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Att: CDM Executive Board

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CDM Ref 0991	MLEH/CK	22 December 2008

Response to requests for review
"Bundled Wind power project in Tamilnadu, India co-ordinated by the TamilNadu Spinning Mills Association (TASMA)" (0991)

Dear Members of the CDM Executive Board,

We refer to the issues raised by the requests for review by three Board members regarding our request for issuance for the project activity 0991 "*Bundled Wind power project in Tamilnadu, India co-ordinated by the TamilNadu Spinning Mills Association (TASMA)"* and would like to provide our initial response to issues raised.

Comment 1:
Further clarification is required on how the DOE verified that the approach of applying the electricity generation from the two WEGs connected to HTSC No.740 as electricity supply to the grid, is in accordance with the revised monitoring plan which requires that the net electricity supplied to the grid (export minus import) to be measured by meters at substation and certified by TNEB statement.

DNV Response

As per the revised monitoring plan, the net electricity supplied to the southern grid by the project activity needs to be monitored through the actual measurement records of the energy meter readings in the substation.

In the case of the HTSC no 740, three WEGs are connected to the energy meter (HTSC # 740). Of the three, only two form a part of the CDM project while one is not. The HTSC 740 meter is under the purview of the TNEB (Tamilnadu Electricity Board – a state government power utility) with regard to the maintenance and calibration. The TNEB officials record the readings from the meter on a monthly basis and this forms basis for the net electricity supplied to the grid by the three WEGs.

The individual LCS (Local Control Station) meters located on the WEGs are under the purview of the project proponent, are calibrated and the generation readings are logged on a daily basis by the project proponent and archived by TASMA on a monthly basis.

DNV during the verification had observed that HTSC#740 had three meters connected to the meter and one of the WEG is not part of the CDM project bundle. The monthly readings of the meter were being recorded by TNEB and the statements were being issued to the project proponent. Also the daily LCS meter readings from the individual machines were being recorded

and archived monthly by TASMA. Since three WEGs of which only two form part of the project activity are connected to the HTSC 740 meter (under purview of TNEB), a CAR was raised by DNV to assess the conservativeness of the generation figure used.

The conservativeness in the approach adopted in arriving at the net generation values was demonstrated by the project proponent by arriving at the net generation of the two WEGs by selecting the lowest figure of the three alternatives as stated.

a. Equally apportioning the TNEB readings (HTSC 740) by the formulae "((TNEB statement /3) *2))" thereby arriving at the generation of two machines.
b. Sum of the month wise LCS meter readings of the two WEGs forming part of the project activity. The LSC meters are calibrated by the project proponent.
c. Average of the month wise LCS meter readings taken from all three WEGs connected to HTSC. No 740 and multiplying by 2.

DNV could check the conservativeness in the approach adopted for arriving at the net generation values considered for the emission reduction calculations and has accepted the methodology adopted considering that the HTSC 740 meter is calibrated by TNEB and the individual WEG LCS meters are also calibrated by the project proponent.

The excel sheet containing the recorded values of the month wise TNEB meter readings and the LCS meter readings of the individual WEG's has been presented along with the workings for arriving at the conservative value of the net generation (attached as Appendix 1 to this response) and the calibration certificate of the LCS meters has been attached as Annexure II of this response.

In order to fully comply with the revised monitoring plan with respect to the two WEGs, connected to HTSC.No 740, a separate metering arrangement has now been planned by Tasma. However to be conservative, the project participant has also now chosen to forego the emission reductions generated from the two WEGs connected to HTSC.No 740 till the time the separate metering arrangement is commissioned.

The revised excel sheet after discounting the emission reductions from HTSC.No 740 with the values of total export, import and net export for the all the machines has been attached as Annexure to the response of comment 2.

Comment 2:
Further information is required on the electricity generation data measured by the power meters installed at substations in accordance with the revised monitoring plan

DNV Response

As per the standard power purchase agreement (PPA) used by the Tamilnadu Electricity Board (TNEB – a state government power utility), the primary recording of the electricity exported by the project activity is through the meter installed at the grid interconnection point which is directly connected to the incoming feeders of the TNEB substation. The meter installed to measure electricity is a bi-directional electronic trivector meter owned and maintained by TNEB. The readings from these meters are recorded by TNEB every month in the form of **Joint Meter Reading** (JMR) and in the presence of both parties (the developer's representative and officials of the state power utility). This JMR is then translated into a "**Monthly generation statement**" and is forwarded by the TNEB to the project participant. The monthly generation statement clearly indicates the electricity exported to the grid, electricity imports from the grid, net electricity export, wheeling units and the units that can be withdrawn by the PP from the grid in case of captive consumption. **The net electricity export value (Export - Import) from the electricity**

monthly generation statement forms the basis for calculations of the emission reductions. The respective monthly statements for the monitoring period have been verified by DNV.

The same procedure is reflected in the revised monitoring plan, and is applicable except for the HTSC 740 meter. The detailed monitoring plan under section B.7.2 of the revised monitoring plan indicates that the secondary monitoring of the electricity generated by the individual WEGs is done through the LCS meters provided in the individual wind mills.

For all the WEGs included in the project activity the project proponent is recording the net generation as per the monthly TNEB statements and daily energy meter readings for all WEGs and these readings are archived by TASMA on a monthly basis. Except for the two WEGs mentioned in the query above, emission reduction calculations have been accounted from the monthly generation statement issued by TNEB. DNV has verified that the readings accounted for the emission reduction calculations against the **TNEB monthly generation statement** and the relevant documents have been archived by TASMA in a controlled format. The TNEB monthly generation statement for one of the machines for the bundle has been attached Annex III of this response. The revised excel sheet after deducting the emission reductions from HTSC.No 740 with the values of total export, import and net export for the all the machines has been attached as Annexure IV to the response.

We sincerely hope that the Board find our elaboration on the above satisfactory.

Yours faithfully
for DET NORSKE VERITAS CERTIFICATION AS

Chandeshekara Kumaraswamy
Manager

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Technical Director
Climate Change Services

Annexure:

I : Excel sheet containing the data of monthly meter readings and LCS data for HTSC.No 740

II : Calibration certificates for the LCS meters connected to HTSC.No.740.

III : Sample of the monthly generation statement from TNEB.

IV : Revised excel sheet data for all the machines providing the total export, total import and Net export.