

MONITORING REPORT

TAMILNADU SPINNING MILLS ASSOCIATION

**Version 1.2
Dated 18nd Dec 2008**

Monitoring Period: 01/01/2007 to 31/12/2007

Title	Bundled wind power project in Tamilnadu, India coordinated by Tamilnadu Spinning Mills Association (TASMA)”
UNFCCC Reference No	991
Registration Date	10th June 2007

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A. Introduction

Tamilnadu Spinning Mills Association (TASMA) (project proponent) has registered their large scale Clean Development Mechanism project namely “Bundled wind power project in Tamilnadu, India coordinated by Tamilnadu Spinning Mills Association (TASMA)” with the Executive Board of United Nations Framework Convention on Climate Change.

As the next step, the project proponent has taken on the process of verification, for which this monitoring report is submitted. The project proponent had opted to go for a fixed crediting period of ten years. This monitoring report is prepared for the purpose of verification of emission reductions generated by the project activity. This report contains monitoring data starting 01/01/2007 till 31/12/2007.

B. Project Reference

Title	Bundled wind power project in Tamilnadu, India coordinated by Tamilnadu Spinning Mills Association (TASMA)”
UNFCCC Reference No	991
Registration Date	10 th June 2007
Crediting Period	01/01/2003 to 31/12/2012
Date of Monitoring Report	18 th December 2008

C. Location

The project sites are located at Udumalpet, Ayakudi, Aralvaimozhi in the districts of Coimbatore, Tirunelveli and Kanyakumari in the Indian State of Tamil Nadu. All the projects are connected to the southern grid

D. Brief Description

This project involves bundling of 704 wind mill sub projects. The small wind mill sub project owners, who own spinning mills, have invested into wind energy generation encouraged by their Association - Tamil Nadu Spinning Mills Association (TASMA), and the generated wind power is used for meeting their captive needs or to export to the grid. All the wind mills are connected to the grid of the Tamil Nadu Electricity Board (TNEB) / Southern Grid; situated within the State of Tamilnadu, micro-sited in many locations based on wind availability.

This wind based electricity generation aggregates to a total Installed capacity of 468 MW and the generation is expected to be approximately 860 GWh, annually.

The Project activity is coordinated by Tamilnadu Spinning Mills Association (TASMA). As per the agreement with the members of the Association, TASMA would have the ownership rights for the project activity and would be the sole transaction entity with the Executive Board of the United Nations Framework Convention for Climate Change.

E. Period of Verification

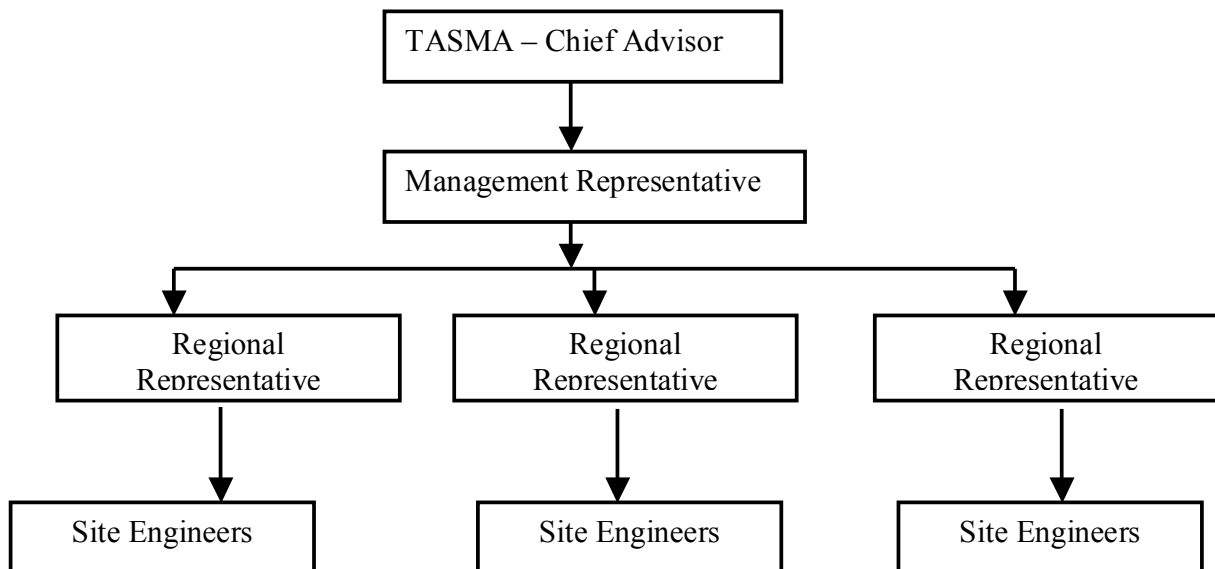
The project proponent wishes to get Emission Reductions certified for the period 01/01/2007 to 31/12/2007.

