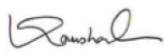




**Verification and certification report form for
CDM programme of activities
(Version 03.0)**

BASIC INFORMATION		
Title and UNFCCC reference number of the programme of activities (PoA)	Title: Brazilian PoA for NAMA incentivized NCRE Projects UNFCCC reference number: 10286	
Version number(s) of the PoA-DD(s) to which this report applies	Version 04.1, dated 13/07/2016	
Version number of the verification and certification report	02	
Completion date of the verification and certification report	03/09/2020	
Monitoring period number and duration of this monitoring period	Monitoring period number: 01 Duration of this monitoring period: 01/01/2017 to 31/12/2019 (first and last days are included)	
Number and version number of the monitoring report to which this report applies	Version number of the monitoring report: 2.2	
Coordinating/managing entity (CME)	ENGIE Brasil Energia S.A.	
Host Parties	Host Parties of the PoA	Is this a host Party to a CPA covered in this report? (yes/no)
	Brazil	Yes
Applied methodologies and standardized baselines	Applied methodology: ACM0002 (Grid-connected electricity generation from renewable sources), Version 16.0 Standardized baseline: NA	
Mandatory sectoral scopes	Sectoral Scope: 01- Energy industries (renewable - / non-renewable sources)	
Conditional sectoral scopes, if applicable	NA	
Estimated amount of GHG emission reductions or GHG removals for this monitoring period in the included CPAs covered in this report	400,951 tCO ₂ e	
Certified amount of GHG emission reductions or GHG removals for this monitoring period for the included CPAs covered in this report	234,859 tCO ₂ e	
Name and UNFCCC reference number of the DOE	Name: KBS Certification Services Pvt. Ltd. UNFCCC reference number: E-0051	
Name, position and signature of the approver of the verification and certification report		

	<div>Kaushal Goyal Managing Director KBS Certification Services Pvt. Ltd.</div>
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SECTION A. Executive summary

KBS has been commissioned by “ENGIE Brasil Energia S.A.” to perform an independent periodic verification of its registered PoA “Brazilian PoA for NAMA incentivized NCRE Projects” UNFCCC Ref# 10286 for the reported GHG emission reductions for the given monitoring period 01/01/2017 to 31/12/2019 (both dates included). The PoA must undergo independent third party verification and certification of emission reductions as the basis for issuance of Certified Emission Reductions (CERs). The CPAs considered in the verification are:

Ref.	Title	Inclusion date
10286-P1-0003-CP1	Floresta Solar Power Complex	27/10/2017
10286-P1-0004-CP1	Paracatu Solar Power Complex	27/10/2017

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The CPA has been implemented and operated as per the approved revised PoA-DD & CPA-DD and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- Monitoring report and other supporting documents are complete;
- The actual monitoring systems & procedures and monitoring report confirms with the requirements of the approved monitoring plan and the approved monitoring methodology;
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan.

Scope:

The scope of the verification is the independent and objective review and ex post determination of the monitored reductions in GHG emission by the CPAs under the PoA. The verification is based on review of monitoring report, supporting information and

- (a) The approved revised PoA-DD & CPA-DD, including the monitoring plan and the corresponding validation opinion(s);
- (b) Previous verification reports, deviation requests, Post registration changes;
- (c) Monitoring report for the monitoring period under verification including CER calculations sheets and all supporting documents;
- (d) The applied monitoring methodology;
- (e) The applied standardized baseline (if applicable);
- (f) Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board;
- (g) All information and references relevant to the PoA's resulting in emission reductions

The PoA is assessed against the requirements of the Kyoto Protocol, the CDM Modalities and Procedures and related rules and guidance.

KBS has, based on the recommendations in the latest version of CDM Validation and Verification Standard for programmes of activities, employed a rule-based approach in the verification, focusing on the identification of significant reporting risks and the reliability of project monitoring.

Description of PoA:

The objective of the Brazilian Programme of Activities for Nationally Appropriate Mitigation Actions incentivized Non-Conventional Renewable Energy Projects (or by simplification “*Brazilian PoA for NAMA incentivized NCRE Projects*”) is to contribute to environmental, social and economic sustainability by promoting the development of NCRE sources as an alternative to the dispatch of electricity from existing fossil fuel thermal power plants and the development of new power plants based on GHG intensive generation.

