




**Verification and certification report form for
CDM project activities
(Version 04.0)**

Complete this form in accordance with the instructions attached at the end of this form.

BASIC INFORMATION

| | | | |
|---|--|---|----------------------------|
| Title and UNFCCC reference number of the project activity | Rinconada PV CDM Project (Ref. 10549) | | |
| Scale of the project activity | <input type="checkbox"/> Large-scale <input checked="" type="checkbox"/> Small-scale | | |
| Version number of the verification and certification report | Version 02.0 | | |
| Completion date of the verification and certification report | 24/11/2021 | | |
| Monitoring period number and duration of this monitoring period | - Monitoring period number: 1 st - Duration of this monitoring period: 05/02/2020 ~ 31/05/2021(both days included, 482days) | | |
| Version number of the monitoring report to which this report applies | Version 02.0 | | |
| Crediting period of the project activity corresponding to this monitoring period | 05/02/2020 ~ 04/02/2027 (Renewable) | | |
| Project participants | DE Energia SpA | | |
| Host Party | Chile | | |
| Applied methodologies and standardized baselines | Methodology: AMS-I.D. ver. 18 - Grid connected renewable electricity generation Selected standardized baseline : N/A | | |
| Mandatory sectoral scopes | Sectoral scopes 1: Energy Industries (Renewable / Non-renewable sources) | | |
| Conditional sectoral scopes, if applicable | N/A | | |
| Estimated amount of GHG emission reductions or GHG removals for this monitoring duration in the registered PDD | 17,989 tCO ₂ e | | |
| Certified amount of GHG emission reductions or GHG removals for this monitoring period | Amount before 1 January 2013 | Amount from 1 January 2013 until 31 December 2020 | Amount from 1 January 2021 |
| | N/A | 10,538 tCO ₂ eq | 5,252 tCO ₂ eq |
| Name and UNFCCC reference number of the DOE | KTR (Korea Testing and Research Institute) (Ref. E-0056) | | |
| Name, position and signature of the approver of the verification and certification report | JINTAE KIM, Director  | | |

SECTION A. Executive summary

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DE Energia SpA has commissioned Korea Testing and Research Institute (hereinafter referred to as "KTR") to carry out the 1st verification of the project titled "Rinconada PV CDM Project" (hereinafter referred to as project).

The verification team from KTR has reviewed the implementation of the monitoring plan (MP) of the registered CDM project. The Green House Gas (GHG) data for the monitoring period from 05/02/2020 to 31/05/2021 has been verified in a detailed manner by applying the set of requirements, audit practices and principles as required under the CDM Validation and Verification Standard for project activities (version. 03.0) of the United Nations Framework Convention for Climate Change (UNFCCC).

This report summarizes the findings and conclusions of this 1st verification of the UNFCCC registered project activity mentioned above. Objectives of the verification are review and ex-post determination of GHG emission reductions by an independent entity.

The objectives include the verification of:

- Implementation and operation of the project activity as given in the project design document (PDD),
- Compliance with the applied approved methodology and the provisions of the MP,
- Data given in the monitoring report (MR) by checking the monitoring records, the emissions reduction calculation and supporting evidence,
- Accuracy of the monitoring equipment,
- Quality of evidence, and
- Significance of reporting risks and risks of material misstatements.

The verification of this registered project is based on the validated PDD, the MR, emission reduction calculation spread sheet, supporting documents made available to the verifier and information collected through interviews and during the on-site assessment. Furthermore, publicly available information was considered as far as available and required.

The verification was carried out on the basis of the following requirements applicable to this project activity:

- CDM Project Standard for project activities (version.0.3.0)
- CDM Validation and Verification Standard for project activities (version. 03.0),
- Approved methodology AMS I.D (version 18.0);
- Monitoring plan, and other supporting documents, such as publicly available information from the UNFCCC website and background information

The following parties to the Kyoto Protocol and a project participant (PP) are involved in this project (Table A-1).

Table A-1: Project parties and project participants

| Characteristic | Party | Project Participant |
|----------------|-------|---------------------|
| Host party | Chile | DE Energia SpA |

The purpose of this project is to generate electricity using photovoltaic power at Rinconada area in Chile. The Rinconada PV power plant consists of 16,128 modules of 370 Wp and 9,856 modules of 375 Wp - PV modules. The generated power is converted into AC through 5 inverters with capacity of 1,600 kWp.

The proposed project was registered as a CDM project activity on 05/02/2020 with a crediting period of renewable, 7 years from 05/02/2020 to 04/02/2027.

The verification team verified the key parameters for the project by checking the nameplates of PV generators along with their specification and other installed equipment during remote assessment. The verification team's findings are summarized in the Table A-2.

Table A-2: Technical Specification

| items | Specification |
|------------------------------------|--------------------------------|
| Capacity of each PV module (Wp) | 370 / 375 |
| The number of PV modules | 16,128 / 9,856 (Total: 25,984) |
| Capacity of each inverter (kWp) | 1,600 |
| The number of inverters | 5 |
| Capacity of each transformer (kVA) | 4,800 / 3,200 |
| The number of transformers | 1 / 1 (Total: 2) |
| DC Capacity of the plant (kW) | 9,663 |
| AC Capacity of the plant (kW) | 8,000 |

The proposed CDM project activity will generate power using solar energy, which is a renewable source of energy. The solar PV system mainly consists of PV modules, inverters, monitoring devices and etc. The solar PV cells convert solar radiation into DC current. The solar panels are installed in arrays. The modules in each array are connected in parallel and/or series in order to get the preferred current & voltage which match with the rated input parameters of the inverter. The inverter connected in each array converts the DC current to AC current. The electricity collected from all the inverters and the voltage of the collected electricity is stepped up and transported to the national grid.

The verification team confirmed that the project was implemented as planned and described in the registered PDD and that the project activities are in accordance with the approved methodology AMS I.D version 18.0. The verification team also confirmed that the installed equipment essential for emission reduction runs reliably and has been calibrated appropriately.

The verification team confirmed that the monitoring was performed in accordance with the registered PDD and that the GHG emission reductions were calculated without any significant misstatements. The GHG emission reductions were verified by checking the registered PDD, the MR version 01.0 and MR version 02.0, the relevant requirements and documents.

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team member

| No. | Role | Type of resource | Last name | First name | Affiliation (e.g. name of central or other office of DOE or outsourced entity) | Involvement in | | | |
|-----|--------------|------------------|-----------|------------|---|----------------------|--------------------|------------|-----------------------|
| | | | | | | Desk/document review | On-site inspection | Interviews | Verification findings |
| 1. | Team Leader | IR | JUNG | Kyuhong | KTR | O | Remote audit | O | O |
| 2. | Verifier | IR | PARK | Hyemi | KTR | O | Remote audit | O | O |
| 3. | Local Expert | IR | SHIN | Changhoon | KTR | O | X | X | O |

B.2. Technical reviewer and approver of the verification and certification report

| No. | Role | Type of resource | Last name | First name | Affiliation (e.g. name of central or other office of DOE or outsourced entity) |
|-----|--------------------|------------------|-----------|------------|---|
| 1. | Technical reviewer | IR | LEE | Bongjae | KTR |
| 2 | Approver | IR | KIM | Jintae | KTR |

SECTION C. Application of materiality**C.1. Consideration of materiality in planning the verification**

| No. | Risk that could lead to material errors, omissions or misstatements | Assessment of the risk | | Response to the risk in the verification plan and/or sampling plan |
|-----|---|------------------------|---|--|
| | | Risk level | Justification | |
| 1. | Errors, omissions or misstatements of emission sources | Low | The verification team checks whether there are error, omission or misstatements of emission source during the monitoring period. | To be further confirmed by cross-checking the related documents and through a remote assessment |
| 2. | Errors, double counting, omissions, or misstatements of monitoring parameters | Low | The verification team checks whether there are errors, omissions or misstatements of monitoring parameters during the monitoring period. In this project activity, there are only 2 monitoring parameters requiring thorough checks. | To be further confirmed by cross-checking the related documents and through a remote assessment. |
| 3. | Accuracy of monitoring instruments | Low | The MR described the accuracy of each meter in accordance with the registered PDD. | To be further confirmed by cross checking the related documents including a remote assessment. |
| 4. | The delay of the calibration for some measuring instruments | Low | The MR described the calibration date and the validity based on the monitoring plan in the registered PDD. | To be further confirmed by checking the related documents and through a remote assessment. |
| 5. | IT system and data collection procedure for monitoring system | Low | The designated staffs record the collected data and calculate the emission reductions based on the Monitoring plan, the monitoring manual and the data records. | To be further confirmed by cross-checking the related documents and through a remote assessment. |
| 6. | Organization and QA/QC system | Low | Roles and responsibilities were defined according to the registered PDD. Monitoring activities including the data collection procedure, training, etc. were defined in the MR according to the registered PDD. | To be further confirmed by the cross checking the related documents and through a remote assessment. |

C.2. Consideration of materiality in conducting the verification

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There were some findings that has an impact on the amount of emission reductions, but it is immaterial. As the findings could be considered as simple error, not systematic reoccurring error, the verification team determined that no additional audit procedures need to be conducted in order to reach a reasonable level of assurance, and that the claimed emission reductions in the MR are free from material error, omission or misstatement. Consequently, verification and sampling plan were not revised.

