



Mr. Hans Jurgen Stehr  
Chair, CDM Executive Board  
UNFCCC Secretariat  
[CDMinfo@unfccc.int](mailto:CDMinfo@unfccc.int)

November 9<sup>th</sup> 2007

Re: Request for review of the request for registration for the CDM project activity “Enercon Wind Farms in Karnataka Bundled Project – 30.40 MW” (UNFCCC No. 1291)

Dear Mr. Stehr

SGS has been informed that the request for registration for the CDM project activity “Enercon Wind Farms in Karnataka Bundled Project – 30.40 MW” (UNFCCC No. 1291) is under consideration for review because three requests for review have been received from members of the Board.

The requests for review are based on the same reason outlined below. SGS would like to provide an initial response to the issues raised by the request for review:

**Request 1, 2 and 3:**

- 1. The additionality of the project activity should be demonstrated using version 3 of the additionality tool.*

**SGS Response to the Comments:**

DoE would like to through light on the chronology of the Project activities CDM cycle.

Sr. No.	Date	Description
1	28 <sup>th</sup> Nov. 2006	PDD for the project activity was made public on UNFCCC website. PDD uses most recent version of methodology ACM0002 version 6 with the applicable tool for the demonstration and assessment of additionality version 2
2	15 <sup>th</sup> Dec. 2006	EB 28 (para 20) decided to consider the revised tool for the demonstration and assessment of additionality in the next meeting.
3	27 <sup>th</sup> Dec. 2006	Period for submission of Public comments was over.
4	16 <sup>th</sup> Feb. 2007	EB 29 (para 35) agreed to the revision of the tool for the demonstration and assessment of additionality.
5	14 <sup>th</sup> Aug. 2007	Project activity was submitted for Request for Registration (RfR) to UNFCCC; i.e. within less than 8 months of the date when the version 3.0 of the tool of additionality was made public.
6	6 <sup>th</sup> Sept. 2007	Project activity was published on UNFCCC website under RfR
7	30 <sup>th</sup> Oct. 2007	CDM-EB informed DoE that project activity was under review.

It may be noted that there was a lack of clarity on the effective date of revision of an approved tool until EB30. In EB 30, specific mention of the **‘tool’** (additionality tool) was added to the revised procedures for the revision of an approved baseline and monitoring methodology and it was clarified that the revision of an approved methodology **or tools referred to in an approved methodology** shall not effect:

- registered CDM project activities during their crediting period;
- project activities that have been published for public comments for validation using the previously approved methodology or tool, so long as the project activity is submitted for registration **within 8 months (previously 8 weeks)** of the date when the revision became effective.

Version 3.0 of the additionality tool was made public on 16<sup>th</sup> February 2007 and the Project Activity was published for public comments for validation prior to the Version 3.0 of the additionality tool and submitted for RfR before end of the grace period of eight months as mentioned above.

It may be noted that there was a lack of clarity on the effective date of revision of an approved tool until EB30. In EB 30, specific mention of the 'tool' (additionality tool) was added to the revised procedures for the revision of an approved baseline and monitoring methodology and it was clarified that the revision of an approved methodology or tools referred to in an approved methodology shall not effect

- i. registered CDM project activities during their crediting period;
- ii. project activities that have been published for public comments for validation using the previously approved methodology or tool, so long as the project activity is submitted for registration within 8 months (previously 8 weeks) of the date when the revision became effective.

In light of the above, we would appreciate if the additionality tool version 2.0 may be allowed to be applied to the Project Activity. We would of course be guided by the Executive Board in this regard.

2. In accordance with sub-step 2b of the additionality tool, project IRR should be calculated for the investment analysis. This project IRR should be compared to an appropriately justified benchmark.

**SGS Response to the Comments:**

We recognize that in carrying out the benchmark analysis, the additionality tool requires calculation of the Project IRR and comparison with benchmark returns (for project IRR) for the power/wind generation sector in India.

The reason why DOE had accepted the Equity IRR approach is because post tax equity return benchmark is publicly available as it is set by the electricity regulatory commissions for tariff determination (of power generation projects in India) provides a transparent, credible and conservative benchmark for returns from investment in power projects in India.

Further, an investor looks at the equity IRR when making an investment decision in the project. It also stands to reason that firms that can avail of debt financing (project financing) will attempt to optimize the debt financing in order to enhance their equity returns.

Using the project IRR approach has the potential of allowing otherwise profitable projects to get through. To explain this point we have considered following examples which is the case with project activity as well. Suppose there are two firms and each undertakes investment in identical projects (Investment of 100, project lifetime of 15 years) and their project returns are 10%. Firm A has weak financials and no track record in implementing such projects and therefore is forced to use a 100% equity financing for its project because it is not able to avail of debt financing. Firm B which is financially very strong and has a strong track record in implementing such projects uses a 90:10 debt:equity financing structure. Further, Firm B is able to avail long tenure debt (say 15 years) and at very competitive interest rates (say at 8%), given its strong negotiation position. As both have invested in identical projects, the project IRR of both the projects would be same but the equity IRR of firm B is likely to be very high (approx. 25.5%) as compared to Firm A (10%).

