

MONITORING REPORT FORM (CDM-MR) *
Version 01 - in effect as of: 24/06/2011

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* as contained within the document entitled "Guidelines for completing the monitoring report form (CDM-MR)" (EB 54 meeting report, annex 34).

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| <p align="center">MONITORING REPORT Version 01 and date 01/07/2011 Title project: 24MW DONG YANG ENERGY PV(photovoltaic) power plant UNFCCC Reference Number: 3246 Monitoring period: 24/06/2010 ~ 23/06/2011</p> |
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| SECTION A. General description of the project activity |
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|---|
| A.1. Brief description of the project activity: >> |
|---|

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- Purpose of the project activity and Measures taken to reduce greenhouse gas emissions

DONG YANG ENERGY PV Power Plant is a facility to produce electricity by solar energy inside of Jeollanamdo province in the Republic of Korea, and emits zero greenhouse gas (GHG) into the atmosphere.

The purpose of this project is to abate GHG emission through generating electricity by PV power without using fossil fuels. The project confirms to the government policy which promotes development of renewable energy technology and contributes to lowering dependence on electricity generated by fossil fuels which takes more takes 63.43% of electricity generation in Korea.(KPX,2007)

-Brief description of the installed technology and equipments

DONGYANG ENERGY PV Power Plant consists in modules of two types (180W and 200W). The proposed project of generating capacity is 24MW(19.6MW + 4.36MW)

| Item | DONGYANG |
|-----------------------------|-------------------------|
| Type of module | STM 180F (PV1~PV6) |
| Module Maximum Output Power | 180W |
| Number of module | 108,864 pieces |
| Total installed Capacity | 19.6MW (180W x 108,864) |

| Item | DONGYANG |
|-----------------------------|------------------------|
| Type of module | SP200F P12 C1 (PV7) |
| Module Maximum Output Power | 200W |
| Number of module | 21,792 pieces |
| Total installed Capacity | 4.36MW (200W x 21,792) |

- Relevant dates for the project activity

| Item | Dangjin |
|----------------------------|---|
| Completion of construction | PV1: 22/11/2007 PV2: 14/04/2008 PV3: 02/08/2008 PV4: 30/04/2008 PV5: 07/05/2008 PV6: 08/05/2008 PV7: 24/09/2008 |
| Commissioning date | PV1: 20/11/2007 PV2: 12/04/2008 PV3: 31/07/2008 PV4: 28/04/2008 PV5: 05/05/2008 PV6: 06/05/2008 |

| | |
|---|---|
| | PV7: 22/09/2008 |
| Starting date of operation | PV1: 22/11/2007 PV2: 14/04/2008 PV3: 02/05/2008 PV4: 30/04/2008 PV5: 07/05/2008 PV6: 08/05/2008 PV7: 26/09/2008 |
| The 1st monitoring period | 24/06/2010 ~ 23/06/2011 |

- Total emission reductions achieved in this monitoring period:

From 24/06/2010 to 23/06/2011, the net power supplied to the grid by the project is 34,898.34MWh, corresponds to the emission reductions of 21,274tCO_{2e}.

A.2. Project Participants

>> < **Project Participants** >

| Name of Party involved (host) indicates a host Party) | Private and/or public entity Project participants | Kindly indicate if the Party involved wishes to be considered a project participants (yes/no) |
|--|--|--|
| Republic of Korea (host) | DONG YANG ENERGY Co., Ltd. | No |

A.3. Location of the project activity:

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The location of the project activity is located at Taechon-ri in Jeollanamdo, the Republic of Korea. The geographical coordinates of the proposed project are longitude 126° 14' 20.82" East, latitude 35° 01' 40.84" North.

A.4. Technical description of the project

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The purpose of the project is to build up the PV power plant with 24MW capacity. Regarding the technology/measure of the project, silicon solar cells are installed for the proposed project and two types of modules (180W and 200W) are used. The efficiency of the power plant is about 17.1%.

