

# MONITORING REPORT

## BUNDLED WIND POWER PROJECT IN TAMIL NADU, INDIA, CO-ORDINATED BY TAMIL NADU SPINNING MILLS ASSOCIATION (TASMA-V1)



Document Prepared By

Tamilnadu Spinning Mills Association (TASMA)

|                          |                                                                                                                                                                                                     |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Project Title</b>     | Bundled Wind power project in Tamil Nadu, India, co-ordinated by Tamil Nadu Spinning Mills Association (TASMA-II)                                                                                   |
| <b>Version</b>           | 2.0                                                                                                                                                                                                 |
| <b>Report ID</b>         | VCS project id: 250                                                                                                                                                                                 |
| <b>Date of Issue</b>     | 20 <sup>th</sup> June 2018                                                                                                                                                                          |
| <b>Project ID</b>        | VCS project id: 250                                                                                                                                                                                 |
| <b>Monitoring Period</b> | 1 <sup>st</sup> January 2009 to 31 <sup>st</sup> December 2014                                                                                                                                      |
| <b>Prepared By</b>       | Tamilnadu Spinning Mills Association (TASMA)                                                                                                                                                        |
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## 1 PROJECT DETAILS

### 1.1 Summary Description of the Implementation Status of the Project

The project activity is the bundling of **109** Wind Turbine Generators (WTGs) sponsored by **50** individual investors aggregating to a total installed capacity of **51.595 MW**. All these WTGs are spread in the entire State of Tamilnadu, India and the bundling activity is undertaken by Tamilnadu Spinning Mills Association (TASMA). All these WTGs are commissioned and connected to the Southern Regional Grid, India.

The intent of the Project Activity is to reduce GHG emissions and promote sustainable development by use of renewable energy (Wind) for generation of power by bringing together a number of investors with small power requirements to invest into wind turbines. In the absence of the project activity, the equivalent amount of electricity would have been generated by the power plants connected with the southern grid which is predominantly based on fossil fuel.

### 1.2 Sectoral Scope and Project Type

Sectoral Scope: 01

Project Type & category: The project activity uses approved consolidated baseline and monitoring methodology: ACM0002.

Title: "Consolidated Baseline Methodology for grid connected electricity generation from renewable sources", Version 10

This is not a grouped project.

### 1.3 Project Proponent

*Provide contact information for the project proponent(s). Copy and paste the table as needed.*

|                   |                                                                           |
|-------------------|---------------------------------------------------------------------------|
| Organization name | Tamilnadu Spinning Mills Association (TASMA)                              |
| Contact person    | Mr. V. Bharathi Kannan                                                    |
| Title             | Head – CDM / VCS Projects                                                 |
| Address           | #2, Karur Road (Near Beschi College), Dindigul, Tamilnadu - 624 001 India |
| Telephone         | Mob: +91 98428 33318                                                      |
| Email             | E-Mail: cdmhead@tasma.in<br>Website: www.tasma.in                         |

### 1.4 Other Entities Involved in the Project

*Provide contact information and roles/responsibilities for any other project participant(s). Copy and paste the table as needed.*

|                     |    |
|---------------------|----|
| Organization name   | NA |
| Role in the project | -  |

|                |   |
|----------------|---|
| Contact person | - |
| Title          | - |
| Address        | - |
| Telephone      | - |
| Email          | - |

### 1.5 Project Start Date

5<sup>th</sup> March 2002.

### 1.6 Project Crediting Period

1<sup>st</sup> April 2006 to 31<sup>st</sup> March 2016 (10 years)

### 1.7 Project Location

Tamilnadu, India.

### 1.8 Title and Reference of Methodology

Sectoral Scope: 01

Project Type & category: The project activity uses approved consolidated baseline and monitoring methodology: ACM0002.

Title: "Consolidated Baseline Methodology for grid connected electricity generation from renewable sources", Version 10

### 1.9 Other Programs

The project activity has never been registered or rejected under any other GHG program other than VCS.

### 1.10 Sustainable Development

List of some of the contributions is highlighted below:

- Use of renewable energy (Wind) for generation of power
- Reduction in emission of Green House Gases
- Increase the contribution of renewable energy to Southern Grid/Tamil Nadu Electricity Grid of India.
- Encourage Industries to contribute to Green Power Development
- Reduction in procurement and use of diesel based power generation sets as power option by PP
- Overall Rural infrastructure development
- Capacity addition to the installed capacity of Southern Grid, filling up the ever-growing gap between power supply and demand
- Generation of additional employment especially for windmill operations/ maintenance/security etc.

## 2 IMPLEMENTATION STATUS

### 2.1 Implementation Status of the Project Activity

All the WTGs are operating continuously depending on the wind availability. The electricity available for carbon credit for this monitoring period is 564,201.15 MWh.

### 2.2 Deviations

#### 2.2.1 Methodology Deviations

There is no methodology deviation.

#### 2.2.2 Project Description Deviations

PP has not conducted calibration for the WTGs. PP has applied twice the maximum allowable error (0.5%) for the measured values to get the adjusted value.

### 2.3 Grouped Project

This is not a grouped project.

### 2.4 Safeguards

#### 2.4.1 No Net Harm

There is no negative environmental and socio-economic impact.

#### 2.4.2 Local Stakeholder Consultation

No negative comments were received that required follow up action in this monitoring period.