The Component Project Activities (CPAs) included in the PoA are implemented within the Brazilian national territory and connected to the Brazilian Interconnected System (from the Portuguese Sistema Interligado Nacional – SIN) and consist of new (Greenfield) solar, wind, small hydro (up to 30 MW), geothermal, wave and tidal power plants. The CPAs included in the PoA reduce greenhouse gas (GHG) emissions by displacing electricity that would have otherwise been generated by the operation of power plants and by the addition of new generation sources connected to the SIN.

The PoA fosters the implementation of multiple NCRE projects, providing an important contribution to renewable and clean non-conventional alternatives for electricity generation and achievement of the country's

voluntary climate change mitigation goals. The PoA also sustainably develop regional economies and consequently increase the quality of life in local communities.

There are 7 CPAs available in this PoA however only 2 CPAs are covered in this monitoring period.

The generated electricity from the 2 CPAs is exported to the national grid under Power Purchase Agreements (PPAs) signed with the Chamber of Electrical Energy Commercialization (CCEE) /36/. For the current monitoring period, the generated electricity from the 2 CPAs is sold to CCEE as evidenced from monthly electricity reports /29/.

The CPA implementation for the 2 CPAs have been verified from commissioning certificate /24/, PPAs /36/, power operation license /28/. The commercial operation date for the 2 CPAs have been verified from the ANEEL Dispatches /25/. The geographic coordinates for the 2 CPAs have been verified through the environmental licenses /34/ and power operation license /28/.

The verification team has concluded that the 2 CPAs were implemented and operated as per approved CPA-DDs (for CPA ref. no. 10286-0004, 10286-0003 /5/) and that all physical features of the 2 CPAs are in place. The verification team, based on the remote site visit and document review, was able to conclude that the project activity has been commissioned and implemented as per the approved CPA-DDs (for CPA ref. no. 10286-0004, 10286-0003 /5/). The monitoring report for this monitoring period is in compliance with the monitoring plan of the approved revised/included CPA-DDs. The PoA was registered by applying the Large scale methodology ACM0002 version 16.0 /7/ and the verification was carried out in accordance with the applied methodology.

Methodology:

KBS follows a rule based verification approach, wherein, as a first step, the contract review is undertaken as per latest version of CDM Accreditation Standard. Subsequently, after the contract is signed, the monitoring report of the PoA is made publicly available at UNFCCC website as per CDM procedures. A desk review of the project documentation is undertaken, which is followed by a remote site visit by the members of verification team in accordance with the latest version of CDM PCP for PoA. The verification protocol is filled by the verification team that is based on standard auditing practices and version 02.0 of CDM VVS for PoA, to capture the assessment of applicable CDM requirements viz., version 02.0 of CDM Project Standard for PoA, revised approved PoA-DD & CPA-DD, applied methodology/ies, applied standardized baseline and/or tools and recent decisions. The verification protocol provides transparent means to record the observations and compliances by the verification team members and the nonconformities, if any. The verification protocol is an internal document, and is available on request. Following are the major milestones for the verification under consideration.

Verification contract	16/06/2020 (Floresta) and 17/06/2020 (Paracatu)
Publication of MR	26/06/2020
Remote site verification	12/08/2020
Draft Verification Report	17/08/2020
Final Verification Report	20/08/2020

KBS Certification Services Pvt. Ltd. Confirms that the monitoring system is in place and the emission reductions are calculated without material misstatements.

Based on the information seen and evaluated we confirm that the implementation of the project has resulted in 234,859 tCO₂e (round down) emission reductions during period 01/01/2017 to 31/12/2019 (Including both the days).