The entire solar cell module is consisted of 7 sections connected to junction boxes and linked to an inverter. The fuses are installed in series strong that it can be conducted for the series, which makes prompt action that could be taken in disorder of the solar cells module. And there is equipped 3-phase watching system with current control to observe the important parameters such as voltage, frequency of the grid. Also for unmanned operations of the plant, each facility cab be supervised from on-site control room.

The remote control of tracker setting is possible and information on climatic condition from thermoscope, insolation and anemometer sensors are recorded. From these sensors, signals from these sensors and data from the inverter are sent to the main computer in the plant.

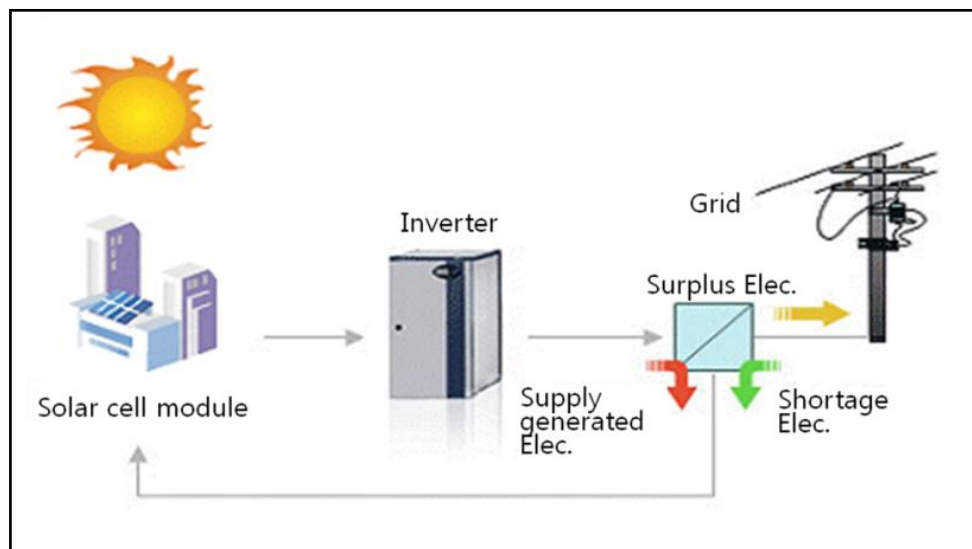
In the communication board of an inverter, by sending electric characteristics such as power generation, voltage, electric current and frequency of photovoltaic generation of electric power to the main computer, it is possible to audit and measure the data. It is also possible to audit and measure the data at a distant place by a LAN(Local Area Network) or a modem, and if part of the system would break down, it will be captured and managed quickly at a distant place, in case that there is something wrong with the equipment.

As the biggest advantage, the easy maintenance is on stand-by all the time against the unexpected breakdown.

<Table A-1> Technology description

| Item | Type | Technology Standards |
|-------------------------|-----------------------------|----------------------|
| Solar Cell (PV1~PV6) | Type | STM 180F(CONERGY) |
| | Capacity | 1959.520kW |
| | Module Maximum Output Power | 180W |
| | Number of module | 108,864 pieces |
| Inverter (PV1~PV6) | Type | STZ 300(SUNTECHNICS) |
| | | Grid connected |
| | output | 275.0 kW |
| | Max. input voltage | DC 965 V |
| | Control Method | PWM |
| | Node form | 3-Phase 3-Wire |
| | Efficiency | More than 95% |

| Item | Type | Technology Standards |
|---------------------|-----------------------------|------------------------|
| Solar Cell (PV7) | Type | SP200F P12 C1(CONERGY) |
| | Capacity | 4358.400Kw |
| | Module Maximum Output Power | 200W |
| | Number of module | 21,792 pieces |
| Inverter (PV7) | Type | STZ 300(SUNTECHINCS) |
| | | Grid connected |
| | Output | 275.0 kW |
| | Max. input voltage | DC 965 V |
| | Control Method | PWM |
| | Node form | 3-Phase 3-Wire |
| | Efficiency | More than 95% |



