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CDM Executive Board

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Our / Your Reference

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Date
28.03.2008

Request for Review

“Generation of electricity from 9.6 MW capacity wind mills by Sun-n-Sand Hotels Pvt. Ltd. at Bhambarwadi, Maharashtra” (1542)

Dear Sir/Madam,

Please find below the response of the project participant (Sun-n-Sand Hotels Pvt. Ltd.) and the TÜV NORD JI/CDM Certification Program to the four (4) requests for review for the above mentioned project no. 1542.

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

Yours sincerely,

TÜV NORD JI/CDM Certification Program



Rainer Winter

Request for Review (1-1,1-2,1-3,1-4)																	
Issue raised by EB Members / DNA	1. Further clarification is required on how the appropriateness of the benchmark and the input values to the IRR calculation, including the load factor, have been validated.																
Response of project participant	Nil																
Response of DOE	<p>Further to the validation report, the clarification on the appropriateness of the benchmark and input values including the load factor are presented below</p> <p><u>Appropriateness of the benchmark</u></p> <p>The table below presents the parameter considered and the appropriateness thereof</p> <table border="1"> <thead> <tr> <th>Parameters for comparison</th> <th>Project Activity</th> <th>Selected Benchmark (CERC)</th> </tr> </thead> <tbody> <tr> <td>National policy at the time of investment decision</td> <td>Investment decision was taken along with the management decision i.e. 27th June 2005</td> <td>Central Electricity Regulatory Commission (CERC) was constituted as a central nodal body formed under the Electricity Regulatory Commissions Act, 1998, to determine the terms and conditions of tariff, to regulate tariff, and to provide guidelines/notifications related to power sector. 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Nevertheless, the state electricity regulatory commission i.e. Maharashtra Electricity Regulatory Commission (MERC) order dated 24th November 2003, prescribes 16% post tax ROE (higher than the selected benchmark) for wind power projects (refer page 48 of Order: http://www.mercindia.org.in/pdf/Detail_Wind_Energy_Order.pdf) was not chosen for conservativeness.</td> </tr> <tr> <td>Financial indicator</td> <td>Although the Project participant is not an equity investor, the equity IRR is computed based on the equity</td> <td>Post tax equity return has long been an established benchmark in the Indian power sector (electricity generation), whether for conventional fossil fuel fired power generation, hydro power generation or non-conventional/renewable power generation. CERC in its 2003 discussion paper discussed the suitability of the two approaches; Return on capital employed (Project IRR) and Return on equity (Equity IRR) for tariff determination, and concluded that the latter, equity IRR was the preferred and most suitable approach.</td> </tr> </tbody> </table>		Parameters for comparison	Project Activity	Selected Benchmark (CERC)	National policy at the time of investment decision	Investment decision was taken along with the management decision i.e. 27 th June 2005	Central Electricity Regulatory Commission (CERC) was constituted as a central nodal body formed under the Electricity Regulatory Commissions Act, 1998, to determine the terms and conditions of tariff, to regulate tariff, and to provide guidelines/notifications related to power sector. At the time of investment decision of the underlying project activity, CERC notification of March 2004 was available and hence was considered for demonstration of additionality.	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	component of total investment.	Post Tax Return on Equity is comparable with equity IRR demonstrated by the project participant.
<p>Since the regulatory commissions provide a sound, rigorous and transparent basis for the benchmark returns for the power sector and this has been in use in India, it is considered as the appropriate benchmark for the project activity. Hence, equity IRR (post tax) has been used as the financial indicator and is confirmed to be in line with the CERC prescribed benchmark, post tax return on equity.</p> <p><u>Assessment of the Input data/parameters (including the load factor)</u></p> <p>The table given below provides the list of input data/parameters and the means of validation adopted by the validation team.</p>		
Input data/parameter of main sheet IRR calculation (Cp project page of 1542)	Value	Means of validation
1. Capacity of machines	800 KW	Capacity of each WEG is 800 Kw and is cross verified with the technical description ^{/TD/} of project equipments provided by the wind mill supplier (Cp table 7-1 of VR of project page of 1542)
2. Number of machines and project capacity	12	Cross-checked with the purchase orders ^{/PO/} dated 10.08.05 placed on Enercon India Ltd for the purchase of the WEGs (Cp table 7-1 of VR of project page of 1542)
3. Project commissioning date	22 nd March 2006 (Commissioning date of first WTG No 34 at Yeslewadi)	Cross checked with the commissioning report ^{/CR/} .The commissioning dates in chronological order for all 12 WTGs is also cross checked with the commissioning reports ^{/CR/} (Cp table 7-1 of VR of project page of 1542)
4. Load Factor	20%	Load factor (Plant load factor i.e. PLF is also equivalent to Capacity Utilization Factor) is cross verified against the guaranteed electricity generation figures given by the wind mill supplier i.e. Enercon India Ltd. As the project activity is located in the state of Maharashtra, DOE has also cross verified the PLF value considered by the PP with Maharashtra Electricity Regulatory Commission's (MERC) ¹ Order dated 24 th November 2003 which confirms that the wind power projects commissioned from 1 st April, 2003 should consider a PLF of 20% for the purpose of determination of tariff. This assessment further confirms that the PLF value is realistic.
5. Insurance charges	0.15%	Insurance premium is cross checked with Insurance documents provided by the project participant.
6. O & M costs and annual O&M escalation	O&M cost is 1.36% of the capital cost and with an annual escalation of 5%	Operation and maintenance cost of the project activity is cross checked with the operation and maintenance contract ^{/OMC/} dated 10.08.05 signed between PP and the wind mill supplier (Enercon India Ltd) (Cp table 7-1 of VR of project page of 1542)
7. Base year tariff	Rs 3.50 /KWh	Base year tariff rate is cross checked with the Wind Energy purchase agreement dated 31.07.2006 signed between M/s.

