DANS ENERGY PRIVATE LIMITED
5th Floor, DLF Building No. 8, Tower C
DLF Cyber City, Phase - II
Gurgaon (Haryana) – 122 002
Tel: +91-95124-4696300
Fax:+91-95124-4696311

28 December 2007

UNFCCC Secretariat
Martin-Luther-King-Strasse 8
D-53153 Bonn
Germany

Att: CDM Executive Board

Reference: Response to Request for Review
1326 Jorethang Loop Hydroelectric Project, India

Dear Members of the CDM Executive Board,

We refer to the issues raised in the requests for review by the Board members concerning our request for registration of the 96 MW Jorethang Loop Hydroelectric Project and would like to provide the following clarifications for your perusal and review.

The points raised and our response to the same are indicated below.

1. **Further explanation is required on how the DOE has validated the alternatives presented under sub-step 1a of the additionality tool.**

Our Response

Section B5, sub-step 1a in the PDD includes two alternatives:

- The proposed 96MW JLHEP not undertaken as a CDM project activity.
- The 96MW JLHEP is not implemented and electricity demand would have to be continued to be met through the current carbon intensive grid mix.

Two additional alternatives were also considered:

- Grid-connected power projects utilizing other renewable sources (wind, biomass) supplying the same amount of electricity as the project activity.
- Grid-connected fossil fuel-fired power plant supplying the same annual amount of electricity as the project activity.

However, DANS Energy Private Limited (DEPL) was established with the specific objective of providing services to the hydro power sector in India based upon the extensive experience of one of the company's directors in this sector. This is outlined in the DEPL Company Profile, which has been provided to the DOE. AS DEPL was established to focus on the hydropower sector these two additional alternatives could not be considered to be realistic or credible in accordance with the

DANS ENERGY PRIVATE LIMITED
5th Floor, DLF Building No. 8, Tower C
DLF Cyber City, Phase - II
Gurgaon (Haryana) – 122 002
Tel: +91-95124-4696300
Fax:+91-95124-4696311

provisions of the tool for the demonstration and assessment of additionality and were dismissed.

2. Further justification is required on how the DOE has validated the Prime Lending Rate as an appropriate benchmark for the project activity.

Our Response

The project participant elected to use option III Benchmark Analysis from the *Tool for the demonstration and assessment of additionality*, as option 1 Simple Cost Analysis and Option II Investment Comparison Analysis were not appropriate as the project produces economic benefit from the sale of electricity and the only realistic and credible alternatives to the project activity were the JLHEP not being undertaken as a CDM project or the JHLEP not being implemented (See Response 1 above).

The tool for the demonstration and assessment of additionality stipulates that "*For the benchmark analysis, the IRR shall be calculated as project IRR*."

In order to utilize a benchmark comparable to the project IRR the project participant elected to use the Prime Lending Rate (PLR) published by the Reserve Bank of India (RBI). The PLR is the benchmark interest rate at which commercial banks in India lend to their most credit worthy customers. The RBI publishes the average PLR of the five major nationalized banks in India in its fortnightly publication.

Typically, projects in India would be borrowing debt at a rate equal to or higher than the PLR. Hence, for any project to be financially attractive, the IRR of the project must be higher than the rate of borrowing on debt (i.e. higher than the PLR). Accordingly, if any project's IRR does not exceed the PLR, it could be considered a financially unattractive project.

The use of the PLR is consistent with the *Tool for the demonstration and assessment of additionality* which suggests that "*…benchmarks for IRR, NPV, etc. can be derived from….Estimates of the cost of financing and required return on capital (e.g.* ***commercial lending rates*** *and guarantees required for the country and the type of project activity concerned), based on bankers views and private equity investors/funds' required return on comparable projects*".

The PLR contained in the PDD (12.75-13.25%) was the value quoted by the RBI on April 20th 2007 (see http://rbidocs.rbi.org.in/rdocs/Wss/PDFs/77110.pdf). In order to keep this benchmark conservative no risk premium associated with the project type or the project developer was added to it. Further, RBI's PLR is in itself a conservative benchmark as it does not take into account the commercial lending rates of private sector banks which are typically higher than that of nationalized banks. For example,

- The PLR of ICICI Bank, India's largest private sector bank, was 15.75% from 1 April 07 (http://www.icicibank.com/pfsuser/aboutus/investorelations/pressrelease/icicibank_pressrealease/IBAR.pdf).

DANS ENERGY PRIVATE LIMITED
5th Floor, DLF Building No. 8, Tower C
DLF Cyber City, Phase - II
Gurgaon (Haryana) – 122 002
Tel: +91-95124-4696300
Fax:+91-95124-4696311

- The PLR of HDFC Bank was 15% from 3 April 07 (http://www.hdfcbank.com/wholesale/default.htm# - see bottom left hand side – Benchmark PLR).

3. The investment and sensitivity analyses should be presented in a transparent manner to allow reproducing the analyses and obtaining the same results as provided for in paragraph 6 of the additionality tool.

Our Response

A MS Excel version of the project activity's financial model has been provided, which is the basis of the investment and sensitivity analyses. The MS Excel financial model includes a series of linked worksheets that allows a reader to readily reproduce the analysis and obtain the same results.

4. Further justification is needed on the essential differences between the project activity and the existing similar projects, following sub-step 4b of the additionality tool.

Our Response

Table B3 of the PDD describes other large hydro power projects with an installed capacity greater than 25MW and less than 500 MW that have been developed or are in the process of being developed in Sikkim by private sector developers. In response to this request for review by the CDM Executive Board the project participant attempted to identify large hydro power projects with an installed capacity greater than 25MW and less than 500 MW being developed or in the process of being developed by private sector developers in other states connected to the Eastern Grid but the details of no additional projects could be found.

The installed cost/MW of all projects similar to the project activity are listed in Table B3 of the PDD. All of the projects listed have a substantially lower installed cost/MW than that of the project activity. The reasons for the higher installed cost/MW of the project activity are listed below:

- Gross Head: All other projects listed in table B3 (for which data is publicly available) have higher "gross head" in comparison to the project activity. As a result, the electro-mechanical equipment (Francis turbines) to be used by the project activity is more expensive due to the lower revolutions per minute (rpm) required (215 rpm).
- Discharge: Due to the lower head associated with the project activity a considerably greater volume of discharge water is required to achieve a rated power comparable to the other projects listed in Table B3. This requires a larger water carrying system, including the intake and head race tunnel, surge shaft,

DANS ENERGY PRIVATE LIMITED
5th Floor, DLF Building No. 8, Tower C
DLF Cyber City, Phase - II
Gurgaon (Haryana) – 122 002
Tel: +91-95124-4696300
Fax:+91-95124-4696311

and pressure shaft, resulting in higher civil costs for the JLHEP compared to other projects

- Cost of Infrastructure: In the case of the first 3 projects listed in the Table B3, the Sikkim Government has agreed to construct roads, bridges, and transmission and distribution lines required by the projects at its own cost. This facility has not been provided to the JLHEP.

This higher installed cost/MW represents a serious change in the circumstances under which the JLHEP will be implemented compared to the circumstances under which these other similar projects will be carried out as required in sub-step 4b of the additionality tool and supports the claim that the project activity is financially unattractive.

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

Yours faithfully,
For **Dans Energy Pvt. Ltd.**

T Nagendra Rao
Managing Director