On-grid Photovoltaic distributed system diagram

A.5. Title, reference and version of the baseline and monitoring methodology applied to the project activity:

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Methodologies Used: ACM0002 ver.10 - Consolidated methodology for grid-connected electricity generation from renewable sources

A.6. Registration date of the project activity:

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Registration date: 24/06/10

A.7. Crediting period of the project activity and related information (start date and choice of crediting period):

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Starting date of the first crediting period: 24/06/2010

Length of the total crediting period: 7 years (24/06/2010 ~ 23/06/17)

A.8. Name of responsible person(s)/entity(ies):

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Won-il, Cho(20060637@dongyangex.co.kr)/Dongyang Energy Co.,Ltd

Tel. +82-10-3750-5214

SECTION B. Implementation of the project activity**B.1. Implementation status of the project activity**

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1. Relevant dates of project activity:

| Item | DONG YANG PV Power Plant |
|-----------------------------------|---|
| Completion of construction | PV1: 22/11/2007 PV2: 14/04/2008 PV3: 02/08/2008 PV4: 30/04/2008 PV5: 07/05/2008 PV6: 08/05/2008 PV7: 24/09/2008 |
| Starting date of operation | PV1: 22/11/2007 PV2: 14/04/2008 PV3: 02/05/2008 PV4: 30/04/2008 PV5: 07/05/2008 PV6: 08/05/2008 PV7: 26/09/2008 |
| Continued operation | PV1: 22/11/2007 ~ PV2: 14/04/2008 ~ PV3: 02/08/2008 ~ PV4: 30/04/2008 ~ PV5: 07/05/2008 ~ PV6: 08/05/2008 ~ PV7: 24/09/2008 ~ |

2. The information regarding the actual operation:

| Item | Dongyang PV power project |
|------------------------------|--|
| Overhaul | N/A |
| Downtimes | 2 times (Downtimes of IGBT Inverter, Damage of snubber) |
| Exchange of equipment | 3 times (exchange of module) - PV2-INV#5: 12EA, PV2-INV#5: 27EA - PV4-INV#6: 22EA, - PV5-INV#9: 17EA |

* Downtimes and Exchange of equipment

| | PV1 | PV2 | PV3 | PV4 | PV5 | PV6 | PV7 |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|
| Downtimes | | | 1 | | 1 | | |
| Exchange of equipment | | 1 | | 1 | 1 | | |

4. Events or situations which may impact on the applicability of the methodology:

There were no events may impact on the applicability of methodology such as increases or decreases in capacity of facilities.

B.2. Revision of the monitoring plan

>>

Not applicable

B.3. Request for deviation applied to this monitoring period

>>

Not applicable

B.4. Notification or request of approval of changes

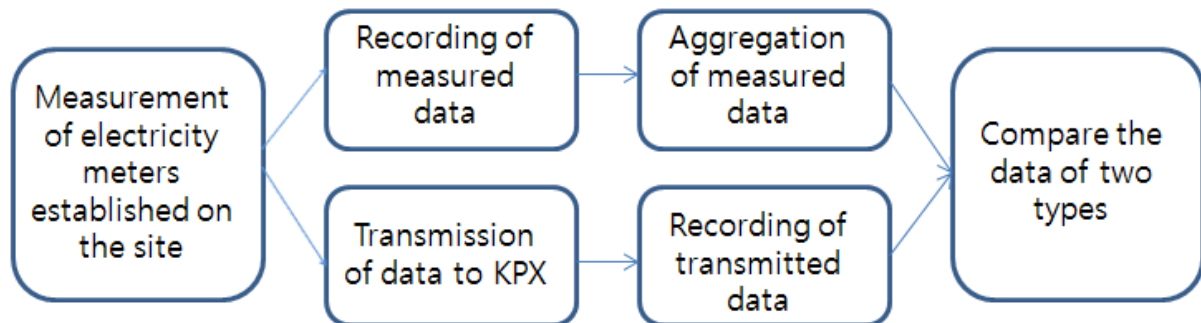
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Not applicable