SECTION D. Means of verification**D.1. Desk/document review**

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During the desk review, all documents initially provided by the PP and publicly available were reviewed by following the KTR internal quality procedures. The main documents reviewed are listed below:

- The final version of the PDD including the MP;
- The final version of the validation report,
- Approved methodology AMS I.D (version 18.0);
- The MR (version 01.0 and 02.0), including the claimed emission reductions for the project, and
- ER calculation sheet (version 01.0 and 02.0).

Other supporting documents, such as publicly available information from the UNFCCC website and background information were also reviewed

D.2. On-site inspection

As per VVS-PA (version 03.0) para 339, it is mandatory for the DOE to conduct an on-site inspection at verification for registered CDM project activity if it is the first verification for the DOE with regard to this project.

However, on site visit was not able to be conducted for this verification due to the outbreak of global pandemic COVID-19 and increased risk of exposure from infection of COVID-19 virus during the travel. As per the announcement by the EB 110th meeting, it has agreed to further extend the period in which DOEs may apply alternative measures of validation/verification to mandatory on-site inspections until 31 December 2021.

If the site visits cannot be postponed, a proper justification should be provided by the DOE as to why the site visits cannot be postponed, including the demonstration of a significant impact of delaying the site visits on the DOE, or project participants or coordinating/ managing entity reliance on applicable force majeure provisions in the verification contracts.

However, the CL01 has been raised and closed successfully.

The Daelim Energy CO., Ltd. established a holding company, DE Energia SpA. (Hereafter, PP) pursuant to the laws of Chile, Chilean Taxation No. 76.857.825 having its registered office in Santiago, Chile.

The PP has signed the agreement with investor, Korea East-West Power co, Ltd. As per the contract, the two entities considered CDM benefits (51(Dearim company): 49(Korea East-West Power Co., Ltd)), CERs, and decided to commence the project.

Two entities considered investment analysis of the project in a way the electricity sales benefit with the CDM credit. It was concluded that CDM project is necessary to coincide with the investment of this project and their decision on project commencement as a CDM project.

The revenue from the CDM credit shall be reflected from 2021 in accordance with the investment terms stipulated in the subscription and shareholders' agreement contract terms among DE Energia SPA, DAELIM Energy CO., LTD and Korea East-West Power Co.,LTD.

Thus, the verification should be processed in accordance with the timeline of CER credit revenue within 2021.

Therefore, the verification team opted for conducting the remote audit during the current monitoring period using alternative measures in accordance with the KTR quality system.

The alternative means used by KTR for the purpose of validation of the project are listed below:

- 1) telephonic interviews (via audio calls) with site personnel and the project developer to discuss the overall operational aspects
 - 2) interviews with the PP representatives/consultants to discuss the implementation of project activity and monitoring procedures for various parameters
 - 3) geographic and photographic evidence for the project activity site
 - 4) review of documentary evidence and supporting documents including technical specifications of project equipment, commissioning certificates of PV power generation. The entire list of documents reviewed for purpose of validation is available in Appendix 3 of this report.
- These alternative methods were considered sufficiently by the verification team for the current verification.

| VVS PA Version 03 Requirements | Verification team Justification |
|--|---|
| <p>Para 338 In assessing the information, the DOE shall apply the means of verification specified throughout this standard and, where appropriate, standard auditing techniques to assess the quality of the information, including but not limited to:</p> <p>(b) On-site inspection taking into account paragraphs 339–341 below, involving: (i) An assessment of the implementation and operation of the registered CDM project activity as per the registered PDD or any approved revised PDD;</p> <p>(ii) A review of information flows for generating, aggregating and reporting the monitoring parameters;</p> <p>(iii) Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the registered monitoring plan;</p> <p>(iv) Cross checks between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data sources;</p> <p>(v) A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PDD, the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents;</p> <p>(vi) A review of calculations and assumptions made in determining the GHG data and GHG emission reductions or net anthropogenic GHG removals;</p> <p>(vii) An identification of quality control and quality assurance procedures in place to prevent, or identify</p> | <p>1. Verification team has done the follow-up actions by:</p> <ul style="list-style-type: none"> - Remote interviews of PPs with Zoom. - Cross checks between information provided by interviewed personnel (i.e. by checking sources) to ensure that no relevant information has been omitted. <p>2. The details of remote assessment have been given as follows:</p> <ol style="list-style-type: none"> 1) assessment of the implementation and operation of the CDM project activity as per the registered PDD 2) review of information flows for generating, aggregating and reporting of the monitoring parameters 3) interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the Monitoring Plan 4) cross-checks between information provided in the MR and data from other sources 5) checking the monitoring equipment including calibration performance, and observations of monitoring practices against the requirements of the PDD and the applied methodology 6) review of calculations and assumptions made in determining the GHG data and ERs, and 7) identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters |

| | |
|--|---|
| and correct, any errors or omissions in the reported monitoring parameters; | |
| <p>Para 339</p> <p>It is mandatory for the DOE to conduct an on-site inspection at verification for the registered CDM project activity if:</p> <p>(a) It is the first verification for the DOE with regard to this project activity;</p> <p>(b) More than three years have elapsed since the last on-site inspection conducted for verification for the project activity; or</p> <p>(c) The project activity has achieved more than 300,000 tCO₂ eq of GHG emission reductions or net anthropogenic GHG removals since the last verification when an on-site inspection was conducted.</p> | <p>For Rinconada project, on-site inspection is mandatory according to (a) of VVS PA(Ver.03.0) para 339.</p> <p>However, the Executive Board of the Clean Development Mechanism (CDM), at its 110th meeting, agreed to further extend the period in which DOEs may apply alternative measures of validation/verification to mandatory on-site inspections until 31 December 2021.</p> <p>Accordingly, the verification team conducted on-site inspection through Zoom.</p> |

D.3. Interviews

| No. | Interviewee | | | Date | Subject | Team member |
|-----|-------------|------------|------------------------------------|------------|---|----------------------------|
| | Last name | First name | Affiliation | | | |
| 1. | Jinhee | Yoo | DE Energia SpA. | 01/09/2021 | Application of selected baseline and monitoring methodologies, baseline scenario, additionality demonstration, Emission reduction calculations, monitoring plan | KyuHong JUNG Hyemi PARK |
| 2 | Sanghoon | Jang | Ernst & Young (Consultant company) | 01/09/2021 | | |
| 3 | Francisco | Promis | DE Energia SpA. | 01/09/2021 | Regional Manager Quality management system | |
| 4. | Charlcs | Franch | DE Energia SpA. | 01/09/2021 | Administration Manager Quality management system | |
| 5 | Vincent | Burgmeier | Enertis | 01/09/2021 | Technical equipment and their operation, Monitoring and measuring instruments, Calibration procedures Maintenance of Facility | |
| 6 | Stefano | Gozzo | Grenergy | 01/09/2021 | | |
| 7 | Ricardo | Liego | Grenergy | 01/09/2021 | | |

D.4. Sampling approach

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No sampling approach used during the verification.

D.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

| Areas of verification findings | No. of CL | No. of CAR | No. of FAR |
|---|-----------|------------|------------|
| Compliance of the monitoring report with the monitoring report form | 0 | 1 | 0 |
| Compliance of the project implementation and operation with the registered PDD | 0 | 1 | 0 |
| Post-registration changes | 0 | 0 | 0 |
| Compliance of the registered monitoring plan with the methodologies including applicable tools and standardized baselines | 0 | 0 | 0 |
| Compliance of monitoring activities with the registered monitoring plan | 0 | 1 | 0 |
| Compliance with the calibration frequency requirements for measuring instruments | 0 | 1 | 0 |
| Assessment of data and calculation of emission reductions or net removals | 0 | 1 | 1 |
| Assessment of reported sustainable development co-benefits | 0 | 0 | 0 |
| Global stakeholder consultation | 0 | 0 | 0 |
| Others (Section D.2) | 1 | 0 | 0 |
| Total | 1 | 5 | 1 |

SECTION E. Verification findings

E.1. Compliance of the monitoring report with the monitoring report form

| | |
|------------------------------|--|
| Means of verification | (VVS para. 352-353) The DOE shall determine whether the monitoring report was completed using the valid version of the applicable monitoring report form. The DOE shall state its opinion on the compliance of the monitoring report with the relevant form and instructions therein. |
| Findings | There is one CAR raised in this section. |
| Conclusion | DOE has made the version 01 of the monitoring report covering the monitoring period from 05/02/2020 to 31/05/2021(both days included, 482days) publicly available through its dedicated interface on the UNFCCC CDM website before undertaking a desk-review. During the verification process, the monitoring report form has been revised to version 09.0 So, CAR01 has been raised but was closed successfully. The verification team has concluded that the monitoring report was completed using the valid version of the applicable monitoring report form and is followed the guidelines contained in the template. |

E.2. Remaining forward action requests from validation and/or previous verifications

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Not applicable.