## 3 DATA AND PARAMETERS

### 3.1 Data and Parameters Available at Validation

*Complete the table below for all data and parameters that are determined or available at validation, and remain fixed throughout the project crediting period (copy the table as necessary for each data unit/parameter). Data and parameters monitored during the operation of the project are included in Section 3.2 (Data and Parameters Monitored) below.*

|                            |                                                                                  |
|----------------------------|----------------------------------------------------------------------------------|
| Data / Parameter           | EF <sub>y</sub>                                                                  |
| Data unit                  | tCO <sub>2</sub> e/MWh                                                           |
| Description                | Baseline emission factor                                                         |
| Source of data             | CEA database                                                                     |
| Value applied              | 0.92694742 tCO <sub>2</sub> e/MWh                                                |
| Justification of choice of | The grid emission factor (EF <sub>grid</sub> ) was calculated from the operating |

|                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| data or description of measurement methods and procedures applied | margin (OM) CO2 emission factor and build margin (BM) CO2 emission factor, referenced from “CO2 Baseline Database for Indian Power Sector” by Central Electricity Authority (CEA). The weighting of operating margin emission factor and weighting of build margin emission factor are 0.75 and 0.25, respectively. The calculation of OM and BM is as per the version 1.1 of “Tool to calculate Emission Factor for an Electricity System. |
| Purpose of the data                                               | Calculation of baseline emissions                                                                                                                                                                                                                                                                                                                                                                                                           |
| Comments                                                          | -                                                                                                                                                                                                                                                                                                                                                                                                                                           |

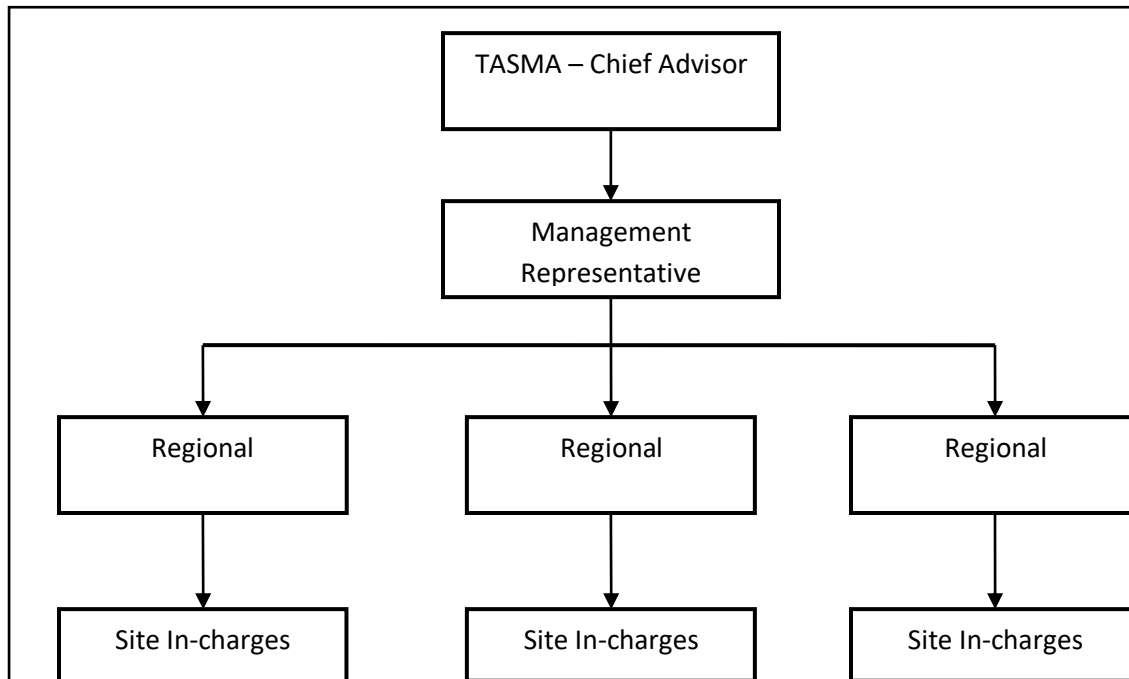
### 3.2 Data and Parameters Monitored

Complete the table below for all data and parameters monitored during the project crediting period (copy the table as necessary for each data unit/parameter). Data and parameters determined or available at validation are included in Section 3.1 (Data and Parameters Available at Validation) above.

|                                                                 |                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data / Parameter                                                | EG <sub>y</sub>                                                                                                                                                                                                                                                                                                        |
| Data unit                                                       | MWh                                                                                                                                                                                                                                                                                                                    |
| Description                                                     | Net electricity supplied to the grid                                                                                                                                                                                                                                                                                   |
| Source of data                                                  | TNEB statement                                                                                                                                                                                                                                                                                                         |
| Description of measurement methods and procedures to be applied | Net generation is certified by TNEB Statement<br>Monthly Measurement by TNEB                                                                                                                                                                                                                                           |
| Frequency of monitoring/recording                               | Monthly                                                                                                                                                                                                                                                                                                                |
| Value monitored                                                 | 564,201.15 MWh                                                                                                                                                                                                                                                                                                         |
| Monitoring equipment                                            | Measured by 0.5 Class Meter – (accuracy $\pm 0.5\%$ )<br>Refer Appendix 2                                                                                                                                                                                                                                              |
| QA/QC procedures to be applied                                  | QA/QC of Monitoring Equipment<br>The values are cross-checked with the Sales records.<br>Calibration procedure: Main meter is to be calibrated by the TNEB as per guidelines provided by CEA/TNERC.<br>However the calibration was not carried out. PP has applied error of twice the error to get conservative value. |
| Purpose of the data                                             | Calculation of baseline emissions                                                                                                                                                                                                                                                                                      |
| Calculation method                                              | -                                                                                                                                                                                                                                                                                                                      |
| Comments                                                        | Data will be archived during the whole crediting period + 2 years                                                                                                                                                                                                                                                      |

### 3.3 Monitoring Plan

The monitoring activity will be centrally executed by TASMA. The organization for monitoring will be as follows:



The responsibilities of Management structure are

1. TASMA:
  - a. Reviewing the monthly and annual statistics.
  - b. Evaluating the GHG performance of the project activity.
  - c. Identify opportunities for further improvement.
2. Regional representative:
  - a. Reviewing the GHG performance related parameters as recorded by the Site In-Charge regularly.
  - b. Implementation of appropriate corrective measures in case any discrepancies are identified in the reported parameters.
3. Site In-charge:
  - a. The Site In-charge (O&M Service provider/Company personnel) besides operation and maintenance of the wind turbine generators will record monthly energy meter reading jointly with TNEB officials and submits the generation Statement to the TASMA as and when called for.

