Mr. Hans Jurgen Stehr
Chair CDM Executive Board
UNFCCC Secretariat
CDMinfo@unfccc.int

November 13th 2007

Re: Request for review of the request for registration for the CDM project activity "Enercon Wind Farms in Karnataka Bundled Project - 73.60 MW" (UNFCCC No. 1286)

Dear Mr. Stehr

SGS has been informed that the request for registration for the CDM project activity "Enercon Wind Farms in Karnataka Bundled Project - 73.60 MW" (UNFCCC No. 1286) is under consideration for review because four requests for review have been received from members of the Board.

The requests for review are based on the reasons outlined below. SGS's initial response to the issues raised by the request for review is as follows:

Request 1 2 3 and 4:

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	28th 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	15th Dec. 2006	EB 28 (para 20) decided to consider the revised tool for the demonstration and assessment of additionality in the next meeting.
3	27th Dec. 2006	Period for submission of Public comments was over.
4	16th Feb. 2007	EB 29 (para 35) agreed to the revision of the tool for the demonstration and assessment of additionality.
5	8th Aug. 2007	Project activity was submitted for Request for Registration (RfR) to UNFCCC.
6	5th Sept. 2007	Project activity was published on UNFCCC website under RfR
7	30th 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:

(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.

Version 3.0 of the additionality tool was made public on 16th 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 registration before end of the grace period of eight months as mentioned above.

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
Year 8	13.15	10.515	2.635
Year 9	13.15	10.515	2.635

	Project cash flows	Debt cash flows	Equity cash flows = (Project cash flows - debt cash flows)
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 Power Transmission Corporation Limited (http://www.kptcl.com/) Karnataka Renewable Energy Development (www.kredl.kar.nic.in/) Indian Wind Energy Association (http://www.inwea.org/) Indian Wind Power Association Reliance Energy (www.rel.co.in/) Synergy Global (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 18th January 2005 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%[1] would be reasonable for tariff computation." http://www.kerc.org/order2005/Order%20on%20NCE%20Tariff%20(FINAL).doc

Therefore DOE has 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 18th January 2005 the tariff for the projects have been fixed at Rs. 3.40/kWh[2].
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.

4. *The PP shall further demonstrate the consideration of CDM in their decision making process.*

SGS Response to the Comments:

The Karnataka Electricity Regulatory Commission had approved a model power purchase agreement (PPA) that were to be entered between the wind project developer/investors and the off taker i.e. Karnataka Power Transmission Corporation Limited ("KPTCL"). As per the terms of this model PPA the CDM revenues were to be shared between the wind project owner and KPTCL in the ratio of 30:70.

The Project Proponent Enercon was among the wind project developers in Karnataka that submitted written responses to KERC on the issue of introduction of sharing of CDM revenues with KPTCL. KERC's order dated 17th September 2003 for approval of the model PPA carries detailed discussions on the submissions made by Enercon Indian Wind Power Association (IWPA) and other wind project developers. Subsequently in 2005 KERC after considering the representations made by IWPA/project developers removed the CDM revenue sharing clause vide its order dated 18th January 2005. The concerns raised by IWPA/wind project developers pertaining to sharing of CDM revenues are also discussed in this KERC order. The project proponent Enercon India Limited is a leading member of the IWPA. The tariff hearing for the said KERC order was attended by Mr. A.V. Raghavan - Vice President of Enercon on behalf of IWPA. Evidence of this is available on KERC order dated 18th January 2005 "Tariff of Renewable Sources of Energy" available on http://www.kerc.org/order2005/Order%20on%20NCE%20Tariff%20(FINAL).doc.

The KERC order on model PPA that contained CDM sharing clause and the KERC tariff order are public documents that are available at http://www.kerc.org/orders2003/wind%20mill%20ppas.doc. These documents provide transparent and credible evidence that Project proponent was aware about CDM benefits and had considered the same while undertaking the project. In addition to the above, documents used as evidence regarding the consideration of CDM benefits for each individual sub project were also provided to the DOE during validation. Thus it was validated that Project proponent has considered CDM funds prior to start of the project activity.