¹ http://www.mercindia.org.in/pdf/Detail_Wind_Energy_Order.pdf (section 2.2.2.B, page 43).

		Sun-n-Sand Hotels Pvt. Ltd. and the Maharashtra State Electricity Distribution Company Limited (MSEDCL)
8. Annual escalation of tariff rate	Rs 0.15/KWh	Annual escalation of tariff rate is cross checked with the Wind Energy purchase agreement dated. 31.07.2006 signed between M/s. Sun-n-Sand Hotels Pvt. Ltd. and the Maharashtra State Electricity Distribution Company Limited (MSEDCL)
9. Tariff applicable for year 13	Rs 5.30/KWh	Tariff rate applicable for the 13th year and onwards is cross checked with the Wind Energy purchase agreement dated. 31.07.2006 signed between M/s. Sun-n-Sand Hotels Pvt. Ltd. and the Maharashtra State Electricity Distribution Company Limited (MSEDCL)
10. Tariff applicable beyond 13 th year	Rs 3.50/KWh	Tariff rate applicable beyond 13 th year is cross checked with the Wind Energy purchase agreement dated. 31.07.2006 signed between M/s. Sun-n-Sand Hotels Pvt. Ltd. and the Maharashtra State Electricity Distribution Company Limited (MSEDCL)
11. Project cost	Rs 465 million	Cross-checked with the purchase orders dated. 10.08.05 placed on Enercon India Ltd for the purchase of the WEGs
12. Term loan and interest rate	Rs 350 million at a interest rate of 7.75%	Interest rate on loan is cross checked with the bank loan documents
13. Income tax depreciation rate on WEGs	80%	The incentives provided by the National Government include accelerated depreciation (upto 80% on reducing balance method) and tax holiday under section 80IA of the Income Tax Act, 1961 for 10 years out of the first 15 years. For the incentives offered, a reference may be made to http://www.nedcap.org/index_files/Page2490.htm
14. Book depreciation rate	5.28%	Schedule XIV of Companies Act, 1956, item II (b). The entire plant and machinery is written off in 17 years and ~15 days.
15. Working capital interest rate	9%	Based on the working capital interest presently paid by the company
16. CER price in US\$	13.6	The value is cross checked against the Draft Emission Reduction purchase agreement
17. Baseline emission factor for western region (tCO ₂ /GWh)	906.41	The value is cross checked against the user guide for CO ₂ Baseline Database for the Indian Power Sector (version 2, June 2007)

The validation team confirms that the input data and assumptions against the credible evidences provided by the PP are found to be project specific and valid at the time of investment decision. The input data and assumptions are independently cross verified by the validation team.

Contact person:

Mr. Asim Kumar Jana
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L.B.S. Marg. Ghatkopar (West)
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Request for Review (2-1,2-2,2-3,2-4)