E.3. Compliance of the project implementation and operation with the registered project design document

| | |
|------------------------------|--|
| Means of verification | (VVS para. 354-356) The DOE shall identify any concerns related to the conformity of the actual CDM project activity and its operation with the registered PDD and determine whether: (a) The implementation and operation of the project activity has been conducted in accordance with the description contained in the registered PDD; or (b) Any deviation or the proposed or actual changes in the implementation or operation of the project activity comply with the relevant requirements of the "CDM project standard for project activities". The DOE shall assess whether all physical features (technology, project equipment, and monitoring and metering equipment) of the registered CDM project |
|------------------------------|--|

| | activity specified in the registered PDD are in place and that the project participants have operated the project activity as per the registered PDD or any approved revised PDD. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|-------------------------------|-------------------------|---------------|--|--------------|--|------------|--|-------|--|------------------|------------------|------------------------------|--|-----|-----|----------------------------------|--|------|----|----------------------------------|--|------|------|--------------------------------|--|------|------|---------------------------------|--|------|------|-----------------------|--|----|------|-----------|--|-----------------|--|-------------|--|-----------|--|------------------------|--|----|--|------------------------------|--|--|---------------|--------------|--|--|----------|-------|--|--|-------------------------|------------|----------------------------|--|---------------|--------------------------|--|-------------|---------------------|--|-------|---------------------|--|-------|-------------|----------------------------------|--|---------------|----------------------------------|--|---------------|---------------------|--|-----|----------------|--|---------|------------------------|--|--|----|---------------------------------|--|---------------|--|--------------|--|-------|--|-------|--|------|--|---------|-------------|-----|-----|-------------------|--------|--|
| Findings | There is one CAR raised in this section. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conclusion | <p>The verification team has reviewed Commercial operation date (start date of supplying generated electricity to the grid, 19/12/2019). The CAR02 has been raised and closed successfully. The project has a capacity of 8MW which is same as mentioned in the registered PDD. The capacity does not change after the registration of the project activity as confirmed by the verification team during remote assessment. No unforeseen activities were observed during the present verification which can alter the applicability or additionality of the applied methodology. The details were checked by the verification team from the plant log records which were found correct. The Solar plant is located Town of La Chimba, Municipality of Rengo, belonging to the Cachapoal Province of the Region of O'Higgins, Chile. The power plant consists of 16,128 modules with 370 Wp and 9,856 modules of 375 Wp - PV modules. The generated power is converted into AC through 5 inverters with capacity of 1,600 kWp. The Inverter connected in each array converts the current from DC to AC and then it is supplied to the national power grid in Chile (SEN, Sistema Eléctrico Nacional) after stepping up the voltage up to 15 kV. The same is checked during specification of panels & invertors and remote assessment. Thus, the verification team confirmed that all required facilities were installed and being operated as described in the registered PDD.</p> <table border="1"> <thead> <tr> <th colspan="2">Technical Aspect of PV Module</th><th colspan="2">Specification</th></tr> </thead> <tbody> <tr> <td colspan="2">Manufacturer</td><td colspan="2">Trinasolar</td></tr> <tr> <td colspan="2">Model</td><td>TSM-370DE14A(II)</td><td>TSM-375DE14A(II)</td></tr> <tr> <td colspan="2">Peak Power Watts - PMPP (Wp)</td><td>370</td><td>375</td></tr> <tr> <td colspan="2">Maximum Power Voltage - VMPP (V)</td><td>39.7</td><td>40</td></tr> <tr> <td colspan="2">Maximum Power Current - IMPP (A)</td><td>9.33</td><td>9.37</td></tr> <tr> <td colspan="2">Open Circuit Voltage - VOC (V)</td><td>48.3</td><td>48.5</td></tr> <tr> <td colspan="2">Short Circuit Current - ISC (A)</td><td>9.83</td><td>9.88</td></tr> <tr> <td colspan="2">Module efficiency (%)</td><td>19</td><td>19.3</td></tr> <tr> <td colspan="2">Size (mm)</td><td colspan="2">1960 x 992 x 40</td></tr> <tr> <td colspan="2">Weight (kg)</td><td colspan="2">22.5 ~ 26</td></tr> <tr> <td colspan="2">Life Expectancy (year)</td><td colspan="2">25</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="3">Technical Aspect of Inverter</th><th>Specification</th></tr> </thead> <tbody> <tr> <td colspan="3">Manufacturer</td><td>Ingeteam</td></tr> <tr> <td colspan="3">Model</td><td>INGECON SUN 1640TL B630</td></tr> <tr> <td rowspan="4">Input (DC)</td><td colspan="2">PV array power range (kWp)</td><td>1,620 - 2,128</td></tr> <tr> <td colspan="2">Voltage Range at MPP (V)</td><td>910 - 1,300</td></tr> <tr> <td colspan="2">Maximum voltage (V)</td><td>1,500</td></tr> <tr> <td colspan="2">Maximum current (A)</td><td>1,850</td></tr> <tr> <td rowspan="4">Output (AC)</td><td colspan="2">Power IP54 @30 °C / @50 °C (kVA)</td><td>1,637 / 1,473</td></tr> <tr> <td colspan="2">Current IP54 @30 °C / @50 °C (A)</td><td>1,500 / 1,350</td></tr> <tr> <td colspan="2">Rated voltage (Vac)</td><td>630</td></tr> <tr> <td colspan="2" rowspan="2">Frequency (Hz)</td><td>50 / 60</td></tr> <tr> <td colspan="3">Life Expectancy (year)</td><td>30</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">Technical Aspect of Transformer</th><th colspan="2">Specification</th></tr> </thead> <tbody> <tr> <td colspan="2">Manufacturer</td><td colspan="2">CELME</td></tr> <tr> <td colspan="2">Model</td><td colspan="2">ONAN</td></tr> <tr> <td rowspan="2">Primary</td><td>Power (MVA)</td><td>4.8</td><td>3.2</td></tr> <tr> <td>Rated Voltage (V)</td><td colspan="2">15,000</td></tr> </tbody> </table> | Technical Aspect of PV Module | | Specification | | Manufacturer | | Trinasolar | | Model | | TSM-370DE14A(II) | TSM-375DE14A(II) | Peak Power Watts - PMPP (Wp) | | 370 | 375 | Maximum Power Voltage - VMPP (V) | | 39.7 | 40 | Maximum Power Current - IMPP (A) | | 9.33 | 9.37 | Open Circuit Voltage - VOC (V) | | 48.3 | 48.5 | Short Circuit Current - ISC (A) | | 9.83 | 9.88 | Module efficiency (%) | | 19 | 19.3 | Size (mm) | | 1960 x 992 x 40 | | Weight (kg) | | 22.5 ~ 26 | | Life Expectancy (year) | | 25 | | Technical Aspect of Inverter | | | Specification | Manufacturer | | | Ingeteam | Model | | | INGECON SUN 1640TL B630 | Input (DC) | PV array power range (kWp) | | 1,620 - 2,128 | Voltage Range at MPP (V) | | 910 - 1,300 | Maximum voltage (V) | | 1,500 | Maximum current (A) | | 1,850 | Output (AC) | Power IP54 @30 °C / @50 °C (kVA) | | 1,637 / 1,473 | Current IP54 @30 °C / @50 °C (A) | | 1,500 / 1,350 | Rated voltage (Vac) | | 630 | Frequency (Hz) | | 50 / 60 | Life Expectancy (year) | | | 30 | Technical Aspect of Transformer | | Specification | | Manufacturer | | CELME | | Model | | ONAN | | Primary | Power (MVA) | 4.8 | 3.2 | Rated Voltage (V) | 15,000 | |
| Technical Aspect of PV Module | | Specification | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | Trinasolar | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | TSM-370DE14A(II) | TSM-375DE14A(II) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Peak Power Watts - PMPP (Wp) | | 370 | 375 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maximum Power Voltage - VMPP (V) | | 39.7 | 40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maximum Power Current - IMPP (A) | | 9.33 | 9.37 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Open Circuit Voltage - VOC (V) | | 48.3 | 48.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Short Circuit Current - ISC (A) | | 9.83 | 9.88 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Module efficiency (%) | | 19 | 19.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Size (mm) | | 1960 x 992 x 40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Weight (kg) | | 22.5 ~ 26 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Life Expectancy (year) | | 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Technical Aspect of Inverter | | | Specification | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | | Ingeteam | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | INGECON SUN 1640TL B630 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Input (DC) | PV array power range (kWp) | | 1,620 - 2,128 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Voltage Range at MPP (V) | | 910 - 1,300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Maximum voltage (V) | | 1,500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Maximum current (A) | | 1,850 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Output (AC) | Power IP54 @30 °C / @50 °C (kVA) | | 1,637 / 1,473 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Current IP54 @30 °C / @50 °C (A) | | 1,500 / 1,350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Rated voltage (Vac) | | 630 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Frequency (Hz) | | 50 / 60 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Life Expectancy (year) | | | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Technical Aspect of Transformer | | Specification | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | CELME | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | ONAN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Primary | Power (MVA) | 4.8 | 3.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Rated Voltage (V) | 15,000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | |
|--|----------------|-------------------|----------|---------|
| | | Rated Current (A) | 184.75 | 123.17 |
| | Secondary | Power (MVA) | 4.8 | 3.2 |
| | | Rated Voltage (V) | 615 | |
| | | Rated Current (A) | 4,506.15 | 3,004.1 |
| | Frequency (Hz) | | 50 | |
| | Impedance (%) | | 7.61 | 6.44 |

The electric meter monitors both the export and import electricity, Monitored the quantity of electricity generation is available on the CEN website and sales invoices from CEN

The verification team checked the latitude and longitude of the project activity during the remote assessment with the help of PP's staff and their GPS meter. Moreover, verification team also checked the same site with Google earth software and found that the detail of latitude and longitude as mentioned in the registered PDD is correct. The detail is as below:

| Project title | Latitude | Longitude |
|--------------------------|-----------|-----------|
| Rinconada PV CDM Project | -34.40683 | -70.81912 |

Same are found in-line with the registered PDD. The detail also forms the part of the Monitoring report and thus is acceptable to the verification team.

The verification team confirmed that the physical features of the project activity in the registered PDD are in place and that the PP has operated the project activity as per the registered PDD during this monitoring period.

