RESPONSE TO REQUESTS FOR REVIEW

BVQI had performed the validation of the CDM Project 0522 "6.6 MW Sheshadri Iyer Mini Hydel Power project of Atria Hydel Power Limited at Malavalli Taluk, Mandya District, Karnataka". The request for registration was made on 12th August 2006 and was under review from 15th August to 13th September 2006. Subsequently, there have been four requests for review.

We thank the CDM executive board and the secretariat for giving us the opportunity to clarify about our considerations in validating the said project.

We find that four requests were made against the following requirements derived from paragraph 37 of the CDM modalities and procedures, viz. i) The baseline and monitoring methodologies complying with the requirements pertaining to methodologies previously approved by the Executive Board. ii) The project activity conforms to all other requirements for CDM project activities in decision 17/CP-7 the CDM Modalities and procedures and relevant decisions by the COP/MOP and the Executive Board.

We wish to clarify our stand for each of these requests as given below:

The project activity involves implementation and operation of 2 nos. of 3.3 MW hydroelectric grid connected renewable energy project on the second power channel from the Shiva Balancing reservoir .The project has installed two horizontal shaft Francis turbines each of 3.3 MW rated capacity. The turbines are connected to synchronous generators each of 3.3MW rated capacity and the generated power is exported using the existing switch yard. The power is exported to the state owned power utility company Karnataka Power Transmission Corporation Ltd. The project activity falls under small scale CDM project Type1- Renewable Energy Project and Category 1.D. – 'Grid connected renewable electricity generation' as mentioned in section B.1 of the PDD. 'Appendix B of the simplified M&P for small-scale CDM project activities-Version 08 (3rd March 2006)' which was the valid version of the methodology during the validation process.

The selected baseline methodology is in line with the baseline methodologies provided for the relevant project category - Renewable Energy Project. Category 1.D. of the simplified modalities and procedures for small-scale CDM project activities.
This methodology applies to various project activities including the grid connected hydroelectric power generation.

We therefore hereby confirm that in the opinion of the BVQI validation team, the methodology AMS 1.D is applicable to the said CDM project activity.

The validation of the said project had been conducted as per the laid down procedures of BVQI's accreditation manual. We had used this manual in obtaining the accreditation under sector scope-I to which the present project activity belongs.

We give below our common response to all the 4 requests for reviews that we find are similar to each other.

Reasons and background for Request for Review	BVQI response
1. According to the validation report , the decision to build this project was made in early	The validation team had verified the various documents including Board Resolutions

2000. Neither the PDD nor the validation report indicates anywhere that the project was envisioned for CDM originally.	maintained with the project participant. The Board meeting held on 19.03.2000 had considered CDM benefits for this project as is evident from the extract of Board resolution (Exhibit No.1). The validation report refers to this document under Section 6 category 2 documents. Placement of Purchase Order for the turbine was released during April 2000. (Exhibit No.2). The validation report under Section 6 category 1 documents refers this document.
The barrier analyses do not seem to demonstrate project additionality. Also, the prevailing practice barrier is not plausible. It states that in India and in state of Karnataka too, it is a common practice to invest in medium and large-scale fossil fuel fired electricity project. However, about half of the total electricity supplied to the Karnataka state gird in the fiscal year 2003-2004 is from hydro and nuclear.	The validation team had made detailed study of the various barriers to the project activity through the data available with the project participant. In the state of Karnataka large hydro projects were being operated by State electricity utility and the Nuclear plants come under Central Government utilities. Investing in mini hydro projects was not the prevailing practice as is evident from the following considerations. The barriers to the project have been identified under the following categories. i) **Prevailing Practice**: The project activity started in the year 2001-2002. In the state of Karnataka the major hydro projects and nuclear projects are being operated by State Electricity utilities and the contribution of mini hydro projects was only around 0.5% as is evident by the data maintained by KPTCL (Karnataka State Power Transport Corporation Limited). As per the data for the year 2001-02 the generation of power from mini hydro projects is of the order of only 154.4 Million KWh (Exhibit No.6) compared to the total generation of 26882.5 Million KWh through all other sources which adequately confirms that investment in mini hydro projects was not a common practice in the State of Karnataka. Even if half of the generation in 2003 – 04 was from hydro and nuclear, it is clear that it was not from similar scale mini-hydel projects. ii) **Institutional Barrier**: The details pertaining to the audited statement of cash flow had been verified by the validation team and the extract of the same has been enclosed.(Exhibit Nos.3A to 3F). It can be noted that the IRR for the project without CDM revenue is negative (-2%) and with CDM revenue will be around 2%. The guidelines from Central Electricity Regulation Commission (Exhibit No.4) clearly indicates that the return on investment for

