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CDM Executive Board

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TÜV®

Our / Your Reference	Contact	Direct Dial	Date
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Request for Review
"15 MW grid-connected wind power project by MMTC in Karnataka " (1797)

Dear Sir/Madam,

Please find below the response of the project participant (MMTC Limited) and the TÜV NORD JI/CDM Certification Program to the three (3) requests for review for the above mentioned project no. 1797.

If you have any questions do not hesitate to contact us.

Yours sincerely,

TÜV NORD JI/CDM Certification Program

Rainer Winter

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Request for Review (1-1,2-1,3-1)	
Issue raised by EB Members / DNA	1. The DOE is requested to explain the suitability of the 16% benchmark set by the (KERC), given the EB guidance (EB 40 report, para. 40) that this is not a suitable benchmark for investment analysis for CDM projects in India
Response of project participant	Please refer separate response of the PP.
Response of DOE	At the outset we wish to submit that this project was submitted to EB Secretariat on April 9, 2008. The EB 40 meeting was held between June 15th and 17th 2008. Hence, the wisdom of EB was not available to the DOE at the time of submission to EB. DOE accepted the return because it satisfied the conditions stipulated by the Additionality Tool, Ver. 04, then current version. The Additionality Tool states, "The benchmark is to represent standard returns in the market, considering the specific risk of the project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer". Since KERC recommended return represents standard return permitted to non-conventional energy projects and takes into consideration the specific risk of the project type[1], it fulfilled the criteria laid down by the EB. Hence, DOE considered the return to be suitable benchmark. Nevertheless, before accepting 16% ROE as suitable benchmark for the project activity, DOE considered two other alternatives and chose the most conservative of them all. 1. The first alternative considered by the DOE pertains to the study made by Credit Rating Information Services of India Ltd. (CRISIL), a well known rating agency of India, on "Cost of Capital for Central Sector Utilities". The study was commissioned by the Central Electricity Regulatory Commission (CERC), a statutory body. Based on a detailed study of various State Utilities, bond and stock markets, the study recommended a risk free return of 11%. Together with the risk premium at 8.2% CRISIL had recommended a return on equity of 19.2%[2]. 2. The second alternative considered by DOE is based on the Capital Asset Pricing Model (CAPM). In estimating the expected return on equity (ROE), DOE had chosen the most conservative market risk premium and used the published data to arrive at beta value (ß) for the project type as revealed in the following paragraphs: a) Four research publications have been brought out on the equity risk premium for India. Prof J.R. Verma, Professor of Finance at Indian Institute of Management, Ahmedabad and former Full time Member of Securities and Exchange Board of India, has arrived at a risk premium of 8.75%[3]. Study made by Prof. Rajnish Mehra, University of California, Santa Barbara and National Bureau of Economic Research places the risk premium of 9.7%[4]. Prof. Aswath Damodaran's research estimates the risk premium at 8.54%[5]. Finally, CRISIL has arrived at a risk premium at 8.2%[6]. The lowest of the four, viz., 8.2% has been chosen as the market risk premium. b) The weighted average yield of Government securities, which is conventionally taken as a proxy for the risk free rate, during the year 2005-06, relevant to the decision taken year, was 7,34%[7].

[1] The rate has been fixed uniformly for all non-conventional power projects and not for any specific project
[2] http://cercind.gov.in/2612/Order%20Final.pdf Page No. 44.
[3] Prof. Jayant R. Verma and Samir K. Barua, *A First Cut Estimate of the Equity Risk Premium in India* Indian Institute of Management, Ahmedabad, can be accessed at http://www.iimahd.ernet.in/~jrvarma/papers/WP2006-06-04.pdf
[4] *The Equity Premium in India*, Prof. Rajnish Mehra, can be accessed at http://www.academicwebpages.com/preview/mehra/pdf/Equity%20Premium%20in%20India.pdf
[5] *Country Default Sprads and Risk Premiums*, Aswath Damodaran, can be accessed at http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctryprem.html
[6] *Cost of Capital for Central Sector Utilities*, CRISIL Advisory Services can be accessed at http://cercind.gov.in/rep1304.pdf
[7] http://rbidocs.rbi.org.in/rdocs/AnnualReport/PDFs/72295.pdf page 182

	c) The equity beta value of the wind power company, listed and traded in the Indian stock exchanges, works out to 1.72. Based on the debt equity ratio of the company, the asset beta of the company has been arrived at 1.1. d) Using the above data, the ROE for the project type works out to 16.71% 3. As per the Additionality Tool the internal benchmark cannot be used when there can be more than one project developer, which is the case here. However, the return earned on equity by the company has been very high[8]. As the project is entirely equity financed, there are no other alternative methods to estimate the expected return on equity. Thus, the DOE had three options to choose from, viz., CRISIL recommended return of 19.2%, CAPM based return of 16.71% and KERC recommended return of 16%. Since of the three, KERC recommended return is the lowest, DOE accepted 16% ROE as suitable benchmark. It is also submitted that the EB expressed its concern over using the CERC recommended return only because it has been used for tariff determination of both CDM and non-CDM projects. In contrast, the KERC recommended return is used for tariff determination of CDM projects only. Moreover, the ROE fixed by the KERC is based on public hearing and hence it has taken into account all the stakeholders' views. Therefore, DOE concluded that a ROE of 16% selected as the benchmark by Project Participant is suitable and justified. Contact person: Ms. Katja Beyer TUV NORD CERT GmbH Langemarckstr. 20 45141Essen Germany Tel: +49 201 825 2755 Mobile: +49 160 888 6612 Fax: +49 201 825 2139 email: kbeyer@tuev-nord.de

Request for Review (1–2,3-2)	
Issue raised by EB-Members / DNA	2. "The DOE is requested to explain how it has validated that the starting date of the project activity complies with the Glossary of CDM terms."
Response of project participant	Please refer separate response of the PP.
Response of DOE	During the validation, following major milestones of the project implementation were presented by the project participant to DOE in order to arrive at the appropriate start date of the CDM project activity.