E.4. Post-registration changes

E.4.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents¹

>>

Not applicable.

E.4.2. Corrections

>>

| Items | Correction |
|-------------------|---|
| Correction of COD | <p>The exact commissioning details of the project have been added in the PDD since the registered PDD had the expected dates of commissioning.</p> <p>The commissioning date has been corrected from 15/02/2020 to 19/12/2019</p> |

E.4.3. Changes to the start date of the crediting period

>>

Not applicable.

E.4.4. Inclusion of a monitoring plan

>>

Not applicable.

¹ Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

E.4.5. Permanent changes from registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents

>>

Not applicable.

E.4.6. Changes to the project design

>>

Not applicable.

E.4.7. Changes specific to afforestation and reforestation project activities

>>

Not applicable.

E.5. Compliance of the registered monitoring plan with applied methodologies, applied standardized baselines, and other applied methodological regulatory documents

| | |
|------------------------------|--|
| Means of verification | (VVS para. 357-359) The DOE shall determine whether the registered monitoring plan is in accordance with the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents. For monitoring aspects that are not specified in the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents, particularly in the case of small-scale methodologies (e.g. additional monitoring parameters, monitoring frequency and calibration frequency), the DOE should bring to the attention of the Board issues which may enhance the level of accuracy and completeness of the registered monitoring plan. |
| Findings | There is no CAR/CL raised in this section |
| Conclusion | The verification team is able to confirm that the monitoring plan contained in the registered PDD is in accordance with the approved methodology applied by the project activity, i.e. AMS-I.D. ver. 18- Grid connected renewable electricity generation and its applicable tools. The verification team confirms that the project activity complies with the requirement of Approved methodology and registered PDD. |

E.6. Compliance of monitoring activities with the registered monitoring plan

E.6.1. Data and parameters fixed ex ante or at renewal of crediting period

| | | | |
|---|--|---|----------------|
| Means of verification | (VVS para. 360) Compliance with the registered PDD Checking whether the value applied is in compliance with the registered PDD. | | |
| Findings | There is no CAR/CL raised in this section. | | |
| Conclusion | The PP has applied data and parameters fixed ex ante for monitoring and calculating the GHG emission reductions as follow. | | |
| | Table E.6.1-1 Information of data and parameter fixed ex-ante | | |
| | Data/parameter | Applied value | Source of data |
| OM Emission Factor of Grid, EF _{grid,OM, y} | 0.7341 tCO2/MWh | EF _{grid,OM,y} calculated as per “Tool to calculate the emission factor for an electricity system, Version 7” as 3-year generation weighted average using data for the year 2016~2018. The data are obtained from the National Energy Commission of Chile(CNE) in Mar of 2019. | |
| BM Emission Factor of Grid, EF _{grid,BM, y} | 0.4008 tCO2/MWh | EF _{grid,BM,y} calculated as per “Tool to calculate the emission factor for an electricity system, Version 7” as 3-year generation weighted average using data for the year 2016~2018. The data are | |

| | | | |
|---|---|------------------------------|---|
| | | | obtained from the National Energy Commission of Chile(CNE) in Mar of 2019. |
| | Combined Emission Factor of Grid, $EF_{grid,y}$ | 0.6508 tCO ₂ /MWh | $EF_{grid,y}$ calculated as per "Tool to calculate the emission factor for an electricity system, Version 7" as 3-year generation weighted average using data for the year 2016~2018. The data are obtained from the National Energy Commission of Chile(CNE) in Mar of 2019. |
| The verification team confirmed that the PP has applied all of data and parameter fixed ante adequately in calculating the GHG emission reductions according to the registered and validated PDD. | | | |

E.6.2. Data and parameters monitored

| Means of verification | <p>(VVS para. 360~361) The DOE shall determine whether the monitoring of parameters related to GHG emission reductions or net anthropogenic GHG removals in the registered PDD has been implemented in accordance with the registered monitoring plan.</p> <p>(a) The registered monitoring plan has been properly implemented and followed by the project participants;</p> <p>(b) All parameters stated in the registered monitoring plan and relevant Board decisions have been monitored.</p> | | | | | | |
|------------------------------|---|--------|----------------------|-----------------------|------------|-----------------------|-----------|
| Findings | There is one CAR raised in this section | | | | | | |
| Conclusion | <p>According to the MP of the registered PDD (version 02.2) and monitoring methodology for which AMS I.D(version 18.0) has been applied; the monitoring parameters is the net electricity generated by this project.</p> <p>During the verification process, this monitoring parameter has been verified regarding the appropriateness of the applied measurement and determination method, the correctness of the values used in the ER calculation, the accuracy and applied QA/QC measures.</p> <p>However, the CAR03 has been raised but was closed successfully</p> <p><u>Electricity supplied ($Grid_{out,y}$)</u></p> <p>The watt-hour meter is bi-directional electricity meter that measures both export and import electricity in the plant according to the monitoring plan in registered PDD (version 02.2).</p> <p>The primary source of data of the parameter is the meter reading data recorded in the CEN website.</p> <p>The above monthly accumulated data is used to issue a bill every month.</p> <p>The raw data are also downloaded from the meter directly by the operation and maintenance personnel and are crosschecked against the sales records provided by CEN website by the two entities (representative of CEN and the monitoring manager of DE Energia SpA) to confirm the sales invoice.</p> <p>The verification team also cross-checked the data from CEN against the data from the internal database from the meter readings and found that there are no discrepancies between the two data.</p> <p>The verified quantity of supplied electricity is given as follows:</p> <table border="1"> <thead> <tr> <th>Period</th><th>$Grid_{out,y}$ (MWh)</th></tr> </thead> <tbody> <tr> <td>05/02/2020-31/12/2020</td><td>16,235.602</td></tr> <tr> <td>01/01/2021-31/05/2021</td><td>8,090.538</td></tr> </tbody> </table> <p><u>Electricity Imported ($Grid_{in,y}$)</u></p> <p>As discussed in $Grid_{out,y}$, watt- hour meter is bi-directional electricity meter that measure both export and import electricity.</p> <p>The parameter $Grid_{in,y}$ is obtained from the data in the electricity invoice provided by Compania General de Electricidad (CGE)</p> <p>The quantity of electricity imported from the grid is measured continuously and</p> | Period | $Grid_{out,y}$ (MWh) | 05/02/2020-31/12/2020 | 16,235.602 | 01/01/2021-31/05/2021 | 8,090.538 |
| Period | $Grid_{out,y}$ (MWh) | | | | | | |
| 05/02/2020-31/12/2020 | 16,235.602 | | | | | | |
| 01/01/2021-31/05/2021 | 8,090.538 | | | | | | |

recorded monthly. The data is archived from the meter reading by downloading and is managed by the monitoring manager of DE Energia.

The verification team cross-checked the values against the internal database of the PP and the data in the relevant electricity invoice provided by Compania General de Electricidad (CGE) and found them to be consistent.

The verified quantity of imported electricity is given as follows:

| Period | Grid _{in,y} (MWh) |
|-----------------------|----------------------------|
| 05/02/2020-31/12/2020 | 42.755 |
| 01/01/2021-31/05/2021 | 19.743 |

Net electricity supplied to the grid (EG_{PJ,y})

This parameter, EG_{PJ,y} is the quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity.

The verification team confirmed that the formula used in the ER calculation sheet is correct.

The net electricity delivered to the grid by the project activity (EG_{PJ,y}) is obtained by subtracting the quantity of electricity imported from the quantity of electricity supplied (Electricity supplied – Electricity imported).

The reported and verified quantity of net electricity supplied to the grid by the project activity during this monitoring period is given as follows:

| Period | EG _{PJ,y} (MWh) |
|-----------------------|--------------------------|
| 05/02/2020-31/12/2020 | 16,192.847 |
| 01/01/2021-31/05/2021 | 8,070.794 |

E.6.3. Implementation of sampling plan

| | |
|------------------------------|--|
| Means of verification | (VVS para. 338 (c)) Sampling approach in accordance with the “Standard for sampling and surveys for CDM project activities and programme of activities”, including: (i) A random sampling for cases where the project participants or the coordinating/managing entity did not apply a sampling approach; (ii) An acceptance sampling or another sampling approach for cases where the project participants or the coordinating/managing entity applied a sampling approach. |
| Findings | There is no CARs raised in this section |
| Conclusion | The PPs did not apply any sampling plan to determine data and parameters monitored during the period. The verification team checked all documented evidences for ER calculation sheet. |

E.7. Compliance with the calibration frequency requirements for measuring instruments

| | |
|------------------------------|--|
| Means of verification | (VVS para. 365-371) The DOE shall determine whether the calibration of the measuring equipment that has an impact on the claimed GHG emission reductions or net anthropogenic GHG removals is conducted by the project participants at a frequency specified in the applied methodologies, the applied standardized baselines and/or the registered monitoring plan. If, during the verification of a certain monitoring period, the DOE identifies that the calibration has been delayed and the calibration has been implemented after the monitoring period in consideration (i.e. the results of delayed calibration are available), referring to the illustrative examples in the appendix, the DOE may conclude its verification, provided the following conservative approach is adopted in the calculation of GHG emission reductions or net anthropogenic GHG removals |
| Findings | There is one CAR raised in this section |
| Conclusion | The verification team reviewed the information on the bi-directional meter for the imported and exported electricity in the MR version 02.0, the calibration report and the applicable national law to confirmed that there was no calibration delay during the monitoring period. |

The verification team verified the following parameters related to the meter measuring imported/exported electricity.