SECTION B. Verification team, technical reviewer and approver**B.1. Verification team members**

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	Interview(s)	Verification findings
1.	Team Leader/Technical Expert (TA 1.2)	EI	Leiroz	Andrea	Central Office	✓	-	✓	✓

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 (TA 1.2)	IR	Kandari	Sanjay	Central Office
2.	Manager Technical & Certification	IR	Nanda	Dr. Madhuri	Central Office
3.	Authorizer	IR	Goyal	Kaushal	Central Office

SECTION C. Application of materiality in conducting the verification**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.	The data monitoring is done through electronic meters and errors can be perceived during the information transfer from the source to emission reduction sheet.	High	There are total 3 monitoring parameters i.e. $EG_{\text{facility},y}$, $EF_{\text{grid},OM,y}$ and $EF_{\text{grid},CM,y}$. However only one parameter i.e. $EG_{\text{facility},y}$ is monitored/measured through energy meters and are used for baseline emission calculation. This parameter is monitored through the electronic meters and errors can be perceived during the information transfer from the source to the emission reduction sheet. The remaining two monitoring parameters $EF_{\text{grid},OM,y}$ and $EF_{\text{grid},CM,y}$.	The complete dataset for the 2 CPAs (CPA Ref. No. 10286-0004, 10286-0003) was checked and it can be confirmed that the values are consistent with their sources. The complete dataset for the monitoring parameter $EG_{\text{facility},y}$ (or $EG_{PJ,y}$) was checked and it can be confirmed that the values are consistent with their sources. The complete data for the remaining parameters $EF_{\text{grid},OM,y}$ and $EF_{\text{grid},CM,y}$ have also checked and found consistent.

			are a calculated parameter. There is no leakage emission during this monitoring period as discussed under section E.3.5.3 of this report.	
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C.2. Consideration of materiality in conducting the verification

The prescribed thresholds for materiality, as per §308 of “CDM validation and verification standard for programmes of activities” Version 02.0 /07/.

Prescribed range of Ers/annum	500,000+	300,000+ to 500,000	300,000	CDM PoAs comprised only of small-scale CPAs	CDM PoAs comprised only of microscale CPAs
Prescribed Threshold	0.5%	1.0%	2.0%	5.0%	10.0%

The identified/selected materiality threshold for the PoA under current monitoring period is 2% as CPA is large scale.

	MR Version (Draft) /1.1/	MR Version (Final) /1.2/
Emission reductions/monitoring period	233,269 tCO ₂	234,859 tCO ₂
Identified Threshold	2%	2%

The emission reductions for this monitoring period have been increased due to raised CAR-04 which have been successfully closed. Refer Appendix 4 of this report for more details. Verification team has checked the 100% values of reported data. The complete dataset for the project activity was checked and it can be confirmed that the values are consistent with their sources. The assessment team confirms that the reported emission reductions are free from material errors, omissions or misstatements.

SECTION D. Means of verification

D.1. Desk/document review

A desk review is undertaken, involving but not limited to,

- A review of the data and information presented to verify their completeness;
- A review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

The list of documents reviewed is included in the section ‘Appendix 3’ of this report.

D.2. On-site inspection

Duration of on-site inspection: DD/MM/YYYY				
No.	Activity performed on-site	Site location	Date	Team member

As result of the COVID-19 pandemic, taking into account the rules of relevant national and local authorities (local to the DOE offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the DOE and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return from specific countries), the DOE has skipped the on-site visit /37/.

However, as per the CDM EB, the DOE may use other standard auditing techniques for validation or verification as referred to in sections 7.1.3 and 10.1.3 of the VVS-PoA /9/.

As per para 148 of CDM Validation and Verification Standard for programmes of activities version 02.0 /9/, Verification team has used the following alternative means for its assessment and to justify that they are sufficient for the purpose of verification. Along with desk review, audit team has conducted remote audit interview as follows:

- A complete desk review of the PoA-DD and CPA-DDs /5/, submitted MR (initial and final versions) /1/ /2/, as well as applicable country legal requirement and supportive evidences have been checked by the Verification Team.
- Verification team has performed a remote site inspection via videoconference (Teams) with CME and CPA implementor on different topics as mentioned under section C.3 of this report.
- By taking follow up actions by conducted interview with CME and CPA implementor, to gather information about knowledge of project design, current situation via videoconference. Cross-checked evaluation under the scope of all information and references provided in MR. Details of interviewees, topics covered and additional information presented in the below section “C.3 – Interviews”.

Verification team has also checked the site visit requirements mentioned in the VVS for PoA version 02.0 /9/ and concluded that no site visit is required. The justification for not conducting the on-site visit as per VVS PoA version 02.0 /9/ have been mentioned below.