SECTION C. Description of the monitoring system

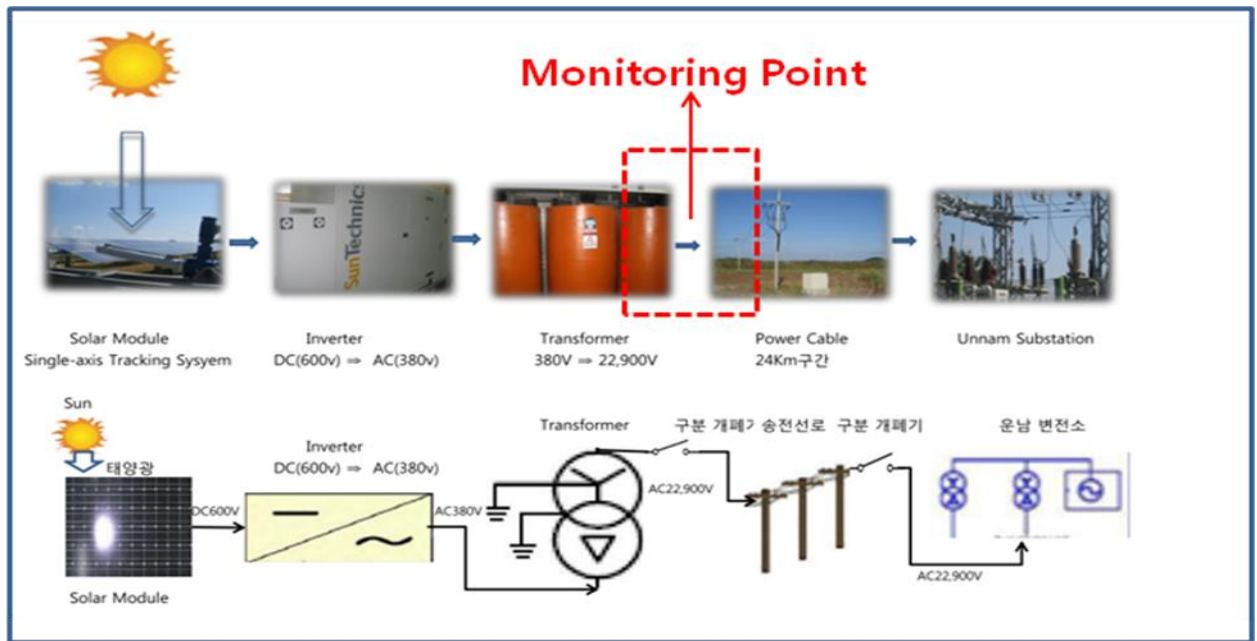
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1) Data collection procedure