F. Monitoring Plan

This project activity uses renewable energy that is wind, as source for power generation. No other fossil/non fossil fuels are involved and no fuel preparation or combustion takes place. Therefore, the net electricity generated by the project activity is the only parameter that needs to be monitored. The energy meter readings are maintained in daily log books in the respective sites. The officially authenticated energy meter readings, are carried out by the TNEB authority on a monthly basis. The corresponding invoices / adjustment statements will therefore testify the actual number of units exported to the grid and hence form the basis of Emission Reductions. The invoices represent the sales records in the case of sale to EB.

Structuring For Monitoring:

1. The following organization is in place for facilitating monitoring:



2. Identification of WTGs:

Each WTG which is part of the project activity will be uniquely identified. The ID number will have following structure:

Company ID+ WTG ID

3. Records Maintained

- Minutes of Periodic Review Meetings
- Monthly Generation data
- Meter wise Calibration / Inspection Record as provided by TNEB
- Records on Environmental Care activities

G. Baseline Emission Factor

The baseline emissions and the emission reductions from TASMA project activity are estimated based on the quantum of electricity exported by the TASMA project activity and the **Baseline Emission Factor (BEF)** of the chosen Southern Regional grid (India). The baseline emission factor (combined margin) has been calculated as per the guidance provided in ACM0002 (Version 06). The Baseline Emission Factor 0.932 tCO₂/MU has been validated in the PDD.

H. Emission Reductions

According to the methodology outlined in ACM0002 (Version 06), Baseline emissions (*BE_y* in tCO₂) due to displacement of grid-electricity are the product of the Baseline Emissions Factor (*EF_y* in tCO₂/MWh), times the electricity exported by the TASMA project activity to the grid (*EG_y* in MWh), over the crediting period as given below.

$$BE_y = EG_y \cdot EF_y$$

Value for *EF_y* is declared as 0.932, in the validated PDD.

The emission reductions *ER_y* by the project activity during a given year *y* is the difference between baseline emissions (*BE_y*), project emissions (*PE_y*), and emissions due to leakage (*L_y*), as follows:

$$ER_y = BE_y - PE_y - L_y$$

Where,

- ER_y* Emission reductions of the project activity during the year *y* in tons of CO₂,
- BE_y* Baseline emissions due to displacement of electricity during the year *y* in tons of CO₂,
- PE_y* Project emissions during the year *y* in tons of CO₂.
- L_y* Leakage emission during the year *y* in tons of CO₂.

As there are no project emissions and leakage in this case, Baseline emissions are equivalent to the emission reductions. The summary of the emission reductions calculated for the year 2007 is summarized in the following table.

Year	Export (MWh)	EF (tCO ₂ /MWh)	
2007	925,689,043	0.932	862,742

I. Abbreviations

ACM	Approved Consolidated Methodology
BEF	Baseline Emission Factor
BM	Build Margin
CO2	Carbon dioxide
CEA	Central Electricity Authority
CER	Certified Emission Reductions
CDM	Clean Development Mechanism
CM	Combined Margin
KW	Kilowatt
MNES	Ministry of Non-Conventional Energy Sources
MW	Mega watt
MWh	Megawatt hour
MU	Million Units
OM	Operating Margin
PDD	Project Design Document
TASMA	Tamilnadu Spinning Mills Association
tCO2e	Tonnes of carbon dioxide equivalent
TNEB	Tamilnadu Electricity Board
UNFCCC	United Nations Framework Convention on Climate Change
WTG	Wind Turbine Generators