[1] Refer: Page 16 of KERC Order dated 18th January 2005.

[2] Refer: Page 19 of KERC Order dated 18th January 2005.

5. *The DOE shall further clarify how they have verified and validated the sensitivity analysis.*

SGS Response to the Comments:

The project activity involves 33 independent project participants and Enercon India Ltd. is co-ordinating the project activity for CDM. The financial analysis shown in the excel sheet includes the details regarding the project finance from individual project participant. The IRR for each of the project participant was calculated based on the information like loan amount equity participation rate of interest for the loan and loan repayment period. The same information was validated during the site visit through the project finance details available with the project proponent i.e. Enercon India Ltd. The parameters used for IRR calculation were also used for Sensitivity Analysis and thus it was validated and verified. Because of the large number of project participants, project proponent has considered example of single project proponent for which having the highest IRR compared to the other project participants. As mentioned in the validation report submitted for registration the sensitivity analysis and financial analysis was verified through the verification of the assumptions and calculations for IRR values of all the sub-bundles. The IRR value in the excel sheet was checked with those mentioned in Appendix 3 of the PDD and thus it is validated.

6. *The PP shall demonstrate that the project activity is not a common practice in the region.*

SGS Response to the Comments:

Installed capacity of wind in India is about 15% of its potential. In Karnataka against an assessed wind potential of 7023 MW the state currently has installed wind capacity of 853 MW as of 31st March 2007 which is about 12% of its potential (Refer table below). In 2004 when the project activity was started the installed capacity of wind in Karnataka was 208 MW barely 3% of its potential. The table below provides details of wind capacity additions in Karnataka since the promotional policy for wind was first introduced in 1994-95.

Sr.NO	Financial year	Capacity allocated in MW	Capacity commissioned in MW
1	1994-95	0.55	0.55
2	1995-96	4.00	1.35
3	1996-97	14.56	3.95
4	1997-98	32.50	12.04
5	1998-99	45.60	1.25
6	1999-00	394.16	18.09
7	2000-01	125.60	3.75
8	2001-02	358.30	28.80
9	2002-03	806.05	55.46
10	2003-04	409.10	83.17
11	2004-05	555.40	204.55
12	2005-06	1575.10	174.63
13	2006-07	2397.20	265.95
14	2007-08	305.00	-
	Total	**7023.12**	**853.54**

More than 75% of Karnataka's wind capacity has been added in the last three years. It is interesting to note that during this period the regulatory framework for wind investments in Karnataka have reduced the tariff benefits to wind projects. Since 2003-04 close to 720 MW of wind projects have come up in Karnataka. Out of the projects that are currently available on the UNFCCC website 190 MW of registered wind projects are from Karnataka close to 269 MW of wind projects are under the validation and registration process and another 150 MW of wind is currently in project development stage which will enter the CDM pipeline soon. Out of the 720 MW that has come up 609 MW of capacity or close to 85% are already in the CDM pipeline and more are expected to follow.

A more relevant common practice test is the amount of wind power generation as compared to the overall electricity generation availability for Karnataka. In 2004–05 wind electricity generation in Karnataka was 489.53 GWh[3] and the total electricity availability at bus-bar in the state of Karnataka was 33523.92 GWh[4]. This works out to 1.45% showing that wind energy power generation is insignificant as compared to other power project generation sources in Karnataka. Please note that this wind generation is for all wind projects (including CDM projects). If one were to remove the CDM wind generation from the above data the percentage would be still lower.

Hence wind power project development in Karnataka is insignificant when compared to the power sector of Karnataka. Thus it was validated that the wind power generation is not a baseline scenario in the region where project activity is located.

7. *The DOE shall further clarify how they have validated consultations and comments by stakeholders and the appropriateness of procedures implemented.*

SGS Response to the Comments:

The project proponent has published advertisement in the local newspaper regarding the local stakeholder consultation meeting for the project activity. During the validation site visit the photocopy of the advertisement was submitted to the DOE and the dates mentioned in the PDD were checked with the photocopy. Also during the site visit local stakeholder consultation was conducted which was attained by the company representatives and representative from local community. Thus the local consultation meeting was verified during the site visit and also it was verified that the comments from local stakeholder during the consultation meeting were taken care and write-up under section E of PDD was verified and thus accepted. The same was mentioned in the validation report submitted during the RfR (Request for Registration).