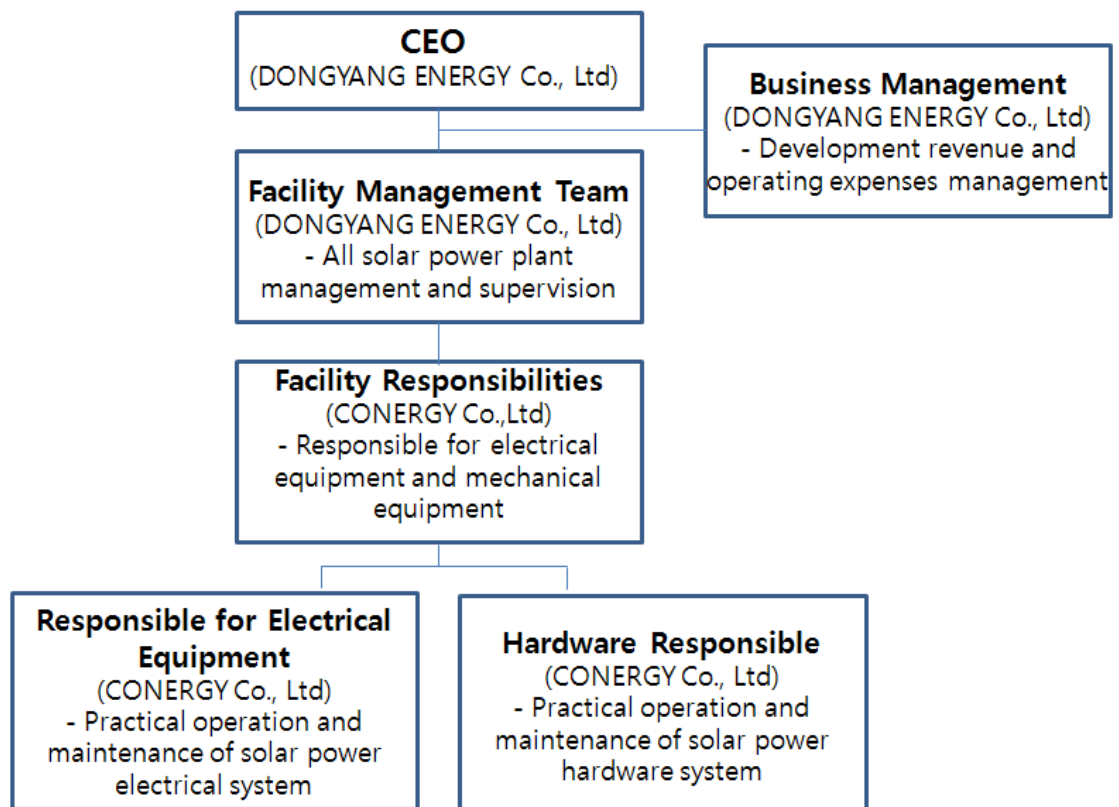


2) Monitoring Point for the project

Electricity monitored by watt-hour meter with accuracy range $\pm 0.5\%$ is delivered to the grid by the project.



3) Operational and management structure:



Although the equipment and the technical work is CONERGY Co., Ltd, but DONG YANG ENERGY Co., Ltd. has the responsibility and authority for all of monitoring.

4) Quality control (QC) and quality assurance (QA) procedures

- Inspection of the measuring equipments

: Exceeds the capacity of this equipment is 1mW. To domestic electricity market rule, we will check the gauge every 3 years.

Domestic according to the regulations, we will check the gauge before the end of expiration the available period. (verification available period : 7 years).

- Allowable error
- : Allowable transmission gauge is $\pm 0.5\%$ and receive gauge is $\pm 1\%$.

5) Emergency procedure

- In case unexpected accident which affects Emission Reductions is occurred, the person in charge of monitoring should report to the responsible department and act according to the internal manual in emergency.
- In case meters are improperly operated or the transfer of data is in error, internal investigation and correction procedure shall be followed and be certified by the final decision-maker and Korea Power exchange.

SECTION D. Data and parameters

D.1. Data and parameters determined at registration and not monitored during the monitoring period, including default values and factors

| | |
|---|--|
| Data / Parameter: | EF _y |
| Data unit: | tCO ₂ /MWh |
| Description: | The combined margin emission factor in the Republic of Korea grid |
| Source of data used: | The registered PDD |
| Value(s) : | 0.6096 tCO ₂ /MWh |
| Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations) | The data (EF _y) is used for baseline emission calculation |
| Additional comment: | This parameter was calculated ex-ante as 0.6096tCO _{2e} /MWh in the registered PDD and will be fixed during the crediting period. |