	Independent Power Producers will be considered at 16%. for arriving at power tariff which is considerably high compared to the IRR of 2% for the project activity with CDM revenue. The PPA originally signed had considered a rate of INR 2.87/KWH with 5% escalation annually considering the base year as 1993-94. However this was modified to INR 2.90/KWH with 2% annual escalation. This revision had resulted in revenue loss to the tune of approximately INR 44 Million till date. The details are given in Exhibit No.7 Based on the above data, the validation team had concluded that the investment in mini hydro projects was not economical. Hence the baseline scenario for the project activity was chosen as the most feasible and attractive option of State Electricity Grid. iii)**Hydrology Risks** The present project by the project participant depends on the release of excess water flow in the forbay of Shivana samudram anicut which is being regulated by Govt. bodies. It has been made clear by the Government authorities as is clear from the Govt. order (Exhibit No.5) that priority will be given for water requirement of Shivana samudram power generating Station and Bangalore Water Supply Board. The excess water only will be released for use at the Sheshadri Iyer Mini Hydel Project. Based on the above detailed barrier analysis the validation team has concluded that the project is additional and qualifies as CDM Project.
The DOEs validation of baseline scenario is weak. The validation report (page 9) states that "The most economically attractive alternative among the alternatives mentioned above, i.e. power from grid connected power plants has been selected as the baseline scenario……". However, no investment analysis has been presented anywhere in the PDD. The DOE should explain how it concluded that the existing grid is the most economically attractive one if it did not conduct an investment analysis.	It is clear that purchase of power from grid would not result in loss or negative IRR. From above discussions, it is clear that project activity resulted in negative IRR and losses. As per the methodology AMS I.D, the baseline is is the kWh produced by the renewable generating unit multiplied by an emission coefficient (measured in kg CO2equ/kWh), i.e. emissions from the connected grid. The project activity exports power to the grid. There is no plausible alternative scenario to this project activity other than export to grid. Hence the validation report stated that the grid [which is the baseline as per the methodology] is the most economically attractive alternative.
2. The project has used small-scale baseline methodology I.D- Grid connected renewable electricity generation. It uses the combined margin (i.e. an average of approximate operating	The validation team had gone through the detailed calculations for the Operating and Build margin during discussions at site. The details had not been included in the PDD submitted earlier

margin and the build margin) approach to determine the baseline emission factor. The PDD, however, does not provide any data used to calculate the BM emission factor. Annex 3 of the PDD (baseline information) provides only the electricity generation data of the southern grid. It does not provide emission data, hence it is not clear how the operating margin emission factor of 0.997 kg CO_2/kWh, is determined. It is not clear how the DOE validated emission factors (i.e. OM emission and BM emission factor) as data provided in the PDD are not enough to validate these factors.	not been included in the PDD submitted earlier since it is not mandatory for a small scale project PDD. The detailed emission factor data is now included in the revised PDD version 04 dated 28/09/2006 which is attached.
3. The last paragraph in Page 6 of the PDD states that the capacity of the turbine is 3,300 KW. The table following the paragraph shows the rated capacity of the turbine as 3,475 kW. Please clarify.	In Hydro-Electric Project, the Prime mover for the Generator is the Hydro-Turbine. The prime mover in the Turbine shall have more capacity to give a rated output at the generator terminals. It means the efficiency of the turbine will be taken into consideration, to give the rated K.W output at generator terminals. Hence, the Turbine output (K.W.) will always be more than the Generator output. (Turbine 3475 KW, Generator 3300 KW)
4. The electricity sold (or to be sold) by the project to the grid is not available in the PDD, so its not possible to calculate the emission mitigation. Please provide electricity generation, own use (or auxiliary consumption) and electricity export for the first crediting period.	The validation team had verified from the records maintained by the project participant the electricity generated and supplied to the grid. The details pertaining to the same has been enclosed under Exhibit No. 8

Atria
HYDEL POWER LIMITED

General Manager (Marketing)
VA Tech Escher Wyss Flovel Ltd.
13/1, Mathura Road, Faridabad – 121 003
HARYANA

Dated: 02/04/00
No. AHPL / BRD/ 006

Sub: Detailed Order for Design, Manufacture, Supply, Packing and Forwarding, Transportation to Project site, 2 X 3300 KW – Hydro – Turbine Generating Units with all its associated and auxiliary equipments for Seshadri Iyer Held Scheme

Ref:- 1. Our letter dated 27.01.2000 and 10.02.2000
2. Your offer No.11/MKT/143/ST/508 dated 12th February 2000

We invite reference to the letter cited under reference ending with letter dated 18.03.00. We are pleased to inform you (here in after referred to as the Contractor) that your offer for the design, manufacture, test at Manufacturers plant, packing, forwarding, supply F.O.R. destination Brindavan Project site, 2 X 3300 KW – Horizontal type Franser of generator Turbine with all its associated and auxiliary equipment for Seshadri Iyer Mini Hydel Scheme has been accepted by us (here in after referred to as Purchaser)

The terms and conditions, specifications for the equipments which are described below shall be read along with the references ending with the discussions and the letter dated 18.03.00.

1.0 Value of the Contract; The total value of the lump sum contract awarded for the above works, detailed in the scope of work and as per the specifications detailed in your offer and to the subsequent discussions held therein shall be Rs.597,55,599/- (Rupees Five hundred ninety seven lakhs fifty five thousand five hundred ninety nine only)

(i) The total value mentioned therein is inclusive of all taxes, duties, levies, freight, insurance (F.O.R. destination Seshadri Iyer project site) for the scope of the work detailed herein.
(ii) The Contract value is firm, throughout the period of the Contract
(iii) Excise duty and Central Sales Tax:-