8. *The PP shall further provide information on the specific location of each of the installed equipment.*

SGS Response to the Comments:

Details of specific location of each of the installed equipment are attached below:

Sr. No	Name of Customers	Capacity (MW)	Name of Site	District	Location No.	Latitude	Longitude
1	Primetex Apparels India	0.6	Vanivilas Sagar	Chitradurga	76	$13^0$45" - $13^0$58"	$76^0$29" - $76^0$31"
2	Patel Shanti Steels P. Ltd.	1.2	Vanivilas Sagar	Chitradurga	72,47	$13^0$45" - $13^0$58"	$76^0$29" - $76^0$31"

[3] Table 3.4 titled "Gross Electrical Energy Generation (Utilities Only) Primemoverwise, Regionwise / Statewise During 2004-05" in chapter 3 of the CEA general review 2006 available at http://www.cea.nic.in/power_sec_reports/general_review/index_general_Review.html

[4] Table 5.3 titled "Statewise System Losses During 2004-05" in chapter 5 of the CEA General review 2006 available at http://www.cea.nic.in/power_sec_reports/general_review/index_general_Review.html

Sr. No	Name of Customers	Capacity (MW)	Name of Site	District	Location No.	Latitude	Longitude
3	Laxmi Organics	1.2	Vanivilas Sagar	Chitradurga	52,53	$13^0$45” - $13^0$58”	$76^0$29” - $76^0$31”
4	Rohit Surfactants P.Ltd	6	Vanivilas Sagar	Chitradurga	29,30,31,32,35 38,39,40,41,43	$13^0$45” - $13^0$58”	$76^0$29” - $76^0$31”
5	Cooper foundry	2.4	Vanivilas Sagar	Chitradurga	48,49,50,51	$13^0$45” - $13^0$58”	$76^0$29” - $76^0$31”
6	I. G. E. (India)	0.6	Vanivilas Sagar	Chitradurga	15	$13^0$45” - $13^0$58”	$76^0$29” - $76^0$31”
7	International Conveyors Ltd	0.6	Vanivilas Sagar	Chitradurga	13	$13^0$45” - $13^0$58”	$76^0$29” - $76^0$31”
8	Jitendra D. Majetha	0.6	Vanivilas Sagar	Chitradurga	57	$13^0$45” - $13^0$58”	$76^0$29” - $76^0$31”
9	Swaraj PVC Pipes P. Ltd.	0.6	Vanivilas Sagar	Chitradurga	14	$13^0$45” - $13^0$58”	$76^0$29” - $76^0$31”
10	Shilpa Medicare Ltd.	1.2	Vanivilas Sagar	Chitradurga	18,19	$13^0$45” – $13^0$58”	$76^0$29” - $76^0$31”
11	Amrit Bottlers	1.2	Vanivilas Sagar	Chitradurga	24,25	$13^0$45” - $13^0$58”	$76^0$29” - $76^0$31”
12	Brindavan Agro	1.2	Vanivilas Sagar	Chitradurga	42,44	$13^0$45” - $13^0$58”	$76^0$29” - $76^0$31”
13	MK Agrotech Private Ltd	1.2	Vanivilas Sagar	Chitradurga	10,11	$13^0$45” – $13^0$58”	$76^0$29” - $76^0$31”
14	Unnathi Projects Ltd	2.4	Vanivilas Sagar	Chitradurga	21,22,23,73	$13^0$45” - $13^0$58”	$76^0$29” - $76^0$31”
15	S.E.Investment	2.4	Vanivilas Sagar	Chitradurga	28,33,34,37	$13^0$45” - $13^0$58”	$76^0$29” - $76^0$31”
16	Jubilee Textiles	0.8	GIM-II	Chitradurga	3	$13^0$57” - $47^0$01”	$76^0$24” - $76^0$29”
17	Amrit Bottlers	0.8	GIM-II	Chitradurga	21	$13^0$57” - $47^0$01”	$76^0$24” - $76^0$29”
18	Srinivasa Cystine Ltd	1.6	GIM-II	Chitradurga	17,18	$13^0$57” - $47^0$01”	$76^0$24” - $76^0$29”
19	B.V.Finance and leasing	1.6	Gim-II	Chitradurga	19,20	$13^0$57” – $47^0$01”	$76^0$24” - $76^0$29”
20	Brindavan Agro	3.2	GIM-II	Chitradurga	22,26,27,28	$13^0$57” - $47^0$01”	$76^0$24” - $76^0$29”
21	Avanti Feeds Ltd	3.2	GIM-II	Chitradurga	13,14,15,16	$13^0$57” - $47^0$01”	$76^0$24” - $76^0$29”
22	Indian power corporation	10.40	GIM-II	Chitradurga	23,24,25,29,30 31,32,33,34,52 53,54,55	$13^0$57” - $47^0$01”	$76^0$24” - $76^0$29”
23	Neharaj Energy	0.8	GIM-II	Chitradurga	2	$13^0$57” - $47^0$01”	$76^0$24” - $76^0$29”
24	Vivek Trading Co.	0.8	GIM-II	Chitradurga	4	$13^0$57” - $47^0$01”	$76^0$24” - $76^0$29”