The **Metering** for WTGs of the project activity is carried out as under:

The monthly meter reading is being taken jointly by the Parties (TNEB/TANGEDCO and the Site In-charge) on a fixed day of the month. At the conclusion of meter reading on each occasion, an appointed representative of the TNEB/TANGEDCO shall sign the meter card provided for this purpose and the entries made is verified by the site in-charges. The TNEB/TANGEDCO meter reading is used for recording electricity generation and the same is sealed by TNEB/TANGEDCO and shall not be interfered other than TNEB/TANGEDCO personnel. Emission reduction calculation is based on the Generation Statement issued by TNEB/TANGEDCO.

## 4 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

### 4.1 Baseline Emissions

Baseline emissions calculated are summarized as below.

#### Base Line Emissions: (BE<sub>y</sub>)

According to the validated PD, Baseline Emission is calculated by the following formula.

$$BE_y = EG_y * EF_y$$

Baseline emission factor (combined margin)

$$EF_y = 0.92694742 \text{ tCO}_2\text{e/MWh}$$

EG<sub>y</sub> = Electricity supplied by the project activity to the Grid (MWh)

### 4.2 Project Emissions

#### Project Emissions: (PE<sub>y</sub>)

According to ACM0002, there is no project emission for grid connected wind based power generation. Hence in this case it is considered as **PE<sub>y</sub> = 0 tCO<sub>2</sub>/year**

### 4.3 Leakage

According to ACM0002, there is no leakage emission for grid connected wind based power generation. Hence in this case it is considered as **LE<sub>y</sub> = 0 tCO<sub>2</sub>/year**

### 4.4 Net GHG Emission Reductions and Removals

Emissions Reduction: (ER<sub>y</sub>)

For a given year, the emission reductions contributed by the project activity is calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where,

BE<sub>y</sub> - Base Line Emission for the year 'y'

PE<sub>y</sub> - Project Emissions for the year 'y'

LE<sub>y</sub> - Leakage for the year 'y'

| Year      | Baseline emissions or removals (tCO <sub>2</sub> e) | Project emissions or removals (tCO <sub>2</sub> e) | Leakage emissions (tCO <sub>2</sub> e) | Net GHG emission reductions or removals (tCO <sub>2</sub> e) |
|-----------|-----------------------------------------------------|----------------------------------------------------|----------------------------------------|--------------------------------------------------------------|
| Year 2009 | 89,378                                              | 0                                                  | 0                                      | 89,378                                                       |
| Year 2010 | 85,686                                              | 0                                                  | 0                                      | 85,686                                                       |
| Year 2011 | 79,851                                              | 0                                                  | 0                                      | 79,851                                                       |

|              |         |   |   |         |
|--------------|---------|---|---|---------|
| Year 2012    | 90,190  | 0 | 0 | 90,190  |
| Year 2013    | 88,469  | 0 | 0 | 88,469  |
| Year 2014    | 89,411  | 0 | 0 | 89,411  |
| <b>Total</b> | 522,985 | 0 | 0 | 522,985 |