Date	Milestones	Document

[8] http://www.mmtclimited.com/annualeng05_06.pdf Page 59

19-10-2006	Supplier's Letter to intimate about change in location of the project. Project put on hold	Letter from Vestas RRB
12-12-2006	Approval for the project with alternate site by ICOD[9] (CDM revenues sought)	Agenda dated 11/12/06 and Minutes of meeting of ICOD
12-12-2006	Letter to Vestas RRB	Letter from MMTC
15-12-2006	Acceptance letter by Vestas RRB	Letter from Vestas RRB
24-03-2007	Commissioning of first turbine	Certificate already submitted to DOE
30-03-2007	Commissioning of the complete project.	-do-

At the time of request for registration with the CDM Executive Board (EB) (9th April, 2008) "glossary of CDM terms", version 03 was applicable. As per this, the start date of a project activity was defined as:

"The starting date of a CDM project activity is the earliest date at which either the implementation or construction or real action of a project activity begins. Project activities starting between 1 January 2000 and the date of the registration of a first clean development mechanism project have to provide documentation, at the time of registration, showing that the starting date fell within this period, if the project activity is submitted for registration before 31 December 2005."

Since project activity was delayed due to the change in the proposed project site, soon after the Letter of Intent (LOI) was placed by MMTC, the date of LOI could not be considered as the start date. The next milestone, commissioning of first turbine (24th March 2007) is the real action and was considered as the start date of the project activity, which is included in Table-7.1 of the final validation report.

However, in the recent EB 41 meeting para 67, the start date of the project was further explained as (CDM glossary of terms version 04):

"The start date shall be considered to be the date on which the project participant has committed to expenditures related to the implementation or related to the construction of the project activity. This, for example, can be the date on which contracts have been signed for equipment or construction/operation services required for the project activity. Minor pre-project expenses, e.g. the contracting of services /payment of fees for feasibility studies or preliminary surveys, should not be considered in the determination of the start date as they do not necessarily indicate the commencement of implementation of the project. For those project activities which do not require construction or significant pre-project implementation (e.g. light bulb replacement) the start date is to be considered the date when real action occurs. In the context of the above definition, pre-project planning is not considered "real action". The Board further noted that there may be circumstances in which an investment decision is taken and the project activity implementation is subsequently ceased. If such project activities are restarted due to consideration of the benefits of the CDM the cessation of project implementation must be demonstrated by means of credible evidence such as cancellation of contracts or revocation of government permits. Any investment analysis used to demonstrate additionality shall comply with the requirements of paragraph 7 of the "Guidance on the assessment of investment analysis" (version 02)."

In light of the above guidance in EB 41, starting date of the project activity stands revised as follows:

As stated in the above table, the project participant has committed to expenditures and entered into a formal agreement with the wind turbines supplier M/s Vestas RRB on 15th December 2006.

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Request for Review (2–2)	
Issue raised by EB-Members / DNA	2. The PP is requested to explain and the DOE should validate the appropriateness of a fixed tariff in the sensitivity analysis
Response of project participant	Please refer separate response of the PP.
Response of DOE	As per the latest Guidance on the Assessment of Investment Analysis (version 02, EB 41), the sensitivity analysis should be carried out only for those parameters which constitute more than 20% of the project revenues. The tariff rate is one of the key critical parameter in determining the project's financial viability as it constitutes more than 20% of the project revenues. In the description presented by the project participant, it is quite evident the tariff rate is fixed only for the first 10 years of operation. From the 11th year the tariff rate is subjected to revision as per the clause 5.2 of the PPA. Even if the tariff variation will extend to +20% after 10 years the IRR increases only to 14.68% what is below the benchmark of 16%. Moreover, after 10 years the tariff rate is uncertain and even get reduced, which could considerably affect the project revenues. However, because of the presented power purchase agreement during the validation process the DOE assessed the fixed tariff as conservative and appropriate. Ms. Katja Beyer TUV NORD CERT GmbH Langemarckstr. 20 45141Essen Germany Tel: +49 201 825 2755 Mobile: +49 160 888 6612 Fax: +49 201 825 2139 email: kbeyer@tuev-nord.de

Request for Review (2–3)	
Issue raised by EB-Members / DNA	3. The PP and DOE are requested to explain how a very generic uncertainty of implementing wind power could be interpreted as a project specific barrier.
Response of project participant	Please refer separate response of the PP.
Response of DOE	During the course of validation the prevailing practice barrier was assessed by the validation team as not decisive. The same is stated in the validation report (page 21): *"Furthermore, the additionality case PDD cites under 'Prevailing practice barrier', regulatory barrier's to describe the random and unfavorable state government policies are justified but assessed as not decisive. Further, barriers cited like low penetration of wind power in India and MMTC being one of the early Public Sector Units investing in wind projects were not convincing to validation team".*

	As per the Attachment A to Appendix B of the simplified modalities and procedures for SSC CDM project activities only one of the provided options shall be decisive. The PP worked out the financial and the prevailing practice barrier. Since the investment barrier was demonstrated and evidenced to get a positive validation opinion the project activity got a positive additionality assessment, although the prevailing practice barrier argumentation has not convinced the validation team. Ms. Katja Beyer TUV NORD CERT GmbH Langemarckstr. 20 45141Essen Germany Tel: +49 201 825 2755 Mobile: +49 160 888 6612 Fax: +49 201 825 2139 email: kbeyer@tuev-nord.de