Gird_{out,y} (Electricity exported) and Grid_{in,y} (Electricity imported)

This parameter is monitored using the bi-directional electricity meter. This meter complies with national regulation, 'Sistemas de Medidas para Transferencias Económicas' issued by CNE (COMISIÓN NACIONAL DE ENERGÍA).

The meter is subject to a regular maintenance and calibration every 5 years to ensure accuracy ($\pm 0.2\%$) by CGE which is an electricity distribution company in the host country.

The verification team reviewed 'Test and calibration certificate' & 'Functions and characteristics' by the Schneider electric and confirmed that calibration validity of the meter is maintained throughout this monitoring period.

However, the CAR05 has been raised but was closed successfully.

The detailed information for each electricity meters is summarized below:

| | watt- hour meter |
|------------------------------|------------------------|
| Type | Electric meter |
| Accuracy | 0.2 % |
| Serial number | MR-1904B709-02 |
| Calibration frequency | 5 years |
| Date of previous calibration | 26/04/2019 |
| Date of last calibration | 26/04/2019 |
| Validity | 26/04/2019 ~25/04/2024 |

No delay in calibration was observed for the current monitoring period. The calibration of the watt-hour meter for both electricity generation and electricity consumption installed at HT side of the transformer were carried out by a 3rd calibration entity which is in line with the national regulation and the same is acceptable to the verification team.

The verification team confirmed that the watt-hour meter was calibrations have been performed properly.

E.8. Assessment of data and calculation of emission reductions or net removals

E.8.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

| | |
|------------------------------|---|
| Means of verification | <p>(VVS para. 372-374) The DOE shall assess the data and calculations of GHG emission reductions or net anthropogenic GHG removals achieved by from the registered CDM project activity.</p> <p>The DOE shall determine whether:</p> <p>(a) A complete set of data for the specified monitoring period is available. If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, the DOE shall assess whether:</p> <ul style="list-style-type: none"> (i) The most conservative values approach is applied to the parameters for the entire non-monitoring period in accordance with the provisions relating to the temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the "CDM project standard for project activities"; or (ii) Alternative monitoring arrangements for the non-monitoring period are described, whether they apply conservative assumptions or discount factors to the calculations, and whether the alternative monitoring arrangements have been approved by the Board under the prior-approval track or to be approved by the Board under the issuance track in accordance with the provisions relating to temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the "CDM project standard for project activities"; <p>(b) The information provided in the monitoring report has been cross-checked with other sources such as plant logbooks, inventories, purchase records and laboratory analysis;</p> |
|------------------------------|---|

| | <p>(c) The calculations of baseline GHG emissions or baseline net GHG removals, project GHG emissions or actual net GHG removals, and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan, the applied methodologies and, where applicable, the applied standardized baselines;</p> <p>(d) Any assumptions used in emission or removal calculations have been justified;</p> <p>(e) Appropriate emission factors, IPCC default values, GWPs and other reference values have been correctly applied;</p> | | | | | | | | | | | | | | | |
|-----------------------|---|-------------------------------|---|-------------------------------|---|----------------------------|-----------------------|------------|--------|--------|--------|-----------------------|-----------|--------|--------|-------|
| Findings | There is one FAR raised in this section. | | | | | | | | | | | | | | | |
| Conclusion | <p>The verification team reviewed all the data related to GHG emission reduction calculation such as CEN data, CGE invoice data, internal database on electricity generation/consumption, and etc. to confirm that data used in the MR (version 02.0) and the ER calculation sheet (version 02.0) is consistent with the data in the reviewed documents.</p> <p>The verification team verified the followings in relation to the ER calculation.</p> <p>The formula used for the determination of baseline emissions is consistent with the registered PDD.</p> <p>$BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$</p> <p>Where:</p> <p>$EG_{PJ,y}$ is quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in for this monitoring period y (MWh)</p> <p>$EF_{grid,CM,y}$ is emission factor for an electricity system" (tCO2/MWh)</p> <p>$EG_{PJ,y} = (Grid_{out,y} - Grid_{in,y})$</p> <p>Where;</p> <p>$EG_{PJ,y}$: Net electricity supplied to the grid during the monitoring period (MWh);</p> <p>$Grid_{out,y}$: Electricity supplied to the grid (MWh);</p> <p>$Grid_{in,y}$: Electricity imported from the grid (MWh).</p> <p>$BE_y = (Grid_{out,y} - Grid_{in,y}) \times EF_{grid,CM,y}$</p> <table><tr><th>Period</th><th>Grid_{out,y} (MWh)</th><th>Grid_{in,y} (MWh)</th><th>EF_{grid,CM,y} (tCO_{2e}/MWh)</th><th>BE (tCO_{2e})</th></tr><tr><td>05/02/2020-31/12/2020</td><td>16,235.602</td><td>42.755</td><td>0.6508</td><td>10,538</td></tr><tr><td>01/01/2021-31/05/2021</td><td>8,090.538</td><td>19.743</td><td>0.6508</td><td>5,252</td></tr></table> | Period | Grid _{out,y} (MWh) | Grid _{in,y} (MWh) | EF _{grid,CM,y} (tCO _{2e} /MWh) | BE (tCO _{2e}) | 05/02/2020-31/12/2020 | 16,235.602 | 42.755 | 0.6508 | 10,538 | 01/01/2021-31/05/2021 | 8,090.538 | 19.743 | 0.6508 | 5,252 |
| Period | Grid _{out,y} (MWh) | Grid _{in,y} (MWh) | EF _{grid,CM,y} (tCO _{2e} /MWh) | BE (tCO _{2e}) | | | | | | | | | | | | |
| 05/02/2020-31/12/2020 | 16,235.602 | 42.755 | 0.6508 | 10,538 | | | | | | | | | | | | |
| 01/01/2021-31/05/2021 | 8,090.538 | 19.743 | 0.6508 | 5,252 | | | | | | | | | | | | |

E.8.2. Calculation of project GHG emissions or actual net anthropogenic GHG removals by sinks

| | |
|------------------------------|--|
| Means of verification | <p>(VVS para. 372-374) The DOE shall assess the data and calculations of GHG emission reductions or net anthropogenic GHG removals achieved by from the registered CDM project activity.</p> <p>The DOE shall determine whether:</p> <p>(a) A complete set of data for the specified monitoring period is available. If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, the DOE shall assess whether:</p> <p>(i) The most conservative values approach is applied to the parameters for the entire non-monitoring period in accordance with the provisions relating to the temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the "CDM project standard for project activities"; or</p> <p>(ii) Alternative monitoring arrangements for the non-monitoring period are described, whether they apply conservative assumptions or discount factors to the calculations, and whether the alterative monitoring arrangements have</p> |
|------------------------------|--|

| | |
|-------------------|---|
| | <p>been approved by the Board under the prior-approval track or to be approved by the Board under the issuance track in accordance with the provisions relating to temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the “CDM project standard for project activities”;</p> <p>(b) The information provided in the monitoring report has been cross-checked with other sources such as plant logbooks, inventories, purchase records and laboratory analysis;</p> <p>(c) The calculations of baseline GHG emissions or baseline net GHG removals, project GHG emissions or actual net GHG removals, and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan, the applied methodologies and, where applicable, the applied standardized baselines;</p> <p>(d) Any assumptions used in emission or removal calculations have been justified;</p> <p>(e) Appropriate emission factors, IPCC default values, GWPs and other reference values have been correctly applied;</p> |
| Findings | There is no CAR/CL raised in this section |
| Conclusion | Project activity emission is considered as zero as per the methodology AMS I.D(version 18.0) and the registered PDD (version 02.2), i.e. $PE_y = 0$. |

E.8.3. Calculation of leakage GHG emissions

| | |
|------------------------------|--|
| Means of verification | <p>(VVS para. 372-374) The DOE shall assess the data and calculations of GHG emission reductions or net anthropogenic GHG removals achieved by from the registered CDM project activity.</p> <p>The DOE shall determine whether:</p> <p>(a) A complete set of data for the specified monitoring period is available. If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, the DOE shall assess whether:</p> <p>(i) The most conservative values approach is applied to the parameters for the entire non-monitoring period in accordance with the provisions relating to the temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the “CDM project standard for project activities”; or</p> <p>(ii) Alternative monitoring arrangements for the non-monitoring period are described, whether they apply conservative assumptions or discount factors to the calculations, and whether the alternative monitoring arrangements have been approved by the Board under the prior-approval track or to be approved by the Board under the issuance track in accordance with the provisions relating to temporary deviation from the registered monitoring plan, the applied methodologies or the applied standardized baselines in the “CDM project standard for project activities”;</p> <p>(b) The information provided in the monitoring report has been cross-checked with other sources such as plant logbooks, inventories, purchase records and laboratory analysis;</p> <p>(c) The calculations of baseline GHG emissions or baseline net GHG removals, project GHG emissions or actual net GHG removals, and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan, the applied methodologies and, where applicable, the applied standardized baselines;</p> <p>(d) Any assumptions used in emission or removal calculations have been justified;</p> <p>(e) Appropriate emission factors, IPCC default values, GWPs and other reference values have been correctly applied;</p> |
| Findings | There is no CAR/CL raised in this section. |
| Conclusion | In accordance with AMS I.D(version 18.0) and the registered PDD (version 02.2), the renewable energy project does not need to consider the leakage, i.e. $LE_y = 0$. |