D.2. Data and parameters monitored

| | | | | | | | |
|---|---|---------|----------|---------|----------|----------|----------|
| Data / Parameter: | EGy | | | | | | |
| Data unit: | MWh | | | | | | |
| Description: | Quantity of net electricity generation supplied by the project plant/unit to the grid in year y | | | | | | |
| Measured /Calculated /Default: | calculated | | | | | | |
| Source of data: | Metering equipment and bills of electricity sales. | | | | | | |
| Value(s) of monitored parameter: | Total values in this monitoring period: 34,848.16MWh For the detail value in the monitoring period, refer to the ER spreadsheet. | | | | | | |
| Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations) | The net value is the value of the difference between the incoming power and outgoing power | | | | | | |
| Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity) | Measurement equipment: Watt-hour meter | | | | | | |
| | - Exported electricity meter | | | | | | |
| | 1.Type: AC3P4W | | | | | | |
| | 2. Accuracy: 0.5S. | | | | | | |
| | 3. Serial number: | | | | | | |
| | PV1 | PV2 | PV3 | PV4 | PV5 | PV6 | PV7 |
| | 3873400 | 3873422 | 37117713 | 3873415 | 37117714 | 37117712 | 46026153 |
| | 4. Calibration frequency : within 3years | | | | | | |
| | 5. Date of first calibration: | | | | | | |