Sr. No	Name of Customers	Capacity (MW)	Name of Site	District	Location No.	Latitude	Longitude
25	Unnathi Project Ltd	0.8	GIM-II	Chitradurga	11	$13^0$57" - $47^0$01"	$76^0$24" - $76^0$29"
26	Mumbai Stock Brokers Pvt. Ltd.	0.8	Gim-II	Chitradurga	40	$13^0$57" - $47^0$01"	$76^0$24" - $76^0$29"
27	Siddaganga Oil Extractions Ltd.	1.6	GIM-II	Chitradurga	63,64	$13^0$57" - $47^0$01"	$76^0$24" - $76^0$29"
28	Prasad Technology Park	1.6	GIM-II	Chitradurga	10,12	$13^0$57" - $47^0$01"	$76^0$24" - $76^0$29"
29	D. R. Container Ter"al	1.6	Gim-II	Chitradurga	41,42	$13^0$57" - $47^0$01"	$76^0$24" - $76^0$29"
30	Enercon Wind Farms (Krishna) Ltd	15.00	Gadag	Gadag	1 to 25	$14^0$11" - $14^0$14"	$76^0$43" - $76^0$45"
31	Enercon Wind Farms (Karnataka) Ltd	3.20	Gadag	Gadag	26,27,28,29	$14^0$11" - $14^0$14"	$76^0$43" - $76^0$45"
32	Dinesh Pouches	0.8	EP-II	Chitradurga	2	$13^0$58" - $14^0$02"	$76^0$17" - $76^0$20"
33	Ush Dev International	1.6	EP-II	Chitradurga	34	$13^0$58" - $14^0$02"	$76^0$17" - $76^0$20"
	Total	73.6					

The maps of site showing location of the respective installed equipments have been provided as Annex 1 with the response.

Annex 1.1: - Site map of Vanivilas Sagar
Annex 1.2: - Site map of GIM-II
Annex 1.3: - Site map of Gadag
Annex 1.4: - Site map of EP-II

9. *The DOE shall further clarify on the entity performing the validation activity and its accreditation status.*

SGS Response to the Comments:

Validation of this project was done by the SGS teams in India and the UK. The staff members involved in the validation have relevant authorisations to work on validation assignments. SGS India is an affiliate of SGS UK. SGS UK is having the accreditation from UNFCCC. Same was mentioned in the Summary on page 2/46 of the validation report submitted during RfR.

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
T: +91 124 23 99990 - 98
M: +91 98717 94628

Siddharth Yadav
Technical Reviewer
Siddharth.yadav@sgs.com
T: +44 1276 697838
M: +44 7712 785772

Annex 1: Location Map of Project Activity
- Annex 1.1: Site map of Vanivilas Sagar
- Annex 1.2: Site map of GIM-II
- Annex 1.3: Site map of Gadag
- Annex 1.4: Site map of EP-II