## APPENDIX 1:

| S.NO. | NAME OF THE MILLS / COMPANIES                       | CAPACITY<br>in MW | HTSC.<br>NO. | COMM. DATE  | PASS |
|-------|-----------------------------------------------------|-------------------|--------------|-------------|------|
| 1     | Anugragha Valve Castings Ltd                        | 1.25              | 493          | 21-Mar-2003 | A    |
| 2     | Arun Excello Urban Infrastructure Pvt. Ltd.,        | 0.225             | 546          | 31-Mar-2003 | A    |
| 3     | Arun Excello Urban Infrastructure Pvt. Ltd.,        | 0.225             | 547          | 31-Mar-2003 | A    |
| 4     | Arunachala Gounder Textile Mills Pvt. Ltd.,         | 0.6               | 597          | 29-Sep-2006 | C    |
| 5     | Arunachala Gounder Textile Mills Pvt. Ltd.,         | 0.6               | 2496         | 30-Sep-2007 | A    |
| 6     | Classic Spinning Mills Pvt. Ltd.,                   | 0.225             | 314          | 18-Nov-2004 | C    |
| 7     | Classic Spinning Mills Pvt. Ltd.,                   | 0.225             | 314          | 5-Jan-2005  | C    |
| 8     | Classic Spinning Mills Pvt. Ltd.,                   | 0.225             | 314          | 8-Aug-2005  | C    |
| 9     | Classic Spinning Mills Pvt. Ltd.,                   | 0.225             | 314          | 8-Sep-2005  | C    |
| 10    | Classic Spinning Mills Pvt. Ltd.,                   | 0.225             | 314          | 8-Sep-2005  | C    |
| 11    | Classic Spinning Mills Pvt. Ltd.,                   | 0.5               | 258          | 27-Mar-2003 | C    |
| 12    | Classic Spinning Mills Pvt. Ltd.,                   | 0.5               | 625          | 16-Mar-2007 | C    |
| 13    | Classic Wind Farms                                  | 0.225             | 255          | 28-Sep-2002 | C    |
| 14    | Classic Wind Farms                                  | 0.225             | 255          | 28-Sep-2002 | C    |
| 15    | Classic Wind Farms                                  | 0.5               | 259          | 27-Mar-2003 | C    |
| 16    | Classic Wind Farms                                  | 0.5               | 627          | 16-Mar-2007 | C    |
| 17    | Classic Wind Farms                                  | 0.5               | 626          | 16-Mar-2007 | C    |
| 18    | Deffree Engineering (P) Ltd.,                       | 0.8               | 1059         | 30-Dec-2005 | C    |
| 19    | Dhanalakshmi Controls & Equipments                  | 0.225             | 726          | 29-Mar-2005 | C    |
| 20    | Frontier Processing Mills                           | 0.5               | 1723         | 29-Mar-2006 | A    |
| 21    | Jayakrishna Flour Mills Pvt. Ltd.,                  | 0.225             | 477          | 5-Feb-2003  | A    |
| 22    | Jayakrishna Flour Mills Pvt. Ltd.,                  | 0.225             | 518          | 28-Mar-2003 | A    |
| 23    | Jayakrishna Flour Mills Pvt. Ltd.,                  | 0.225             | 623          | 29-Sep-2003 | A    |
| 24    | Jayakrishna Flour Mills Pvt. Ltd.,                  | 0.225             | 781          | 31-Mar-2004 | A    |
| 25    | Jayakrishna Flour Mills Pvt. Ltd.,                  | 0.225             | 782          | 31-Mar-2004 | A    |
| 26    | Jayakrishna Flour Mills Pvt. Ltd.,                  | 0.225             | 1463         | 29-Sep-2005 | A    |
| 27    | Jayakrishna Flour Mills Pvt. Ltd.,                  | 0.225             | 1769         | 30-Mar-2006 | A    |
| 28    | K.G. Entertainment Company (P) Ltd.,                | 0.35              | 1328         | 30-Sep-2006 | C    |
| 29    | Kaleesuwari Refinery Pvt. Ltd.,                     | 0.5               | 609          | 25-Sep-2003 | A    |
| 30    | Kaleesuwari Refinery Pvt. Ltd.,                     | 0.6               | 603          | 24-Sep-2003 | A    |
| 31    | Lakshmi Narayan Govrishankar Enterpriser Prt. Ltd., | 0.5               | 561          | 3-Apr-2006  | C    |
| 32    | Lakshminarayan Gourishanker Enterprises Pvt. Ltd.,  | 0.25              | 663          | 10-Apr-2007 | C    |
| 33    | Lakshminarayan Gourishanker Enterprises             | 0.25              | 664          | 10-Apr-2007 | C    |

| S.NO. | NAME OF THE MILLS / COMPANIES<br>Pvt. Ltd.,        | CAPACITY<br>in MW | HTSC.<br>NO. | COMM. DATE  | PASS |
|-------|----------------------------------------------------|-------------------|--------------|-------------|------|
| 34    | Lakshminarayan Gourishanker Enterprises Pvt. Ltd., | 0.25              | 665          | 10-Apr-2007 | C    |
| 35    | Lakshminarayan Gourishanker Enterprises Pvt. Ltd., | 0.25              | 666          | 10-Apr-2007 | C    |
| 36    | Lakshminarayan Gourishanker Enterprises Pvt. Ltd., | 0.25              | 252          | 28-Mar-2002 | C    |
| 37    | Lakshminarayan Gourishanker Enterprises Pvt. Ltd., | 0.25              | 252          | 28-Mar-2002 | C    |
| 38    | Lakshminarayan Gourishanker Enterprises Pvt. Ltd., | 0.25              | 252          | 23-Sep-2002 | C    |
| 39    | Lakshminarayan Gourishanker Enterprises Pvt. Ltd., | 0.25              | 260          | 29-Mar-2003 | C    |
| 40    | Lakshminarayan Gourishanker Enterprises Pvt. Ltd., | 0.25              | 261          | 29-Mar-2003 | C    |
| 41    | Lakshminarayan Gourishanker Enterprises Pvt. Ltd., | 0.25              | 444          | 4-Jun-2005  | C    |
| 42    | Lakshminarayan Gourishanker Enterprises Pvt. Ltd., | 0.25              | 445          | 4-Jun-2005  | C    |
| 43    | Lakshminarayan Gourishanker Enterprises Pvt. Ltd., | 0.5               | 516          | 22-Mar-2006 | C    |
| 44    | Lotus Agency                                       | 0.75              | 1956         | 24-Jul-2006 | B    |
| 45    | M.S. Raja Transports (Wind Mill Division)          | 0.8               | 1063         | 31-Dec-2005 | C    |
| 46    | Poombukar Process                                  | 0.225             | 592          | 15-Dec-2004 | C    |
| 47    | Poomer Hosieries                                   | 0.225             | 984          | 29-Sep-2005 | C    |
| 48    | Power Link System Pvt. Ltd.,                       | 0.23              | 281          | 31-Mar-2003 | C    |
| 49    | Prime Tex                                          | 0.225             | 574          | 12-Sep-2003 | A    |
| 50    | Prime Tex                                          | 0.225             | 574          | 12-Sep-2003 | A    |
| 51    | Prime Tex                                          | 0.225             | 552          | 11-Aug-2003 | A    |
| 52    | Prime Tex                                          | 0.225             | 552          | 31-Mar-2003 | A    |
| 53    | Prime Tex                                          | 0.225             | 552          | 31-Mar-2003 | A    |
| 54    | Prime Tex                                          | 0.225             | 320          | 30-Sep-2003 | C    |
| 55    | Prime Tex                                          | 0.225             | 318          | 30-Sep-2003 | C    |
| 56    | Rangasayee Alloy Castings                          | 0.23              | 407          | 30-Mar-2004 | C    |
| 57    | Rangasayee Alloy Castings                          | 0.35              | 1203         | 31-Mar-2006 | C    |
| 58    | S.N.Q.S. International                             | 0.33              | 1180         | 29-Mar-2006 | C    |
| 59    | S.S.K. Textiles                                    | 0.6               | 58           | 26-Mar-2007 | C    |
| 60    | S.S.K. Textiles                                    | 0.25              | 446          | 17-Jun-2005 | C    |
| 61    | Santhi Casting Works                               | 0.5               | 608          | 25-Sep-2003 | A    |
| 62    | Seyad Home Industries Pvt. Ltd.,                   | 0.5               | 607          | 25-Sep-2003 | A    |
| 63    | Seyad Shariat Finance Ltd.,                        | 0.225             | 645          | 18-Oct-2003 | A    |
| 64    | Seyadu Beedi Company                               | 0.5               | 417          | 5-Mar-2002  | A    |