	Project cash flows	Debt cash flows	Equity cash flows = (Project cash flows - debt cash flows)
Year 0	-100	-90	-10
Year 1	13.15	10.515	2.635
Year 2	13.15	10.515	2.635
Year 3	13.15	10.515	2.635
Year 4	13.15	10.515	2.635
Year 5	13.15	10.515	2.635
Year 6	13.15	10.515	2.635
Year 7	13.15	10.515	2.635

	Project cash flows	Debt cash flows	Equity cash flows = (Project cash flows - debt cash flows)
Year 8	13.15	10.515	2.635
Year 9	13.15	10.515	2.635
Year 10	13.15	10.515	2.635
Year 11	13.15	10.515	2.635
Year 12	13.15	10.515	2.635
Year 13	13.15	10.515	2.635
Year 14	13.15	10.515	2.635
Year 15	13.15	10.515	2.635
IRR	10.0%	8.0%	25.5%

If an equity IRR approach is used, Firm A's project would pass the additionality test while Firm B's project would not pass the test. This is the desired outcome. On the other hand, if a project IRR approach is used, it would not distinguish between Firm A and Firm B's projects – either both would pass or both would fail (depending on if the sectoral benchmark works out to above 10% or below 10%).

To summarize, investment decisions are as much dependent on project characteristics as on financing structure and it would not be appropriate to ignore the financing structure aspect. Further, the very objective of having a sectoral benchmark that is free from project or firm related aspects will get defeated if it is not widely and publicly available. The benchmark for equity IRR is widely and publicly available and it makes sense to consider equity IRR because this approach is able to discriminate between additional and non-additional projects more effectively.

We would therefore request the Executive Board to reconsider the approach set out in Benchmark Analysis (sub-step 2b) and allow the appropriate parameter (equity IRR or project IRR) to be used wherever there is a publicly available benchmark.

3. Further justification and validation of the plant load factor and electricity tariff are required.

**SGS Response to the Comments:**

*Justification of PLF:*

The project activity involves generation and sale of the electricity to the state utility, therefore in accordance with the Electricity Act 2003, the tariff for the project activity is determined by the Karnataka Electricity Regulatory Commission ("KERC") (<http://www.kerc.org/english.html>). KERC Order for determination of tariff from wind generation sources has been based on extensive consultation, obtaining information from various stakeholders (including wind farm developers, government agencies, utilities and other stakeholders). The KERC order sets out detailed discussions and submissions made by various stakeholders on each of the key parameters that affect tariff determination of wind projects. For instance, the following stakeholders had made representations to the KERC for determination of appropriate PLF for wind energy projects in Karnataka, Karnataka Power Transmission Corporation Limited (<http://www.kptcl.com/>), Karnataka Renewable Energy Development ([www.kredl.kar.nic.in/](http://www.kredl.kar.nic.in/)), Indian Wind Energy Association (<http://www.inwea.org/>), Indian Wind Power Association, Reliance Energy ([www.rel.co.in/](http://www.rel.co.in/)), Synergy Global ([www.synergy-global.com/](http://www.synergy-global.com/)), etc.

KERC after reviewing the appeals of the various petitioners and examining the data available on wind profile in the state, in its order dated 18/January/2005 (Appendix 2), ruled as follows "The Commission, after considering the above proposals and after examining the actual PLF achieved by the plants in operation, decides that a PLF of 26.5%<sup>1</sup> would be reasonable for tariff computation." [http://www.kerc.org/order2005/Order%20on%20NCE%20Tariff%20\(FINAL\).doc](http://www.kerc.org/order2005/Order%20on%20NCE%20Tariff%20(FINAL).doc)

<sup>1</sup> Refer: Page 16 of KERK Order dated 18<sup>th</sup> January 2005.



Therefore DOE believed that it is appropriate reference to validate the PLF in the investment analysis. Further, to take care of uncertainties, the range of PLFs that are indicated in KERC Order has been used as part of the sensitivity analysis.

*Justification of Electricity tariff:*

All the individual subprojects that comprise the Project Activity are located in the state of Karnataka and come under the purview of the Karnataka Electricity Regulatory Commission "KERC" for tariff determination. As per the applicable KERC Order dated 18<sup>th</sup> January 2005, the tariff for the projects have been fixed at Rs. 3.40/kWh<sup>2</sup>. [http://www.kerc.org/order2005/Order%20on%20NCE%20Tariff%20\(FINAL\).doc](http://www.kerc.org/order2005/Order%20on%20NCE%20Tariff%20(FINAL).doc)

This has also corroborated from the Power Purchase Agreement of the project activity. The PPA and KERC order was validated during the validation process. The same has been considered for carrying out the financial analysis of the project.

We hope that above explanation would have cleared the comments raised by the CDM-EB.

Vikrant Badve (+91 9860365556) will be the contact person for the review process and is available to address questions from the Board during the consideration of the review in case the Executive Board wishes.

Yours sincerely

Sanjeev Kumar  
Lead Auditor  
[Sanjeev.kumar@sgs.com](mailto:Sanjeev.kumar@sgs.com)  
T: +91 124 23 99990 - 98  
M: +91 98717 94628

Irma Lubrecht  
Technical Reviewer  
[Irma.lubrecht@sgs.com](mailto:Irma.lubrecht@sgs.com)  
T: + 31 181 693287  
M: + 31 651 851777

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<sup>2</sup> Refer: Page 19 of KERC Order dated 18<sup>th</sup> January 2005.