E.8.4. Summary calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

| | |
|------------------------------|--|
| Means of verification | <p>(VVS para. 372-374) The DOE shall assess the data and calculations of GHG emission reductions or net anthropogenic GHG removals achieved by from the registered CDM project activity.</p> |
|------------------------------|--|

| Findings | There is no CAR/CL raised in this section. | | | | | | | | | | | | | | |
|---|---|--|--|--------------------------------|-----------------------------|-----------------------|--------|--------|-----------------------|-----------|-----------------------|-------|---|---|-------|
| Conclusion | The formula used for the determination of emission reductions during the monitoring period was consistent with the registered PDD (version 02.2). | | | | | | | | | | | | | | |
| | Emission Reductions: | | | | | | | | | | | | | | |
| | The total emission reduction achieved in a year would be $ER_y = BE_y - PE_y - LE_y$ | | | | | | | | | | | | | | |
| | Where, | | | | | | | | | | | | | | |
| | ER_y is the Emission reductions during the year y | | | | | | | | | | | | | | |
| | BE_y is the Baseline emissions during the year y | | | | | | | | | | | | | | |
| | PE_y is the Project emissions during the year y | | | | | | | | | | | | | | |
| | LE_y is the Leakage emissions during the year y | | | | | | | | | | | | | | |
| | Thus: | | | | | | | | | | | | | | |
| | $BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$ | | | | | | | | | | | | | | |
| <table><tr><th>Period</th><th>$EG_{pj,y}$ (MWh)</th><th>$EF_{grid,CM,y}$ (tCO₂e/MWh)</th><th>BE_y (tCO₂e)</th></tr><tr><td>05/02/2020-31/12/2020</td><td>16,192.847</td><td>0.6508</td><td>10,538</td></tr><tr><td>01/01/2021-31/05/2021</td><td>8,090.794</td><td>0.6508</td><td>5,252</td></tr></table> | Period | $EG_{pj,y}$ (MWh) | $EF_{grid,CM,y}$ (tCO ₂ e/MWh) | BE_y (tCO ₂ e) | 05/02/2020-31/12/2020 | 16,192.847 | 0.6508 | 10,538 | 01/01/2021-31/05/2021 | 8,090.794 | 0.6508 | 5,252 | | | |
| Period | $EG_{pj,y}$ (MWh) | $EF_{grid,CM,y}$ (tCO ₂ e/MWh) | BE_y (tCO ₂ e) | | | | | | | | | | | | |
| 05/02/2020-31/12/2020 | 16,192.847 | 0.6508 | 10,538 | | | | | | | | | | | | |
| 01/01/2021-31/05/2021 | 8,090.794 | 0.6508 | 5,252 | | | | | | | | | | | | |
| $PE_y = 0$ tCO ₂ e | | | | | | | | | | | | | | | |
| $LE_y = 0$ tCO ₂ e | | | | | | | | | | | | | | | |
| $ER_y = BE_y - PE_y - LE_y$ | | | | | | | | | | | | | | | |
| <table><tr><th>Period</th><th>BE_y (tCO₂e)</th><th>PE_y (tCO₂e)</th><th>LE_y (tCO₂e)</th><th>ER_y(tCO₂e)</th></tr><tr><td>05/02/2020-31/12/2020</td><td>10,538</td><td>0</td><td>0</td><td>10,538</td></tr><tr><td>01/01/2021-31/05/2021</td><td>5,252</td><td>0</td><td>0</td><td>5,252</td></tr></table> | Period | BE_y (tCO ₂ e) | PE_y (tCO ₂ e) | LE_y (tCO ₂ e) | ER_y (tCO ₂ e) | 05/02/2020-31/12/2020 | 10,538 | 0 | 0 | 10,538 | 01/01/2021-31/05/2021 | 5,252 | 0 | 0 | 5,252 |
| Period | BE_y (tCO ₂ e) | PE_y (tCO ₂ e) | LE_y (tCO ₂ e) | ER_y (tCO ₂ e) | | | | | | | | | | | |
| 05/02/2020-31/12/2020 | 10,538 | 0 | 0 | 10,538 | | | | | | | | | | | |
| 01/01/2021-31/05/2021 | 5,252 | 0 | 0 | 5,252 | | | | | | | | | | | |
| As shown above, the emission reduction during the monitoring period (05/02/2020 -31/05/2021) is 10,538 tCO ₂ e (05/02/2020-31/12/2020) and 5,252 tCO ₂ e (01/01/2021-31/05/2021) respectively. After thoroughly checking the records in the CEN database, the invoice provided by CGE and internal database of the PP, the verification team confirms that the calculation in the ER spreadsheet (version 02.0) is reproducible and accurate. | | | | | | | | | | | | | | | |

E.8.5. Comparison of actual GHG emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

| | |
|------------------------------|---|
| Means of verification | DOE determined the CER achieved during this monitoring period with the estimated value and reason for increase if any. |
| Findings | There is no CAR/CL raised in this section |
| Conclusion | <p>The MR includes a comparison of the calculated actual emission reductions which is 15,790 tCO₂e with the ex-ante calculated values which is 17,989 tCO₂e in the registered PDD (ver.02.2).</p> <p>The verification team confirmed that the actual GHG emission reductions and the estimates in the PDD are correctly stated in the MR by cross-checking the ER calculation sheet and the registered PDD.</p> |

E.8.6. Remarks on difference from estimated value in registered PDD

| | |
|------------------------------|---|
| Means of verification | DOE determined the CER achieved during this monitoring period with the estimated value and reason for increase if any. |
| Findings | There is one CAR raised in this section |
| Conclusion | <p>In this monitoring period, the actual emission reduction is lower than the expected emission reduction as calculated in the PDD (version 02.2).</p> <p>The electricity generation during this period is 24,263.642 MWh which is lower than</p> |

| | |
|--|---|
| | <p>the estimated electricity generation (27,641.710 MWh). The actual electricity generation was 12.22% lower than the estimated electricity generation. However, the CAR04 has been raised but closed successfully. The reason for lower electricity generation is due to various reasons including weather, variation of sunlight and the major technical events occurred during this monitoring period. However, the maintenance and repair activities of equipment and facilities being used for this project activity mainly affect the technical operation and performance of the power plant in general. The major repair and maintenance work during this monitoring period, as described in B.1 of the monitoring report, have negative impact on the amount of power generation under this project activity. The verification team's review of the operation log showing significantly low level of electricity generation at the time of repair fully supported this reasoning.</p> |
|--|---|

E.8.7. Actual GHG emission reductions or net anthropogenic GHG removals by sinks during the first commitment period and the period from 1 January 2013 onwards

| | |
|------------------------------|--|
| Means of verification | The verification team determined the CER achieved during the first commitment period. |
| Findings | There is no CAR/CL raised in this section. |
| Conclusion | <p>This monitoring period is from 05/02/2020 to 31/05/2021. Hence, the PP stated that the total amount of GHG emission reductions of this monitoring period as GHG emission reductions from 05/02/2020 onwards in the Monitoring report version 02.0. The verification team confirmed, through review of the related evidence provided by the PP, that this monitoring period is correct, and that both the total amount GHG emission reductions and the GHG emission reduction of the period from 05/02/2020 onwards are stated appropriately in the MR version 02.0. No emission reductions occurred prior 01/01/2013 were considered in the current verification.</p> |

E.9. Assessment of reported sustainable development co-benefits

| | |
|------------------------------|---|
| Means of verification | <p>(VVS para. 375-377) If the project participants have monitored the sustainable development co-benefits of the registered CDM project activity, and requested the DOE to verify them, it shall assess whether:</p> <p>(a) The monitoring has been carried out in accordance with the document for monitoring sustainable development co-benefits, if such document was developed and published on the UNFCCC CDM website in accordance with the "CDM project standard for project activities".</p> <p>(b) The reported monitoring results correspond to the sustainable development co-benefits of the project activity as observed by the DOE.</p> |
| Findings | N/A |
| Conclusion | N/A |

E.10. Global stakeholder consultation

| | |
|------------------------------|--|
| Means of verification | <p>(VVS para. 391-392) The DOE may request further information from the submitters of the comments. The DOE shall also inform the project participants of the comments received and request their feedback within a specified timeframe. The DOE shall consider the input received and assess whether such comments are relevant to the CDM project activity;</p> |
| Findings | There are no CARs/CLs raised in this section. |
| Conclusion | <p>According to para. 258/ VVS, the validation team checked whether the authentic comments are relevant to the following defined scope of comments:</p> <p>(1) The comment discusses issues specific to the proposed CDM project activity (2) The comment discusses issues related to compliance with the relevant CDM rules and requirements.</p> <p>The verification team found that there is was no comment for this project during global stakeholder consultation. Thus, the verification team concluded that no further investigation is needed to</p> |

| | |
|--|--------------------------------------|
| | proceed the verification activities. |
|--|--------------------------------------|

SECTION F. Internal quality control

>>

Quality Management procedures for measurements, collection and compilation of data, data storage and archiving, calibration, maintenance, and training of personnel in the framework of this CDM project activity have been defined in the approved MP. The procedures described in the MR are consistent with the MP and assessed as appropriate for the purpose. No significant deviation has been observed during the verification. The whole procedure of quality management was verified by the verification team by interviewing the responsible personnel and by checking the CDM Monitoring Manual.

SECTION G. Verification opinion

>>

DE Energia SpA has commissioned Korea Testing and Research Institute (KTR) to carry out the 1st periodic verification of the project: "Rinconada PV CDM Project (UNFCCC Ref.10549)", with regard to the relevant requirements for CDM project activities. The project reduces GHG emissions by replacing the electricity generated from fossil fuel fired power plants with the electricity generated from the PV power generation plant. This verification covers the period from 05/02/2020 to 31/05/2021 (including both days).

