

**Monitoring Report Sheet (Input Sheet) [For Verification]****Table 1: Parameters monitored *ex post***

| (a)<br>Monitoring period | (b)<br>Monitoring point No. | (c)<br>Parameters          | (d)<br>Description of data  | (e)<br>Monitored Values | (f)<br>Units | (g)<br>Monitoring option | (h)<br>Source of data | (i)<br>Measurement methods and procedures   | (j)<br>Monitoring frequency | (k)<br>Other comments |
|--------------------------|-----------------------------|----------------------------|---|-------------------------|--------------|--------------------------|-----------------------|---|-----------------------------|-----------------------|
| 2016/6/20-2016/12/31     | (1)                         | $\Sigma$ EG <sub>i,p</sub> | Total quantity of the electricity generated in the project during the period <i>p</i> | 431.57                  | MWh/p        | Option C                 | Measured data         | The AC output of the inverters is measured to determine the amount of net electricity generation by the solar PV system. The reading is taken from four electricity meters. The reading is taken manually. QA/QC is implemented by following the monitoring manual.<br>The electricity meter is certified according to IEC62053-22 (Class 0.5S). The electricity meters are replaced or tested for accuracy every ten years based on the Metering Code of Singapore. The electricity meter is calibrated or replaced when it fails to pass the test.<br>The start date of measuring the electricity generation by the system is set as the base date for counting the ten-year interval for each electricity meter. The date is: 1) 27 June 2016 for A14-1 and A14-2; 2) 24 June 2016 for HQ-1; and 3) 20 June 2016 for HQ-2. | Monthly recording           | N/A                   |

**Table 2: Project-specific parameters fixed *ex ante***

| (a)<br>Parameters | (b)<br>Description of data   | (c)<br>Estimated Values | (d)<br>Units          | (e)<br>Source of data  | (f)<br>Other comments |
|-------------------|--|-------------------------|-----------------------|--|-----------------------|
| EF <sub>RE</sub>  | Reference CO <sub>2</sub> emission factor of grid and/or captive electricity | 0.319                   | tCO <sub>2</sub> /MWh | The default emission factor is derived from the result of the survey on the generation efficiency of major natural gas-fired power plants in Thailand. The default value should be revised if necessary from survey result which is conducted by the JC or project participants. | N/A                   |

**Table 3: *Ex-post* calculation of CO<sub>2</sub> emission reductions**

| Monitoring period    | CO <sub>2</sub> emission reductions | Units               |
|----------------------|-------------------------------------|---------------------|
| 2016/6/20-2016/12/31 | 137                                 | tCO <sub>2</sub> /p |

**[Monitoring option]**

|          |  |
|----------|--|
| Option A | Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications) |
| Option B | Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)                               |
| Option C | Based on the actual measurement using measuring equipments (Data used: measured values)  |

Monitoring Spreadsheet: JCM\_TH\_AM001\_ver01.0

Reference Number: TH001

| i                      | EG <sub>i,p</sub>  |
|------------------------|--|
| solar PV system number | Quantity of the electricity generated by the project solar PV system <i>i</i> during the period <i>p</i> |
|                        | MWh/p  |
| 1                      | 171.80   |
| 2                      | 189.70   |
| 3                      | 16.27  |
| 4                      | 53.80  |
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**Monitoring Report Sheet (Calculation Process Sheet) [For Verification]**

| <b>1. Calculations for emission reductions</b>                                   | <b>Fuel type</b> | <b>Value</b> | <b>Units</b>          | <b>Parameter</b>  |
|--|------------------|--------------|-----------------------|-------------------|
| Emission reductions during the period $p$  | N/A              | 137.7        | tCO <sub>2</sub> /p   | ER <sub>p</sub>   |
| <b>2. Selected default values, etc.</b>  |                  |              |                       |                   |
| Reference CO <sub>2</sub> emission factor of grid and/or captive electricity     | Electricity      | 0.319        | tCO <sub>2</sub> /MWh | EF <sub>RE</sub>  |
| <b>3. Calculations for reference emissions</b>                                   |                  |              |                       |                   |
| Reference emissions during the period $p$  | N/A              | 137.7        | tCO <sub>2</sub> /p   | RE <sub>p</sub>   |
| Total quantity of the electricity generated in the project during the period $p$ | Electricity      | 431.57       | MWh/p                 | EG <sub>i,p</sub> |
| Reference CO <sub>2</sub> emission factor of grid and/or captive electricity     | Electricity      | 0.319        | tCO <sub>2</sub> /MWh | EF <sub>RE</sub>  |
| <b>4. Calculations of the project emissions</b>                                  |                  |              |                       |                   |
| Project emissions during the period $p$  | N/A              | 0.0          | tCO <sub>2</sub> /p   | PE <sub>p</sub>   |

[List of Default Values]

|  |       |                       |
|--|-------|-----------------------|
| Reference CO <sub>2</sub> emission factor of grid and/or captive electricity | 0.319 | tCO <sub>2</sub> /MWh |
|--|-------|-----------------------|