| S.NO. | NAME OF THE MILLS / COMPANIES              | CAPACITY<br>in MW | HTSC.<br>NO. | COMM. DATE  | PASS |
|-------|--------------------------------------------|-------------------|--------------|-------------|------|
| 65    | Shanmugapriya Textiles Pvt. Ltd.,          | 0.75              | 536          | 31-Mar-2003 | A    |
| 66    | Shriram City Union Finance Ltd.,           | 1.25              | 584          | 21-Sep-2003 | A    |
| 67    | Shriram City Union Finance Ltd.,           | 1.25              | 585          | 21-Sep-2003 | A    |
| 68    | Shriram City Union Finance Ltd.,           | 1.25              | 586          | 21-Sep-2003 | A    |
| 69    | Shriram Investments Ltd.,                  | 0.75              | 640          | 30-Sep-2003 | B    |
| 70    | Shriram Investments Ltd.,                  | 0.75              | 641          | 30-Sep-2003 | B    |
| 71    | Shriram Investments Ltd.,                  | 0.75              | 641          | 30-Sep-2003 | B    |
| 72    | Shriram Investments Ltd.,                  | 0.75              | 641          | 30-Sep-2003 | B    |
| 73    | Shriram Investments Ltd.,                  | 0.75              | 641          | 30-Sep-2003 | B    |
| 74    | Shriram Investments Ltd.,                  | 0.75              | 641          | 30-Sep-2003 | B    |
| 75    | Shriram Investments Ltd.,                  | 0.75              | 641          | 30-Sep-2003 | B    |
| 76    | Shriram Investments Ltd.,                  | 0.75              | 642          | 30-Sep-2003 | B    |
| 77    | SNQS International Socks Pvt. Ltd.,        | 0.23              | 290          | 26-Sep-2003 | C    |
| 78    | Soundararaja Mills Ltd.,                   | 1.25              | 862          | 12-Aug-2004 | A    |
| 79    | Soundararaja Mills Ltd.,                   | 1.25              | 888          | 2-Sep-2004  | A    |
| 80    | Soundararaja Mills Ltd.,                   | 1.25              | 889          | 2-Sep-2004  | A    |
| 81    | Soundararaja Mills Ltd.,                   | 1.25              | 890          | 2-Sep-2004  | A    |
| 82    | SRG Apparels Private Ltd.,                 | 0.225             | 575          | 12-Sep-2003 | A    |
| 83    | SRG Apparels Private Ltd.,                 | 0.225             | 575          | 12-Sep-2003 | A    |
| 84    | SRG Apparels Private Ltd.,                 | 0.225             | 554          | 23-Jul-2003 | A    |
| 85    | SRG Apparels Private Ltd.,                 | 0.225             | 554          | 31-Mar-2003 | A    |
| 86    | SRG Apparels Private Ltd.,                 | 0.225             | 554          | 31-Mar-2003 | A    |
| 87    | SRG Apparels Private Ltd.,                 | 0.225             | 319          | 30-Sep-2003 | C    |
| 88    | SRG Apparels Private Ltd.,                 | 0.225             | 319          | 30-Sep-2003 | C    |
| 89    | Sri Alamelu Ammal Mills India Pvt. Ltd.,   | 0.6               | 63           | 28-Mar-2007 | C    |
| 90    | Sri Senthilandavar Cotton Mills Pvt. Ltd., | 0.75              | 519          | 29-Mar-2003 | B    |
| 91    | Sri Venkatram Spinners Pvt. Ltd.,          | 1.65              | 1683         | 25-Mar-2006 | B    |
| 92    | Sugavaneswara Spinning Mills Pvt. Ltd.,    | 1.25              | 2273         | 29-Mar-2007 | B    |
| 93    | Super Spinning Mills Ltd.,                 | 1.25              | 611          | 26-Sep-2003 | A    |
| 94    | Suresh Textiles                            | 0.25              | 613          | 6-Feb-2007  | C    |
| 95    | T.E.S. Fathu Rabbani                       | 0.225             | 447          | 27-Sep-2002 | A    |
| 96    | T.E.S. Naina Mohamed                       | 0.225             | 754          | 29-Mar-2004 | A    |
| 97    | The Prem Dyeing Works                      | 0.5               | 424          | 31-Mar-2005 | C    |
| 98    | The United Yarn Processors                 | 0.5               | 1224         | 29-Mar-2005 | A    |
| 99    | Thriveni Earth Movers Pvt. Ltd.,           | 0.225             | 1470         | 6-Sep-2007  | C    |
| 100   | Unifront Driers                            | 0.5               | 1715         | 29-Mar-2006 | A    |
| 101   | Unifront Textiles Processors Pvt. Ltd.,    | 0.5               | 1763         | 30-Mar-2006 | A    |
| 102   | V.R. Foundries                             | 0.85              | 602          | 23-Dec-2006 | C    |
| 103   | Veena Fabrics Pvt. Ltd.,                   | 0.25              | 1257         | 28-Apr-2006 | C    |