| | <table border="1"> <tr><td>PV1</td><td colspan="6">07/11/2007</td></tr> <tr><td>PV2</td><td colspan="6">05/03/2008</td></tr> <tr><td>PV3</td><td colspan="6">21/04/2008</td></tr> <tr><td>PV4</td><td colspan="6">05/03/2008</td></tr> <tr><td>PV5</td><td colspan="6">21/04/2008</td></tr> <tr><td>PV6</td><td colspan="6">21/04/2008</td></tr> <tr><td>PV7</td><td colspan="6">17/09/2008</td></tr> </table> | | | | | | | PV1 | 07/11/2007 | | | | | | PV2 | 05/03/2008 | | | | | | PV3 | 21/04/2008 | | | | | | PV4 | 05/03/2008 | | | | | | PV5 | 21/04/2008 | | | | | | PV6 | 21/04/2008 | | | | | | PV7 | 17/09/2008 | | | | | |
|---|---|-------------------------|---------|---------|---------|---------|-------------|-------------------------|-------------------------|-----|-----|-----|-----|-----|-------------------------|-------------------------|---------|---------|---------|---------|-------------|-------------------------|-------------------------|--|--|--|--|-----|-------------------------|-------------------------|--|--|--|--|-----|-------------------------|-------------------------|--|--|--|--|-----|-------------------------|-------------------------|--|--|--|--|-----|-------------------------|-------------------------|--|--|--|--|--|
| | PV1 | 07/11/2007 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PV2 | 05/03/2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PV3 | 21/04/2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PV4 | 05/03/2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PV5 | 21/04/2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PV6 | 21/04/2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PV7 | 17/09/2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6. Validity period: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <tr><td>PV1</td><td colspan="6">07/11/2007 ~ 06/11/2010</td></tr> <tr><td>PV2</td><td colspan="6">05/03/2008 ~ 04/03/2011</td></tr> <tr><td>PV3</td><td colspan="6">21/04/2008 ~ 20/04/2011</td></tr> <tr><td>PV4</td><td colspan="6">05/03/2008 ~ 04/03/2011</td></tr> <tr><td>PV5</td><td colspan="6">21/04/2008 ~ 20/04/2011</td></tr> <tr><td>PV6</td><td colspan="6">21/04/2008 ~ 20/04/2011</td></tr> <tr><td>PV7</td><td colspan="6">17/09/2008 ~ 16/09/2011</td></tr> </table> | | | | | | | PV1 | 07/11/2007 ~ 06/11/2010 | | | | | | PV2 | 05/03/2008 ~ 04/03/2011 | | | | | | PV3 | 21/04/2008 ~ 20/04/2011 | | | | | | PV4 | 05/03/2008 ~ 04/03/2011 | | | | | | PV5 | 21/04/2008 ~ 20/04/2011 | | | | | | PV6 | 21/04/2008 ~ 20/04/2011 | | | | | | PV7 | 17/09/2008 ~ 16/09/2011 | | | | | |
| | PV1 | 07/11/2007 ~ 06/11/2010 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PV2 | 05/03/2008 ~ 04/03/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PV3 | 21/04/2008 ~ 20/04/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PV4 | 05/03/2008 ~ 04/03/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PV5 | 21/04/2008 ~ 20/04/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PV6 | 21/04/2008 ~ 20/04/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PV7 | 17/09/2008 ~ 16/09/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7. Date of last calibration: 05/10/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | - Imported electricity meter | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1.Type: AC3P4W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2. Accuracy: 1.0S. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3. Serial number: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <tr> <th>PV1</th> <th>PV2</th> <th>PV3</th> <th>PV4</th> <th>PV5</th> <th>PV6</th> <th>PV7</th> </tr> <tr> <td>0613353</td> <td>7044840</td> <td>7044676</td> <td>7043900</td> <td>7044027</td> <td>7044174</td> <td>PS350075700</td> </tr> </table> | | | | | | | PV1 | PV2 | PV3 | PV4 | PV5 | PV6 | PV7 | 0613353 | 7044840 | 7044676 | 7043900 | 7044027 | 7044174 | PS350075700 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | PV1 | PV2 | PV3 | PV4 | PV5 | PV6 | PV7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0613353 | 7044840 | 7044676 | 7043900 | 7044027 | 7044174 | PS350075700 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Calibration frequency : within 3years | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. Date of first calibration: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <tr><td>PV1</td><td colspan="6">24/01/2008</td></tr> <tr><td>PV2</td><td colspan="6">22/05/2008</td></tr> <tr><td>PV3</td><td colspan="6">22/05/2008</td></tr> <tr><td>PV4</td><td colspan="6">22/05/2008</td></tr> <tr><td>PV5</td><td colspan="6">22/05/2008</td></tr> <tr><td>PV6</td><td colspan="6">22/05/2008</td></tr> <tr><td>PV7</td><td colspan="6">22/09/2008</td></tr> </table> | | | | | | | PV1 | 24/01/2008 | | | | | | PV2 | 22/05/2008 | | | | | | PV3 | 22/05/2008 | | | | | | PV4 | 22/05/2008 | | | | | | PV5 | 22/05/2008 | | | | | | PV6 | 22/05/2008 | | | | | | PV7 | 22/09/2008 | | | | | | |
| PV1 | 24/01/2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PV2 | 22/05/2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PV3 | 22/05/2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PV4 | 22/05/2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PV5 | 22/05/2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PV6 | 22/05/2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PV7 | 22/09/2008 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. Validity period: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <tr><td>PV1</td><td colspan="6">24/01/2008 ~ 23/01/2011</td></tr> <tr><td>PV2</td><td colspan="6">22/05/2008 ~ 21/05/2011</td></tr> <tr><td>PV3</td><td colspan="6">22/05/2008 ~ 21/05/2011</td></tr> <tr><td>PV4</td><td colspan="6">22/05/2008 ~ 21/05/2011</td></tr> <tr><td>PV5</td><td colspan="6">22/05/2008 ~ 21/05/2011</td></tr> <tr><td>PV6</td><td colspan="6">22/05/2008 ~ 21/05/2011</td></tr> <tr><td>PV7</td><td colspan="6">22/09/2008 ~ 21/09/2011</td></tr> </table> | | | | | | | PV1 | 24/01/2008 ~ 23/01/2011 | | | | | | PV2 | 22/05/2008 ~ 21/05/2011 | | | | | | PV3 | 22/05/2008 ~ 21/05/2011 | | | | | | PV4 | 22/05/2008 ~ 21/05/2011 | | | | | | PV5 | 22/05/2008 ~ 21/05/2011 | | | | | | PV6 | 22/05/2008 ~ 21/05/2011 | | | | | | PV7 | 22/09/2008 ~ 21/09/2011 | | | | | | |
| PV1 | 24/01/2008 ~ 23/01/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PV2 | 22/05/2008 ~ 21/05/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PV3 | 22/05/2008 ~ 21/05/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PV4 | 22/05/2008 ~ 21/05/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PV5 | 22/05/2008 ~ 21/05/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PV6 | 22/05/2008 ~ 21/05/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PV7 | 22/09/2008 ~ 21/09/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. Date of last calibration: 05/10/2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measuring/ Reading/ Recording frequency: | The measured electricity amount is collected and recorded hourly | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Calculation method (if applicable): | Not applicable | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures applied: | - QA/QC procedure for this is planned. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