During the course of the verification, 1 Clarification request (CL), 5 Corrective Action Requests (CARs) and 1 Forward Action Request (FAR) were raised and successfully closed. The verification was carried out based on the monitoring report (version 01.0), the revised monitoring report (version 02.0), the registered PDD (version 02.2), revised PDD (version 02.03), the ER calculation sheet (version 02.0), the final validation report (ver. 03.0), and other supporting documents made available to KTR by the PP. The verification included assessment of evidences relevant to the amounts related to the project's GHG emission reductions for this monitoring period.

As a result of this verification, the verification team concluded that:

- All operations of the project are implemented and installed as planned and described in the registered PDD.
- The monitoring plan is in accordance with the applied approved CDM methodology, i.e. AMS I.D (version 18.0) "Grid connected renewable electricity generation".
- The installed meters, which are essential for measurement of parameters required for emission reduction calculation, have been calibrated appropriately.
- The monitoring system is in place and fully functional. The project has achieved GHG emission reductions as intended.

KTR's verification approach was based on the requirements defined under the Kyoto Protocol, Marrakech accord, as well as those defined by the CDM Executive board. The examination includes assessment of evidence relevant to the amounts and disclosures in relation to the project's GHG emission reductions for this monitoring period.

As a result of the 1st periodic verification, the verification team confirms that the GHG emission reductions are calculated in a conservative and appropriate manner without any material misstatements. The verification team has also confirmed that the information included in the revised monitoring is correct and that the emission reduction achieved has been determined correctly. Based on the information seen and evaluated, the verification team confirms the following:

| | |
|-------------------------------------|--------------------------|
| Project Title : | Rinconada PV CDM Project |
| UNFCCC ref no: | 10549 |
| Crediting period : | 05/02/2020 ~ 04/02/2027 |
| Monitoring Report : | Version 02.0 |
| Methodology used for verification : | AMS I.D (version 18.0) |
| Applicable monitoring period : | 05/02/2020 - 31/05/2021 |
| VVS version | VVS 3.0 |

| | | |
|--|-----------------------|---------------------------|
| Certified GHG emission reductions or net anthropogenic GHG removals for this monitoring period | 05/02/2020-31/12/2020 | 10,538 tCO ₂ e |
| | 01/01/2021-31/05/2021 | 5,252 tCO ₂ e |

SECTION H. Certification statement

>>


As above

Appendix 1. Abbreviations

| Abbreviations | Full texts |
|------------------|--|
| CA | Corrective Action / Clarification Action |
| CAR | Corrective Action Request |
| CDM | Clean Development Mechanism |
| CER | Certified Emission Reduction |
| CEN | Coordinador Electrico Nacional |
| CNE | Comision Nacional de Energia |
| CGE | Compania General de Electricidad SA |
| CL | Clarification Request |
| CO ₂ | Carbon dioxide |
| CO _{2e} | Carbon dioxide equivalent |
| DOE | Designated Operational Entity |
| EB | Executive Board |
| ER | Emission Reduction |
| FAR | Forward Action Request |
| GHG | Green House Gas |
| GWP | Global Warming Potential |
| IPCC | Intergovernmental Panel on Climate Change |
| KP | Kyoto Protocol |
| KTR | Korea Testing and Research Institute |
| MP | Monitoring Plan |
| MR | Monitoring Report |
| PDD | Project Design Document |
| PP | Project Participant |
| PV | Photovoltaic |
| QA/QC | Quality Assurance / Quality Control |
| UNFCCC | United Nations Framework Convention for Climate Change |
| VVS | Clean Development Mechanism Validation and Verification Standard |

Appendix 2. Competence of team members and technical reviewers

Certificate for Achievement



KTR
한국화학융합시험연구원
K O R E A T E S T I N G & R E S E A R C H I N S T I T U T E

Certificate of Authorization

Name : JUNG, Kyuhong

Date of Birth : February 1st, 1977


Certificate Number : 2019CDM - 001

We, hereby certify that above mentioned person is qualified for the technical areas specified below in compliance with Appendix 2 of CDM Accreditation Standard Ver 7.0 and CDM Quality procedure (CDM-QP-07)

Scope of Authorization :


| CODE | TECHNICAL AREA | STATUS |
|------|----------------------------|-------------------------|
| 1.1 | Thermal energy generation | Lead Validator/Verifier |
| 1.2 | Renewables | Lead Validator/Verifier |
| 3.1 | Energy demand | Lead Validator/Verifier |
| 4.1 | Cement and lime production | Lead Validator/Verifier |
| 13.1 | solid waste and wastewater | Lead Validator/Verifier |

Valid until : July 4th, 2022



한국화학융합시험연구원
Korea Testing and Research Institute

July 5th, 2019





한국화학융합시험연구원

K O R E A T E S T I N G & R E S E A R C H I N S T I T U T E

Certificate of Authorization

Name : PARK, Hyemi
Date of Birth : February 15th, 1986
Certificate Number : 2019CDM - 003

We, hereby certify that above mentioned person is qualified for the technical areas specified below in compliance with Appendix 2 of CDM Accreditation Standard Ver 7.0 and CDM quality procedure (CDM-QP-07).

Scope of Authorization :

| CODE | TECHNICAL AREA | STATUS |
|------|---|------------------------------|
| 1.2 | Energy generation from renewable energy sources | Full-time Validator/Verifier |
| 13.1 | Waste handling and disposal | Full-time Validator/Verifier |

Valid until : July 5th, 2022

July 5th, 2019



한국화학융합시험연구원장
 Korea Testing and Research Institute



KTR

한국화학융합시험연구원

K O R E A T E S T I N G & R E S E A R C H I N S T I T U T E

Certificate of Authorization

Name : LEE, Bongjae**Date of Birth : August 6th, 1978****Certificate Number : 2019CDM - 001**

We, hereby certify that above mentioned person is qualified for the technical areas specified below in compliance with Appendix 2 of CDM Accreditation Standard Ver 7.0 and CDM quality procedure (CDM-QP-07).

Scope of Authorization :

| CODE | TECHNICAL AREA | STATUS |
|------|-----------------------------|-------------------------|
| 1.1 | Thermal energy generation | Lead Validator/Verifier |
| 1.2 | Renewables | Lead Validator/Verifier |
| 3.1 | Energy demand | Lead Validator/Verifier |
| 4.1 | Cement and lime production | Lead Validator/Verifier |
| 13.1 | Solid waste and waste water | Lead Validator/Verifier |

Valid until : July 5th, 2022**July 5th, 2019**
한국화학융합시험연구원장
 Korea Testing and Research Institute


Appendix 3. Documents reviewed or referenced

| No. | Author | Title | References to the document | Provider |
|-----|---|---|---|----------|
| 1 | PP | Final version of the PDD (version 02.2) | https://cdm.unfccc.int/filestore/A/R/B/ARBP6CXSL/ET3Q5U1Z0N28DV4JKGF/WY/Rinconada_PDD.pdf?t=NIF8cjFtZDE0fDDb4ZzwBLwzhVXCP5I3kocN | PP |
| 2 | DOE(KTR) | The Final version of the validation report | https://cdm.unfccc.int/filestore/B/E/3/BE3UDZXITC/NO0KM4Y6JW5QV9S7L2/GA/Rinconada_VR.pdf?t=N218cjFtZDF4fDAI_k5Z9biuhIC477VXN3TM | Others |
| 3 | UNFCCC | AMS I.D. methodology (version 18.0) | N/A | |
| 4 | UNFCCC | CDM validation and verification standard for project activities(version 03.0) | N/A | Others |
| 5 | Ernst & Young Han Young (Project consultant) | Monitoring report · version 01.0 · version 02.0 | 02/07/2021 10/11/2021 | PP |
| 6 | Ernst & Young Han Young (Project consultant) | ER calculation sheet · version 01.0 · version 02.0 | 02/07/2021 10/11/2021 | PP |
| 7 | UNFCCC | MR template (version 09.0) | N/A | Others |
| 8 | PP | Drawing showing the monitoring points | N/A | PP |
| 9 | PP | Photovoltaic power plant general single line diagram | N/A | PP |
| 10 | PP | Photovoltaic power plant Layout | N/A | PP |
| 11 | CEN | The approval of the Commercial Operation | N/A | PP |

| | | | | |
|----|--------------------|---|------------|--------|
| 12 | PP | Specification of equipment (Invertors, PV modules, transformers) | N/A | PP |
| 13 | PP | Internal database | N/A | PP |
| 14 | CEN | Sales records | N/A | PP |
| 15 | CGE | Monthly electricity invoice | N/A | PP |
| 16 | Schneider Electric | Test and Calibration certificate | N/A | PP |
| 17 | CNE | national regulation, 'Sistemas de Medidas para Transferencias Económicas' | N/A | PP |
| 18 | PP | Revised PDD (version 02.3) | 10/11/2021 | PP |
| 19 | PP | Head of agreement. | - | PP |
| 20 | PP | Subscription and shareholders' agreement contract | - | PP |
| 21 | PP | Signed Risk acknowledgement and acceptance form (Version 01.0) | - | PP |
| 22 | PP | The O&M log sheets (2020. 2021) | 2020/2021 | PP |
| 23 | CGE | Construction result report from | 19/12/2020 | PP |
| 24 | KTR | The validation report for PRC for CDM PAs(version2.0) | 24/11/2021 | Others |