| S.NO. | NAME OF THE MILLS / COMPANIES           | CAPACITY<br>in MW | HTSC.<br>NO. | COMM. DATE  | PASS |
|-------|-----------------------------------------|-------------------|--------------|-------------|------|
| 104   | Veena Fabrics Pvt. Ltd.,                | 0.25              | 1244         | 31-Mar-2006 | C    |
| 105   | Vetal Hi-Tech Industries                | 0.25              | 267          | 12-Sep-2003 | C    |
| 106   | Vetal Textiles & Electronics Pvt. Ltd., | 0.25              | 266          | 12-Sep-2003 | C    |
| 107   | Victus Dyeings                          | 0.75              | 384          | 27-Mar-2004 | C    |
| 108   | Vigneshkumar Spinning Mills Pvt. Ltd.,  | 0.35              | 2201         | 20-Mar-2007 | A    |
| 109   | Vigneshkumar Spinning Mills Pvt. Ltd.,  | 0.35              | 1315         | 29-Sep-2006 | C    |

**APPENDIX 2:**

| S.NO. | HTSC.<br>NO. | Electricity<br>(MWh) in<br>2009 | Electricity<br>(MWh) in<br>2010 | Electricity<br>(MWh) in<br>2011 | Electricity<br>(MWh) in<br>2012 | Electricity<br>(MWh) in<br>2013 | Electricity<br>(MWh) in<br>2014 |
|-------|--------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| 1     | 493          | 2898.57                         | 2802.82                         | 2608.30                         | 2853.93                         | 2830.13                         | 2885.07                         |
| 2     | 546          | 450.57                          | 445.25                          | 418.77                          | 459.86                          | 463.17                          | 450.77                          |
| 3     | 547          | 463.93                          | 453.23                          | 417.75                          | 461.68                          | 438.54                          | 452.39                          |
| 4     | 597          | 1023.21                         | 976.92                          | 866.68                          | 986.97                          | 934.54                          | 1063.67                         |
| 5     | 2496         | 1258.56                         | 1223.82                         | 1128.41                         | 1252.84                         | 1215.44                         | 1252.19                         |
| 6     | 314          | 338.22                          | 331.77                          | 301.77                          | 351.41                          | 340.02                          | 339.05                          |
| 7     | 314          | 352.26                          | 334.04                          | 293.68                          | 344.33                          | 331.65                          | 324.22                          |
| 8     | 314          | 342.45                          | 335.34                          | 293.96                          | 340.58                          | 350.71                          | 332.25                          |
| 9     | 314          | 327.14                          | 323.52                          | 295.53                          | 353.78                          | 354.61                          | 345.40                          |
| 10    | 314          | 349.94                          | 328.74                          | 287.13                          | 335.38                          | 312.09                          | 336.42                          |
| 11    | 258          | 913.05                          | 842.20                          | 805.73                          | 925.19                          | 926.97                          | 881.00                          |
| 12    | 625          | 889.73                          | 851.77                          | 797.07                          | 891.97                          | 883.97                          | 868.13                          |
| 13    | 255          | 333.56                          | 322.94                          | 304.72                          | 356.37                          | 340.04                          | 330.42                          |
| 14    | 255          | 331.99                          | 325.01                          | 296.67                          | 348.49                          | 329.03                          | 350.07                          |
| 15    | 259          | 860.63                          | 849.84                          | 778.23                          | 866.89                          | 875.05                          | 879.55                          |
| 16    | 627          | 908.40                          | 858.89                          | 781.78                          | 903.71                          | 877.91                          | 909.51                          |
| 17    | 626          | 892.04                          | 874.17                          | 793.76                          | 902.52                          | 918.01                          | 882.53                          |
| 18    | 1059         | 1391.52                         | 1341.03                         | 1229.61                         | 1402.66                         | 1431.29                         | 1343.20                         |
| 19    | 726          | 342.35                          | 320.77                          | 301.06                          | 346.43                          | 345.35                          | 347.84                          |
| 20    | 1723         | 1204.80                         | 1131.61                         | 1081.51                         | 1170.84                         | 1190.78                         | 1238.76                         |
| 21    | 477          | 449.79                          | 451.13                          | 425.15                          | 478.42                          | 468.80                          | 471.06                          |
| 22    | 518          | 467.43                          | 443.28                          | 408.10                          | 448.95                          | 438.81                          | 456.77                          |
| 23    | 623          | 464.12                          | 440.61                          | 419.25                          | 464.58                          | 439.64                          | 476.38                          |
| 24    | 781          | 473.28                          | 456.68                          | 412.74                          | 470.88                          | 445.98                          | 463.67                          |
| 25    | 782          | 466.67                          | 453.49                          | 424.71                          | 468.76                          | 466.30                          | 460.99                          |
| 26    | 1463         | 478.17                          | 461.43                          | 408.66                          | 451.26                          | 433.32                          | 450.86                          |
| 27    | 1769         | 464.65                          | 441.08                          | 419.35                          | 470.47                          | 465.87                          | 439.47                          |
| 28    | 1328         | 397.77                          | 366.23                          | 334.69                          | 398.24                          | 376.14                          | 406.83                          |