SECTION E. Emission reductions calculation

E.1. Baseline emissions calculation

>>

Follow the registered PDD in accordance with AMS-ID (version 10), the Baseline emissions (BE_y) during the monitoring period is calculated as follows:

$$BE_y = EG_y * EF_y$$

Where;

BE_y: Baseline Emissions (tCO₂e)

EG_y: Net electricity amount supplied to the grid by the project. (MWh)

EF_y: Baseline emission factor (tCO₂e/MWh)

1) Net electricity supplied to the grid by the project

Deduction 0.5% of exported electricity and Add 1.0% of imported electricity due to overdue calibration of meter

| Periods | Electricity | | | Remarks |
|-------------------------|-------------------|------------------|------------|---------|
| | EG _{out} | EG _{in} | Net | |
| 24/06/2010 - 31/12/2010 | 16,858.245 | 275.509 | 16,582.736 | |
| 01/01/2011 - 23/06/2011 | 18,508.936 | 243.511 | 18,265.426 | |
| Total | 35,367.181 | 519.020 | 34,848.162 | |

2) EF_y – Emission Factor of grid. (tCO₂e/MWh)

The Baseline Emission Factor is calculated ex-ante 0.6096 tCO₂e/MWh in the registered PDD and will be fixed during the crediting period.

3) Baseline Emission (BE_y)

The baseline emission BE_y (tCO₂e) during this monitoring period is calculated as followings;

$$BE_y = EG_y * EF_y$$

$$\cong (34,848.16 \text{ MWh} * 0.6096 \text{ tCO}_2\text{e /MWh})$$

$$\cong 21,243.44 \text{ tCO}_2\text{e}$$

E.2. Project emissions calculation

>>

Follow the registered PDD in accordance with AMS-ID (version 10), the project activity utilizes renewable wind power and there is no anthropogenic emissions by sources of GHG due to the project activity. Thus the project activity emissions equal to zero.y.

Hence, PE_y = 0 tCO₂e

E.3. Leakage calculation

>>

Follow the registered PDD in accordance with AMS-ID (version 13), leakage does not need to be considered. Thus, LE_y = 0 tCO₂e

E.4. Emission reductions calculation / table

>>

Emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER_y Emission reductions in year y (tCO₂e/y)

BE_y Baseline Emissions in year y (tCO₂e/y)

PE_y Project emissions in year y (tCO₂e/y)

LE_y Leakage emissions in year y (tCO₂e/y)

$$\begin{aligned}
ER_y &= BE_y - PE_y - LE_y \\
&= 21,243.44 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e} \\
&= 21,243.44 \text{ tCO}_2\text{e} \\
&\approx 21,243 \text{ tCO}_2\text{e}
\end{aligned}$$

Thus, emission reduction generated in this monitoring period is 21,243tCO₂e

| |
|--|
| E.5. Comparison of actual emission reductions with estimates in the CDM-PDD |
|--|

>>

| Item | Values applied in ex-ante calculation of the registered CDM-PDD | Actual values reached during the monitoring period |
|--|---|--|
| Emission reductions (tCO ₂ e) | 21,874 tCO ₂ e | 21,243tCO ₂ e |

| |
|---|
| E.6. Remarks on difference from estimated value in the PDD |
|---|

>>

This monitoring period (from 24 Jun. 2010 to 23 Jun. 2011) is 1 year. The actual emission reduction amounts are 21,243tCO₂, which are less than that estimated in the CDM-PDD (21,874 tCO₂) by 2.9%. The reason was that solar farms received more solar insolation in the period.