projects have to be considered for CDM benefits also including the Chutak project[10].

iii) The minutes of meeting and email copy sent to the World Bank dated 3 December 2005 by NHPC clearly mentions that there are several hydro projects, including the Chutak project, which can be considered for CDM benefits[11].

iv) Annex I of the draft Memorandum of understanding (MoU) for the year 2006-07 between Ministry of Power and National Hydroelectric Power Corporation Ltd, dated 8 March 2006 clearly mention under performance parameters, DNA approval for Nimoo-Bazgo and Chutak hydropower projects from December 2006 to March 2007[12]. This was also cross verified by the MoU signed between NHPC and Government of India on 28 March 2006, clearly mentioning that the DNA approval should be sought for two projects Nimoo-Bazgo and Chutak hydroelectric projects[13].

v) The letter submitted by the IDBI bank and CDM consultant MGM dated 24 July 2006 offering the development of CDM projects clearly mention Chutak and other hydro projects for CDM consultancy[14].

DNV was able to verify that the project proponent had appointed MGM International as a consultant on 6 March 2007 by issuing the letter of intent (LOI)[15]. Subsequent to the development of the PDD, the project proponent was invited by the DNA of India through a letter dated 18 July 2007, for a meeting and presentation on 30 July 2007[16]. The validation of the project started with the signing of the agreement between MGM and DNV as DOE on 31 October 2007.

The above chronology of events with supporting documents proves the prior consideration of CDM for the project activity. It can be concluded that the continuing and real actions has been taken in order to achieve CDM status for the project activity in parallel to the implementation of the project activity.

Comment 4: *The DOE/PP are requested to justify the basis for changing the ex – ante emission factor from 0.76 tCO_2/MWh used in the PDD published for public consultation to 0.793 tCO2/MWh*

DNV's response:

The PDD was web hosted for global stake holders comments from 31 October 2007 to 29 November 2007. The combined margin emission factor used in the published PDD for emission reduction calculations is 0.76 and was based on the outdated CEA data (Central Electricity Authority website – CO_2 baseline database – version 1.1 dated December 2006[17]) at the time of

[10] Annex of PP response – NHPC Task force
[11] Annex of PP response – MoM ministry of power
[12] Annex of PP response – Draft MoU
[13] Annex of PP response - MoU NHPC and GoI
[14] Annex of PP response –MGM-IDBI offer
[15] Annex of PP response –NHPC -LOI
[16] Annex 8
[17] http://www.cea.nic.in/planning/c%20and%20e/Government%20of%20India%20website.htm

PDD publication. During the validation period this was cross-checked and found outdated by DNV. Hence the PP was asked to use the latest data available from the CO_2-database version 02 dated June 2007[18] vide a clarification request (CL) in the validation report. Hence the combined margin was revised from 0.76 in the published PDD to 0.793 tCO_2/MWh in the final PDD submitted for registration.

Comment 5: *The DOE is requested to clarify the difference between the electricity generation value used in the emission reductions calculation and the one used in the IRR calculations*

DNV's response:

The electricity generation value at 216.14 GWh/year, used in the estimation of the emission reductions is the gross electricity generation figure and was sourced from the detailed project report[19].The generation figure at 210.380 GWh/year used in the financial calculation is the net electricity generation and has been sourced from the salient features report prepared in 2005[20] and is the latest document available. The change in generation values is due to the EIA and EMP studies done by university of Jammu and Kashmir, evidenced by the corporate planning division letter dated 14 June 2005[21]. While the generation figure of 210.38 GWh has been used in the financial calculations, DNV acknowledges that the net electricity generation figure should have been used in the emission reduction estimate, in which will reduce the emission reduction estimate by 4 625 t CO_2 per year[22] and thus requests the PP to do this.

We sincerely hope that the Board accepts our aforementioned explanations and we look forward to the registration of the project activity.

Yours faithfully
for DET NORSKE VERITAS CERTIFICATION AS

H.W. Brinks

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Technical Director for CDM
Climate Change Services

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[18] Annex 7
[19] Annex 10
[20] Annex of PP response –Salient features Chutak
[21] Annex 11
[22] Annex 12

Annexes

Annex1: Cost abstract – Government of India

Annex 2: Management approval letter for 30% Equity dated 24 August 2006

Annex 3: Management approval letter for sub – ordinate debt dated 23 November 2006

Annex4: CERC regulations – March 2004, Chapter 3 CERC regulation page no 37 to 40) (http://www.cercind.gov.in/28032004/finalregulations_terms&condition.pdf

Annex5: Rural Electrification Corporation limited – September 2004 (http://www.recindia.gov.in/download/int_rates_21_09_04.pdf)

Annex 6: Power purchase agreement dated 26 October 2005

Annex 7: CEA website – CO_2 baseline data base - version 02 – Excel sheet (http://www.cea.nic.in/planning/c%20and%20e/Government%20of%20India%20website.htm)

Annex 8: DNA Meeting approval letter

Annex 9: Extract of Detailed project report – for electricity generation.

Annex10: Letter of Corporate planning division.

Annex 11: Revised emission reduction calculations sheet