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. Remaining FAR from validation and/or previous verifications

| FAR ID | Section no. | Date: |
|--|-------------|--------------|
| Description of FAR | | |
| | | |
| Project participant response | | Date: |
| N/A | | |
| Documentation provided by project participant | | |
| N/A | | |
| DOE assessment | | Date: |
| N/A | | |

Table 2. CL from this verification

| CL ID | Section no. | Date: |
|--|-------------|-------------------------|
| 01 | D.2 | 08/09/2021 |
| Description of CL | | |
| <p>1. Evidences, such as contract between the PP and investor, investment decision documents shall be submitted to the DOE to confirm that the verification process could not be postponed.</p> <p>2. The signed form (Risk acknowledgement and acceptance form (Version 01.0)) shall be submitted to the DOE.</p> | | |
| Project participant response | | Date: 03/11/2021 |
| Above evidences and the signed form were submitted to the DOE | | |
| Documentation provided by project participant | | |
| <ul style="list-style-type: none"> - Head of agreement. - Subscription and shareholders' agreement contract - The Signed form | | |
| DOE assessment | | Date: 10/11/2021 |
| <p>The verification team checked the evidence and forms and found to be acceptable.</p> <p>The Daelim Energy CO., Ltd. established a holding company, DE Energia SpA. (Hereafter, PP) pursuant to the laws of Chile, Chilean Taxation No. 76.857.825 having its registered office in Santiago, Chile.</p> <p>The PP has signed the agreement with investor, Korea East-West Power co, Ltd. As per the contract, the two entities considered CDM benefits (51(Dearim company): 49(Korea East-West Power Co., Ltd)), CERs, and decided to commence the project.</p> <p>Two entities considered investment analysis of the project in a way the electricity sales benefit with the CDM credit. It was concluded that CDM project is necessary to coincide with the investment of this project and their decision on project commencement as a CDM project.</p> <p>The revenue from the CDM credit shall be reflected from 2021 in accordance with the investment terms stipulated in the subscription and shareholders' agreement contract terms among DE Energia SPA, DAELIM Energy CO., LTD and Korea East-West Power Co.,LTD.</p> <p>Thus, the verification should be processed in accordance with the timeline of CER credit revenue within 2021.</p> <p>Therefore, the verification team opted for conducting the remote audit during the current monitoring period using alternative measures in accordance with the KTR quality system.</p> <p>Also, the signed form (Risk acknowledgement and acceptance form (version 01.0) has been submitted to the DOE as per para. 7-8 of the meeting report of EB108th and para. 8-11 of the meeting report of EB 109.</p> <p>By interviewing with PP and reviewing above form, the verification team confirmed that PP acknowledges and accepts the risk that it may not be possible for certified emission reductions to be issued for the emission reductions achieved on or after 1 January 2021 by this project activity</p> <p>Therefore, the CL01 was closed successfully.</p> | | |

Table 3. CAR from this verification

| CAR ID | Section no. | Date: |
|---|-------------|-------------------------|
| 01 | E.1 | 08/10/2021 |
| Description of CAR | | |
| Monitoring report form (version 8.0) is invalid during verification process. Therefore, the CAR01 was raised. | | |
| Project participant response | | Date: 03/11/2021 |
| The PP submitted the revised MR (version 02.0) | | |

| Documentation provided by project participant | | | |
|--|--|--|-------------------------|
| The revised MR (ver. 02.0) | | | |
| DOE assessment | | | Date: 10/11/2021 |
| The verification team confirmed that revised MR (version 02.0) is filled with the latest MR form (version 9.0). Also, all the information is correctly transferred to the newly form and filled in accordance with the Attachment (Instructions for completing this form) of MR form. Therefore, the CAR01 was closed successfully. | | | |

| | | | | |
|---|----|--------------------|-----|-------------------------|
| CAR ID | 02 | Section no. | E.3 | Date: 08/09/2021 |
| Description of CAR | | | | |
| The Expected COD in PDD is not consistent with the evidence issued by the CNE. Therefore, the CAR02 has been raised. | | | | |
| Project participant response | | | | Date: 03/11/2021 |
| The information of COD is corrected in revised PDD. | | | | |
| Documentation provided by project participant | | | | |
| The revised PDD (ver. 02.3) The validation report for PRC for CDM PAs(version2.0) | | | | |
| DOE assessment | | | | Date: 10/11/2021 |
| The exact commissioning details of the project have been added in the PDD since the registered PDD had the expected dates of commissioning. The commissioning date has been corrected from 15/02/2020 to 19/12/2019 in the revised PDD. The verification team checked the copy of the Notification letter issued by the CEN(Coordinador electrico nacional)and found it to be consistent with the data in the revised PDD. The more details information refers to the validation report for PRC for CDM PAs(version2.0) Therefore, CAR02 was closed successfully. | | | | |

| | | | | |
|---|----|--------------------|-------|-------------------------|
| CAR ID | 03 | Section no. | E.6.2 | Date: 08/09/2021 |
| Description of CAR | | | | |
| During desk review, there are inconsistency between data of the imported/exported electricity from the evidences, electricity invoices of CGE, sales records and the data in MR version 01.0. Therefore, the CAR03 was raised. | | | | |
| Project participant response | | | | Date: 03/11/2021 |
| The PP submitted the revised MR (version 02.0) and ER calculation sheet(version 02.0) | | | | |
| Documentation provided by project participant | | | | |
| The revised MR (ver. 02.0) The revised ER calculation sheet (ver. 02.0) | | | | |
| DOE assessment | | | | Date: 10/11/2021 |
| The verification team confirmed that the revised MR (version 02.0) and ER calculation sheet (version 02.0) were appropriately corrected with evidence. Therefore, CAR03 was closed successfully. | | | | |

| | | | | |
|--|----|--------------------|-------|-------------------------|
| CAR ID | 04 | Section no. | E.8.6 | Date: 08/09/2021 |
| Description of CAR | | | | |
| The breakdown details of this project are not described in the MR. Moreover, the supporting document regarding the operation issues are not also submitted to the verification team. Therefore, The CAR04 was raised | | | | |
| Project participant response | | | | Date: 03/11/2021 |
| The breakdown details of the Solar power plant have been included in Section B.1 of revised MR version 02.0 and their evidences are submitted to the verification team | | | | |
| Documentation provided by project participant | | | | |
| The revised MR (ver. 02.0) The O&M log sheets (2020. 2021). | | | | |
| DOE assessment | | | | Date: 10/11/2021 |
| Breakdown details are provided in the revised MR. The verification team checked the O&M log sheets and found to be consistent with the breakdown details in revised MR version 02.0. Therefore, the CAR04 was closed successfully. | | | | |

| | | | | |
|---|----|--------------------|-----|-------------------------|
| CAR ID | 05 | Section no. | E.7 | Date: 08/09/2021 |
| Description of CAR | | | | |
| The calibration details such as, calibration date/calibration frequency/due date of calibration is not described in the MR | | | | |
| Project participant response | | | | Date: 03/11/2021 |
| The calibration details have been updated in revised MR version 02 | | | | |
| Documentation provided by project participant | | | | |
| The revised MR (ver. 02.0) | | | | |
| DOE assessment | | | | Date: 10/11/2021 |
| Details of the calibration of the monitoring meters are provided in the revised MR(version 02.0). The verification team checked the calibration certificates provided on the revised MR and found them to be correct. The calibration frequency observed for the complete monitoring period also complied with the registered PDD and national regulation. Therefore, the CAR05 was closed successfully. | | | | |

Table 4. FAR from this verification

| | | | | |
|---|----|--------------------|-------|-------------------------|
| FAR ID | 01 | Section No. | E.8.1 | Date: 08/09/2021 |
| Description of FAR | | | | |
| The Board considered the implications of the postponement of CMP 16 on the operations of the CDM after the second commitment period and decided to make a recommendation to the CMP. The Board agreed, as temporary measures pending CMP guidance at CMP 16 In accordance with decision of CDM Executive Board 108th Meeting, to process requests for renewal of crediting periods that have a crediting period starting on or after 1 January 2021, the following actions shall be taken: (i) Apply any global warming potential values that may be adopted by the CMP for that period in their monitoring reports for any emission reductions achieved on or after 1 January 2021; and (ii) Update the PDD in accordance with any requirements of the CMP guidance. This measures will be further investigated during the next periodic verification process | | | | |
| Project participant response | | | | Date: DD/MM/YYYY |
| Not applicable | | | | |
| Documentation provided by project participant | | | | |
| Not applicable | | | | |
| DOE assessment | | | | Date: 10/11/2021 |
| No further investigation is necessary in this monitoring period. | | | | |

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Document information

| <i>Version</i> | <i>Date</i> | <i>Description</i> |
|----------------|-----------------|--|
| 04.0 | 6 April 2021 | Revision to: <ul style="list-style-type: none"> • Reflect the “Clarification: Regulatory requirements under temporary measures for post-2020 cases” (CDM-EB109-A01-CLAR). |
| 03.0 | 31 May 2019 | Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 02.0 of the “CDM validation and verification standard for project activities” (CDM-EB93-A05-STAN); • Make structural and editorial improvements. |
| 02.1 | 11 January 2018 | Editorial revision to correct the numbering of appendices in the instructions. |
| 02.0 | 31 October 2017 | Revision to align with the requirements of the “CDM validation and verification standard for project activities” (version 01.0). |
| 01.0 | 23 March 2015 | Initial publication. |

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