## Monitoring Report Sheet (Input Sheet) [For Verification]

Table 1: Parameters monitored *ex post*

| (a)<br>Monitoring period | (b)<br>Monitoring point No. | (c)<br>Parameters | (d)<br>Description of data  | (e)<br>Monitored Values | (f)<br>Units | (g)<br>Monitoring option | (h)<br>Source of data | (i)<br>Measurement methods and procedures   | (j)<br>Monitoring frequency | (k)<br>Other comments |
|--------------------------|-----------------------------|-------------------|---|-------------------------|--------------|--------------------------|-----------------------|---|-----------------------------|-----------------------|
| 2017/1/1-2017/10/1       | (1)                         | $\Sigma EG_{i,p}$ | Total quantity of the electricity generated in the project during the period <i>p</i> | 513.27                  | MWh/p        | Option C                 | Measured data         | The AC output of the inverters is measured to determine the amount of net electricity generation by the solar PV system. The reading is taken from four electricity meters. The reading is taken manually. QA/QC is implemented by following the monitoring manual. The electricity meter is certified according to IEC62053-22 (Class 0.5S). The electricity meters are replaced or tested for accuracy every ten years based on the Metering Code of Singapore. The electricity meter is calibrated or replaced when it fails to pass the test. The start date of measuring the electricity generation by the system is set as the base date for counting the ten-year interval for each electricity meter. The date is: 1) 27 June 2016 for A14-1 and A14-2; 2) 24 June 2016 for HQ-1; and 3) 20 June 2016 for HQ-2. | Monthly recording           | N/A                   |

Table 2: Project-specific parameters fixed *ex ante*

| (a)<br>Parameters | (b)<br>Description of data   | (c)<br>Estimated Values | (d)<br>Units          | (e)<br>Source of data  | (f)<br>Other comments |
|-------------------|--|-------------------------|-----------------------|--|-----------------------|
| EF <sub>RE</sub>  | Reference CO <sub>2</sub> emission factor of grid and/or captive electricity | 0.319                   | tCO <sub>2</sub> /MWh | The default emission factor is derived from the result of the survey on the generation efficiency of major natural gas-fired power plants in Thailand. The default value should be revised if necessary from survey result which is conducted by the JC or project participants. | N/A                   |

Table 3: *Ex-post* calculation of CO<sub>2</sub> emission reductions

| Monitoring period  | CO <sub>2</sub> emission reductions | Units               |
|--------------------|-------------------------------------|---------------------|
| 2017/1/1-2017/10/1 | 163                                 | tCO <sub>2</sub> /p |

## [Monitoring option]

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| Option A | Based on public data which is measured by entities other than the project participants (Data used: publicly recognized data such as statistical data and specifications) |
| Option B | Based on the amount of transaction which is measured directly using measuring equipments (Data used: commercial evidence such as invoices)                               |
| Option C | Based on the actual measurement using measuring equipments (Data used: measured values)  |

Monitoring Spreadsheet: JCM\_TH\_AM001\_ver01.0

Reference Number: TH001

| i                      | EG <sub>i,p</sub>  |
|------------------------|--|
| solar PV system number | Quantity of the electricity generated by the project solar PV system <i>i</i> during the period <i>p</i> |
|                        | MWh/p  |
| 1                      | 189.80   |
| 2                      | 208.98   |
| 3                      | 26.50  |
| 4                      | 87.99  |
| 5                      |  |
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**Monitoring Report Sheet (Calculation Process Sheet) [For Verification]**

| <b>1. Calculations for emission reductions</b>                                   | <b>Fuel type</b> | <b>Value</b> | <b>Units</b>          | <b>Parameter</b>  |
|--|------------------|--------------|-----------------------|-------------------|
| Emission reductions during the period $p$  | N/A              | 163.7        | tCO <sub>2</sub> /p   | ER <sub>p</sub>   |
| <b>2. Selected default values, etc.</b>  |                  |              |                       |                   |
| Reference CO <sub>2</sub> emission factor of grid and/or captive electricity     | Electricity      | 0.319        | tCO <sub>2</sub> /MWh | EF <sub>RE</sub>  |
| <b>3. Calculations for reference emissions</b>                                   |                  |              |                       |                   |
| Reference emissions during the period $p$  | N/A              | 163.7        | tCO <sub>2</sub> /p   | RE <sub>p</sub>   |
| Total quantity of the electricity generated in the project during the period $p$ | Electricity      | 513.27       | MWh/p                 | EG <sub>i,p</sub> |
| Reference CO <sub>2</sub> emission factor of grid and/or captive electricity     | Electricity      | 0.319        | tCO <sub>2</sub> /MWh | EF <sub>RE</sub>  |
| <b>4. Calculations of the project emissions</b>                                  |                  |              |                       |                   |
| Project emissions during the period $p$  | N/A              | 0.0          | tCO <sub>2</sub> /p   | PE <sub>p</sub>   |

[List of Default Values]

|  |       |                       |
|--|-------|-----------------------|
| Reference CO <sub>2</sub> emission factor of grid and/or captive electricity | 0.319 | tCO <sub>2</sub> /MWh |
|--|-------|-----------------------|