| S.NO. | HTSC.<br>NO. | Electricity<br>(MWh) in<br>2009 | Electricity<br>(MWh) in<br>2010 | Electricity<br>(MWh) in<br>2011 | Electricity<br>(MWh) in<br>2012 | Electricity<br>(MWh) in<br>2013 | Electricity<br>(MWh) in<br>2014 |
|-------|--------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| 29    | 609          | 1190.74                         | 1173.26                         | 1086.63                         | 1216.60                         | 1188.78                         | 1183.60                         |
| 30    | 603          | 1225.06                         | 1183.47                         | 1122.32                         | 1237.93                         | 1262.20                         | 1285.11                         |
| 31    | 561          | 904.64                          | 845.46                          | 792.13                          | 913.61                          | 879.73                          | 890.67                          |
| 32    | 663          | 339.35                          | 306.84                          | 275.49                          | 327.69                          | 303.11                          | 326.67                          |
| 33    | 664          | 325.24                          | 317.37                          | 284.25                          | 332.37                          | 334.97                          | 332.54                          |
| 34    | 665          | 323.96                          | 303.79                          | 288.22                          | 346.65                          | 313.30                          | 348.29                          |
| 35    | 666          | 341.48                          | 324.54                          | 278.29                          | 332.95                          | 340.16                          | 342.93                          |
| 36    | 252          | 324.26                          | 304.37                          | 292.96                          | 351.33                          | 348.77                          | 319.16                          |
| 37    | 252          | 327.34                          | 306.10                          | 274.95                          | 339.70                          | 325.51                          | 342.11                          |
| 38    | 252          | 329.92                          | 321.52                          | 281.21                          | 325.20                          | 334.69                          | 348.22                          |
| 39    | 260          | 339.22                          | 331.02                          | 282.67                          | 333.06                          | 342.67                          | 329.54                          |
| 40    | 261          | 320.60                          | 306.64                          | 282.45                          | 329.68                          | 341.67                          | 347.10                          |
| 41    | 444          | 324.86                          | 305.65                          | 291.31                          | 345.83                          | 331.06                          | 327.57                          |
| 42    | 445          | 339.93                          | 312.73                          | 291.08                          | 355.78                          | 355.26                          | 346.25                          |
| 43    | 516          | 861.33                          | 841.05                          | 774.06                          | 901.59                          | 861.33                          | 942.29                          |
| 44    | 1956         | 1265.28                         | 1158.50                         | 1041.95                         | 1218.33                         | 1158.04                         | 1166.99                         |
| 45    | 1063         | 1431.29                         | 1387.14                         | 1272.21                         | 1455.63                         | 1358.35                         | 1408.04                         |
| 46    | 592          | 336.00                          | 336.51                          | 298.71                          | 350.61                          | 355.49                          | 344.34                          |
| 47    | 984          | 336.90                          | 311.98                          | 295.44                          | 335.49                          | 317.66                          | 332.58                          |
| 48    | 281          | 339.28                          | 330.23                          | 279.29                          | 335.03                          | 312.63                          | 333.77                          |
| 49    | 574          | 449.94                          | 438.69                          | 423.44                          | 477.15                          | 473.00                          | 457.03                          |
| 50    | 574          | 475.17                          | 456.24                          | 413.12                          | 462.41                          | 435.88                          | 463.59                          |
| 51    | 552          | 469.06                          | 438.53                          | 407.49                          | 448.02                          | 435.16                          | 457.35                          |
| 52    | 552          | 458.68                          | 439.37                          | 422.90                          | 474.26                          | 457.94                          | 451.20                          |
| 53    | 552          | 458.40                          | 445.60                          | 410.08                          | 466.28                          | 432.43                          | 470.49                          |
| 54    | 320          | 332.88                          | 324.06                          | 302.07                          | 352.98                          | 359.89                          | 318.52                          |
| 55    | 318          | 328.48                          | 314.50                          | 294.86                          | 343.33                          | 331.98                          | 335.09                          |
| 56    | 407          | 330.54                          | 303.52                          | 293.92                          | 347.47                          | 343.86                          | 355.05                          |
| 57    | 1203         | 417.88                          | 397.13                          | 330.41                          | 414.72                          | 400.68                          | 434.26                          |
| 58    | 1180         | 402.41                          | 390.95                          | 336.77                          | 414.41                          | 381.85                          | 406.94                          |
| 59    | 58           | 1005.99                         | 990.06                          | 913.38                          | 1022.11                         | 1030.11                         | 1027.52                         |
| 60    | 446          | 333.41                          | 308.82                          | 280.87                          | 335.72                          | 335.86                          | 313.83                          |
| 61    | 608          | 1163.43                         | 1139.32                         | 1092.17                         | 1222.28                         | 1142.64                         | 1207.06                         |
| 62    | 607          | 1233.34                         | 1164.77                         | 1109.19                         | 1211.90                         | 1233.17                         | 1160.87                         |
| 63    | 645          | 465.57                          | 431.48                          | 420.34                          | 461.06                          | 458.03                          | 452.90                          |
| 64    | 417          | 1174.79                         | 1133.59                         | 1083.83                         | 1210.73                         | 1188.10                         | 1174.33                         |
| 65    | 536          | 1449.68                         | 1397.45                         | 1308.88                         | 1445.34                         | 1438.88                         | 1398.89                         |
| 66    | 584          | 2874.35                         | 2778.57                         | 2566.44                         | 2847.63                         | 2746.79                         | 2813.20                         |
| 67    | 585          | 2909.56                         | 2721.82                         | 2541.69                         | 2841.33                         | 2790.12                         | 2812.00                         |

