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

Att: CDM Executive Board

DET NORSKE VERITAS
CERTIFICATION AS
Veritasveien 1
1322 Høvik
Norway
Tel: +47 6757 9900
Fax: +47 6757 9911
http://www.dnv.com

Your ref.:	Our ref.:	Date:
CDM Ref 0971	ETEL/KCHA	02 May 2007

Response to request for review "7.5 MW Grid-Connected Biomass Power Project, by Ravi Kiran Power Projects Private Limited" (0971)

Dear Members of the CDM Executive Board,

We refer to the clarifications to the requests for review raised by three Board members concerning DNV's request for registration of the "7.5 MW Grid-Connected Biomass Power Project, by Ravi Kiran Power Projects Private Limited" (0971) and would like to provide the following initial response to the issues raised by the requests for review.

Comment 1:
1. *The analysis of additionality in the PDD is unconvincing, and the Validation Report does not provide further arguments to justify additionality of the project. Also, since no spreadsheet containing a financial analysis was presented with the PDD, it is difficult to reach a decision regarding additionality based on these conflicting figures. To base additionality on the benchmark analysis, the PDD should provide* ***a)*** *a clear justification of the cost of capital identified as the benchmark;* ***b)*** *clarify the structure of the applicable power purchase tariff; and* ***c)*** *a proper choice of the IRR (project or equity) and a transparent calculation of the same.*

Based on the arguments presented in the PDD and the Validation Report, it is not possible to ascertain that the additionality of the project activity is sufficiently substantiated

DNV Response:
As indicated in DNV's validation report the project activity has had to overcome financial barrier and barriers due to common practice.

Financial barrier:
The choice of the IRR for the project financial analysis has been the *project IRR*. The IRR has been computed for the cash flow of the project, determined as profit after tax plus depreciation and interest on term loans. As reported in section 3.4 of DNV's validation report, we reiterate and confirm the following:

- The project activity had an IRR of 11.82% without considering any CDM benefits, which improved to 16.07% on considering CDM revenues.

- The weighted average cost of capital of the project has been used as the benchmark to compare the project IRR. This has been determined and verified to be 16.96%. The choice of the weighted average cost of capital (WACC) as the selected bench mark is justified as the WACC of a project is the weighted average of, the cost of debt and opportunity returns expected for the project's equity, and gives a realistic return on the cost of capital. There being no fixed requirement in India, on the model adoption for choosing a benchmark to arrive at the financial viability of such small scale projects, the selection of the WACC as benchmark for the project investment is accepted.

  The project proponent has calculated the opportunity return (market return), based on the universally accepted capital asset pricing model (CAPM) model. This is accepted as a conservative option, since the model gives equal weight age for a) high risk and high return investments (like investment in private sector) and b) low risk low return investments (like government based securities) and the project proponent was new to the business at the time of establishment of the project.

  The assumptions made while arriving at the WACC are included as annexure in the response from the project participant (Annexure: financials –I-pre-project scenario-including WACC).

Financial analysis has indeed been presented in the PDD as an annexure, though not in the form of an excel sheet but as a word document. The excel sheet has now been presented (please refer annexure 6 – Financials I of the response from the project participant). The above has been worked out and verified for the following conditions:

- The pre-tax weighted average cost of capital consisting of both, equity and debt components have been considered. Due subsidies as stipulated by the Ministry of Non conventional Energy Sources of India (MNES) and applicable tax regulations have been considered in the determination of the weighted average cost of capital.
- Power tariff at INR 2.80 per Kwh with an escalation of 2% every year as indicated by the power utility vide letter dated July 5, 2003 (please refer annexure 3 of the response from the project participant).

Uncertainty in the tariff was foreseen by the project proponent as one of the barriers since the time of conceptualisation of the activity in 2002. This is elucidated as indicated below:

In June 2002, as per MNES guidelines the project was initially offered a price through a power purchase agreement (PPA) with KPTCL (Karnataka Power Transmission Corporation Limited) of INR 2.25 per kWh with a 5% escalation on price every year, keeping 1994-95 as the base year. (Please refer annexure 2 of the response from the project participant). As per this the project would have been eligible for a price of INR 3.67 per kWh. However even before the project proponent could achieve financial closure, it was verified by DNV that during July 2003, KPTCL had cancelled the PPA unilaterally, and instead offered a revised tariff of INR 2.80 per kWh with 2% escalation every year (please refer annexure 3 of the response from the project participant). Hence, this is the tariff that has been considered for the determination of the project IRR.

The uncertainty in the tariff envisaged earlier in 2002 came true when again in June 2005, KPTCL revised the tariff based on capacity. After challenging the termination of earlier PPA in the high court, the project participant had to sign a supplementary agreement with KPTCL. According to the revised tariff, the project is now eligible for INR 3.10 for first 6 MW and INR 2.85 for remaining 1.5 MW generated at an escalation of 2% every year (please refer annexure 4 of the response from the project participant).

The project participant has now, also determined project IRR based on this current applicable power tariff (INR 3.10 for first 6 MW and INR 2.85 for remaining 1.5 MW generated) and at prevalent biomass price at INR 900 per tonne. This has been estimated to be 13.93% and lower than the benchmark (please refer annexure 6 – Financials II of the response from the project participant).

Thus it has been clearly demonstrated that the fluctuations in tariff structure have created significant uncertainties with regard to the financial viability of the project.

Common practice barrier:
As indicated in the validation report, DNV could verify from the Karnataka Renewable Energy Development Limited (KREDL) website, that the power generation using renewable biomass sources was not representing any prevailing practice at the time of project conceptualisation and that there was only one similar operating project of 4.5 MW capacity and one project (equivalent to 7.5 MW installed capacity) under implementation in the Karnataka region. The 4.5 MW capacity biomass plant has subsequently been registered as a CDM project as well. This confirms that power generation using non-conventional sources was not a common practice in spite of governmental promotions like tax holidays, subsidies etc.
The revised PDD in line with the above arguments and together with detailed excel sheet calculations (for demonstrating the benchmark and the project IRR for the two scenarios have been enclosed in the response from the project participant)

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

Yours faithfully
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Einar Telnes
Director
International Climate Change Services

C Kumaraswamy
Manager – South Asia
Climate Change Services