Issue raised by EB-Members / DNA	2. The DOE is requested to explain to the Executive Board the level of assurance with which it can validate that the CDM was considered necessary to overcome the barriers to the development of this project activity considering the delay between the project implementation/commissioning and submission for validation/registration.																		
Response of project participant	Nil																		
Response of DOE	<p>We would like to present below the chronology of project development (with CDM consideration) and its validation cycle</p> <table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Date</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>27th June 2005</td> <td>Management Decision to invest in the project with serious consideration of CDM revenues</td> </tr> <tr> <td>2.</td> <td>10th August 2005</td> <td>Placing the purchase orders for the WTGs</td> </tr> <tr> <td>3.</td> <td>22nd March 2006</td> <td>Commissioning of 1st WTG</td> </tr> <tr> <td>4.</td> <td>14th July 2006</td> <td>Commissioning of the last WTG in the project</td> </tr> <tr> <td>5.</td> <td>17th January 2008</td> <td>Submission for registration</td> </tr> </tbody> </table> <p>1. The time gap between the consideration of CDM revenue as necessary to overcome the barriers by the Board of PP and commencement of the project activity works out as 9 months</p> <p>2. The time difference between the commencement of project activity and submission of validation for registration works out as 21 months</p> <p>All inputs/parameters considered in the project activity are based on MERC/CERC orders, quotations and documents from independent agencies.</p> <p>There has been no change in any of the parameters in the interregnum and as such there were no changes in values of any inputs assumed in establishing the additionality of the project.</p> <p>The only variable factor is the PLF as the project could achieve higher or lower capacity, as the wind speed could vary.</p> <p>To ensure that there has been no drastic deviation from the assumption made, the Validating team collected the data of power generated since commencement of the commercial activity till December 2007. The data revealed that during the period July 2006 to December 2007 the company had yielded a PLF of only 15.29%, much lower than what has been assumed in the additionality computation.</p> <p>It is based on the foregoing exercise that the DOE could conclude the need for CDM to overcome the barrier with high degree of assurance.</p> <p>The project promoters have funded the project activity through a combination of equity funds and bank loan. The actual returns (cash inflow) from the WTGs in past operating period have hardly been sufficient to service their debts (interest on bank loans). The promoters hope to recover these funds and operate the WTGs profitably with the help of CDM funds. Nevertheless, the continued operation of this project activity is not self sustainable on a long term basis without the supplementary CDM benefits.</p>	Sr. No.	Date	Description	1.	27 th June 2005	Management Decision to invest in the project with serious consideration of CDM revenues	2.	10 th August 2005	Placing the purchase orders for the WTGs	3.	22 nd March 2006	Commissioning of 1 st WTG	4.	14 th July 2006	Commissioning of the last WTG in the project	5.	17 th January 2008	Submission for registration
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	<p>If this information is not sufficient to close the request for review, we appoint Mr Asim Kumar Jana as our contact person.</p> <p>Mr. Asim Kumar Jana TUV India Pvt. Ltd. 801, Raheja Plaza - I L.B.S. Marg. Ghatkopar (West) Mumbai - 400 086 India Phone: +91 22 66477074 Email: jana@tuv-nord.com</p>
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Request for Review (3-1,3-2,3-3,3-4)

Issue raised by EB-Members / DNA	3. Further clarification is required on the nature of the benefits obtained by the project activity from the national and sectoral policies for promoting renewable energy generation in India (PDD, p10) and whether their impact, if any, have been considered in the IRR calculations submitted.		
Response of project participant	The relevant benefits offered by national/sectoral policies for promoting renewable electricity generation in India are set out below:		
	Under Indian Electricity Act 2003	<p>Part VII, section 61(h)²: Tariff for renewable energy projects to be set by the regulatory commission for promotion of co-generation and generation of electricity from renewable sources of energy</p> <p>Section 86(1)³: Promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution license;</p>	<p>The applicable tariff for the project has been set by the Maharashtra Electricity Regulatory Commission, which has been considered in the IRR workings</p> <p>This pertains to provision of necessary evacuation facility and grid connectivity required for setting up renewable energy projects.</p>
	Under Indian Income Tax Act 1961	<p>Accelerated depreciation⁴ benefit at the rate of 80% using reducing balance method</p> <p>Tax Holiday⁵ for a period of 10 consecutive years out of the first 15 years of operations</p>	<p>This has been considered in the IRR workings (refer Main Sheet of the IRR computation spreadsheet, cell no. C 42)</p> <p>This has been considered in the IRR workings (refer P&L and P&L CDM sheets of IRR calculation spreadsheet, cell no. C58:L58)</p>
Response	The provisional incentives under Indian Electricity Act, 2003 and Income Tax Act 1961 as explained above		

² http://powermin.nic.in/JSP_SERVLETS/internal.jsp

³ http://powermin.nic.in/acts_notification/electricity_act2003/regulatory_commissions.htm

⁴ <http://www.ireda.in/incentives.asp>, http://www.nedcap.org/index_files/Page2490.htm

⁵ <http://incometaxindia.gov.in/prototype/acts/income%20tax%20act/80-ia.asp>

of DOE	<p>has been considered in the IRR computation sheet (Cp project page of 1542) the same was validated and found ok.</p> <p>For the incentives offered, reference may be made to http://www.nedcap.org/index_files/Page2490.htm</p> <p>The additionality computation takes into account both the accelerated depreciation (Cp Cell C42 of Main sheet of IRR Calculations of project page of 1542,) as well as tax holiday (Cp Cell C58:L58 of Main sheet of IRR Calculations of project page of 1542).</p> <p>Under the framework of Indian regulations and guidelines, no other incentives are availed by the PP.</p> <p>Contact person:</p> <p>Mr. Asim Kumar Jana TUV India Pvt. Ltd. 801, Raheja Plaza - I L.B.S. Marg. Ghatkopar (West) Mumbai - 400 086 India Phone: +91 22 66477074 Email: jana@tuv-nord.com</p>
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