| S.NO. | HTSC.<br>NO. | Electricity<br>(MWh) in<br>2009 | Electricity<br>(MWh) in<br>2010 | Electricity<br>(MWh) in<br>2011 | Electricity<br>(MWh) in<br>2012 | Electricity<br>(MWh) in<br>2013 | Electricity<br>(MWh) in<br>2014 |
|-------|--------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| 68    | 586          | 2813.21                         | 2756.58                         | 2632.38                         | 2933.34                         | 2923.54                         | 2848.53                         |
| 69    | 640          | 1253.05                         | 1211.16                         | 1048.41                         | 1208.26                         | 1148.88                         | 1239.87                         |
| 70    | 641          | 1195.25                         | 1105.42                         | 1033.85                         | 1204.79                         | 1200.05                         | 1189.32                         |
| 71    | 641          | 1194.19                         | 1157.52                         | 1049.05                         | 1214.12                         | 1202.10                         | 1249.36                         |
| 72    | 641          | 1190.31                         | 1096.12                         | 1077.94                         | 1242.43                         | 1214.28                         | 1222.68                         |
| 73    | 641          | 1188.15                         | 1139.73                         | 1030.64                         | 1194.13                         | 1147.29                         | 1162.65                         |
| 74    | 641          | 1251.95                         | 1184.04                         | 1056.26                         | 1250.31                         | 1192.72                         | 1180.52                         |
| 75    | 641          | 1179.81                         | 1134.29                         | 1061.48                         | 1237.34                         | 1222.32                         | 1155.44                         |
| 76    | 642          | 1187.76                         | 1176.80                         | 1053.62                         | 1211.98                         | 1164.01                         | 1229.76                         |
| 77    | 290          | 347.02                          | 329.80                          | 285.97                          | 333.90                          | 329.52                          | 311.57                          |
| 78    | 862          | 2827.11                         | 2655.01                         | 2619.58                         | 2859.73                         | 2902.21                         | 2769.64                         |
| 79    | 888          | 2892.92                         | 2768.16                         | 2621.33                         | 2865.86                         | 2857.01                         | 2872.05                         |
| 80    | 889          | 2809.46                         | 2778.95                         | 2557.40                         | 2812.13                         | 2726.17                         | 2830.67                         |
| 81    | 890          | 2854.27                         | 2727.63                         | 2572.19                         | 2888.10                         | 2757.75                         | 2790.03                         |
| 82    | 575          | 453.56                          | 444.06                          | 410.61                          | 458.72                          | 465.54                          | 461.06                          |
| 83    | 575          | 457.39                          | 445.43                          | 412.54                          | 453.26                          | 469.05                          | 458.14                          |
| 84    | 554          | 445.83                          | 440.75                          | 407.88                          | 450.95                          | 460.41                          | 474.05                          |
| 85    | 554          | 463.48                          | 436.53                          | 424.82                          | 469.41                          | 455.90                          | 446.54                          |
| 86    | 554          | 472.80                          | 448.58                          | 425.65                          | 467.05                          | 462.29                          | 463.87                          |
| 87    | 319          | 338.59                          | 319.42                          | 286.47                          | 338.30                          | 310.83                          | 348.24                          |
| 88    | 319          | 333.52                          | 318.02                          | 294.77                          | 336.47                          | 342.00                          | 345.42                          |
| 89    | 63           | 973.04                          | 942.96                          | 908.50                          | 1034.14                         | 1000.05                         | 1034.71                         |
| 90    | 519          | 1210.66                         | 1102.95                         | 1054.79                         | 1230.34                         | 1187.05                         | 1230.76                         |
| 91    | 1683         | 3310.23                         | 3102.79                         | 2972.08                         | 3393.77                         | 3321.06                         | 3175.91                         |
| 92    | 2273         | 2203.32                         | 2167.23                         | 2066.47                         | 2355.96                         | 2235.54                         | 2336.62                         |
| 93    | 611          | 2736.04                         | 2698.88                         | 2566.74                         | 2710.87                         | 2735.05                         | 2894.19                         |
| 94    | 613          | 316.28                          | 299.11                          | 273.72                          | 318.37                          | 335.04                          | 334.66                          |
| 95    | 447          | 467.43                          | 450.00                          | 417.34                          | 474.56                          | 466.53                          | 447.85                          |
| 96    | 754          | 456.63                          | 440.81                          | 416.65                          | 470.39                          | 471.06                          | 451.11                          |
| 97    | 424          | 869.00                          | 864.69                          | 802.91                          | 898.95                          | 871.05                          | 878.87                          |
| 98    | 1224         | 1195.03                         | 1134.66                         | 1088.51                         | 1213.38                         | 1160.79                         | 1233.28                         |
| 99    | 1470         | 330.02                          | 314.44                          | 293.20                          | 351.37                          | 313.86                          | 341.58                          |
| 100   | 1715         | 1197.10                         | 1146.39                         | 1109.71                         | 1222.96                         | 1235.98                         | 1191.08                         |
| 101   | 1763         | 1201.40                         | 1181.26                         | 1086.12                         | 1185.99                         | 1201.88                         | 1224.50                         |
| 102   | 602          | 1520.80                         | 1431.20                         | 1408.47                         | 1572.61                         | 1552.82                         | 1538.08                         |
| 103   | 1257         | 330.29                          | 308.49                          | 291.02                          | 349.45                          | 334.21                          | 338.18                          |
| 104   | 1244         | 324.11                          | 305.63                          | 279.01                          | 322.82                          | 332.43                          | 338.00                          |
| 105   | 267          | 328.94                          | 318.35                          | 281.09                          | 332.00                          | 314.66                          | 348.56                          |
| 106   | 266          | 330.37                          | 324.00                          | 280.91                          | 325.28                          | 327.74                          | 330.00                          |

| S.NO. | HTSC.<br>NO. | Electricity<br>(MWh) in<br>2009 | Electricity<br>(MWh) in<br>2010 | Electricity<br>(MWh) in<br>2011 | Electricity<br>(MWh) in<br>2012 | Electricity<br>(MWh) in<br>2013 | Electricity<br>(MWh) in<br>2014 |
|-------|--------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| 107   | 384          | 1199.55                         | 1119.53                         | 1001.82                         | 1160.95                         | 1132.79                         | 1187.26                         |
| 108   | 2201         | 564.01                          | 528.17                          | 482.54                          | 552.57                          | 567.89                          | 586.01                          |
| 109   | 1315         | 413.08                          | 372.78                          | 327.21                          | 399.12                          | 383.75                          | 420.69                          |
|       | Total        | 96422.00                        | 92438.57                        | 86143.89                        | 97298.01                        | 95441.01                        | 96457.67                        |