VVS PoA version 02.0 requirements	Verification team justification
<p>Para 320 (b)</p> <p>(b) On-site inspection taking into account paragraphs 321–323 below, involving:</p> <p>(i) An assessment of the implementation and operation of the included CPAs as per the included CPA-DDs or any approved revised CPA-DDs;</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 CPA-DDs, 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 and correct, any errors or</p>	<p>Verification team has done the follow-up actions by:</p> <ol style="list-style-type: none"> 1. Teleconference with CME. Teams was used with video camera function. A video was recorded in the plant so that the verification team was able to check that the project is installed as described in the CPA. 2. The supervisory system was checked. 3. Cross checks between information provided by interviewed personnel (i.e. by checking sources or other interviews) to ensure that no relevant information has been omitted. 4. PP presented during the videoconference all documents related to the verification of the MR. 5. The calculations and assumptions made in determining the CERs were reviewed and discussed with CME by videoconference.

omissions in the reported monitoring parameters.	
<p>Para 321</p> <p>It is mandatory for the DOE to conduct an on- site inspection at verification for the included CPA if:</p> <p>(a) It is the first verification for the DOE with regard to this CPA;</p> <p>(b) More than three years have elapsed since the last on-site inspection conducted for verification for the CPA; or</p> <p>(c) The CPA has achieved more than 300,000 tCO_{2eq} of GHG emission reductions or net anthropogenic GHG removals since the last verification when an on-site inspection was conducted.</p>	<p>Although it is the first verification for KBS with regard to this CPA and no more than three years have elapsed since the last on-site inspection conducted for verification for the CPA (this is the first verification), the project activity has achieved less than 300,000 tCO_{2eq} of GHG emission reductions since the last verification when an on-site inspection was conducted. Thus, the presentational site visit was not conducted due to the COVID-19 pandemic. The site visit cannot be postponed since a delay on performing the mandatory on-site visit for the CPAs will impact on a delay in CERs delivery to its ERPA final buyer, which deadline is end of 2020 /38/.</p>

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Costa	David	ENGIE Brasil Participações Ltda	12/08/2020	1) Assessment of the implementation and operation of the CPAs as per the validated PoA-DD and CPA-DD. 2) Review of information flows for generating, aggregating and reporting of the monitoring parameters. 3) Monitoring Plan. 4) A cross-check between information provided in the MR and data from other sources. 5) Calibration performance, and observations of monitoring practices against the requirements of the CPA-DD and the applied methodology. 6) GHG data and ERs, and 7) QA/QC procedures.	Andrea Leiroz
2.	Renno	Pedro	ENGIE Solar			
3.	Barreto	Késia	ENGIE Solar			
4.	Pareira	André	ENGIE Solar			
5.	Silva	Diego	ENGIE Solar			
6.	Teixeira	Flávia	ENGIE Brasil Participações Ltda			
7.	Bragion	Alicia	ENGIE Solar			
8.	Almeida	Josiane	Excelência Energética			
9.	Doswald	Vitória	ENGIE Solar			
10.	Zeferino	Maria Clara	Excelência Energética			
11.	Passeto	Bianca	ENGIE Brasil Participações Ltda			
12.	Almeida	Guilherme	ENGIE Solar			

D.4. Sampling approach

>>Not applicable.

D.5. Clarification requests, corrective action requests and forward action requests raised

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
General			
Compliance of the monitoring report with the monitoring report form	-	01	-
Remaining forward action requests from validation and/or previous verifications	-	-	-
CPAs considered for verification and covered in this report	-	-	-
Programme of activities			
Compliance of the programme implementation with the registered PoA-DD	-	-	-
Implementation and operation of the management system	-	-	-
Post-registration changes			
• Corrections	-	-	-
• Inclusion of a monitoring plan	-	-	-
• Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents ¹	-	-	-
• Changes to the programme design	-	-	-
• Addition of CPA inclusion template	-	-	-
• Change of coordinating/managing entity	-	-	-
• Changes specific to afforestation and reforestation activities	-	-	-
Component project activities			
Compliance of the CPA implementation with the included CPA design document	-	02	-
Post-registration changes			
• Temporary deviations from registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents	-	-	-
• Corrections	-	-	-
• Changes to the start date-of the crediting period	-	-	-
• Inclusion of a monitoring plan	-	-	-
• Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents	-	-	-
• Changes to the project design	-	-	-
• Changes specific to afforestation and reforestation activities	-	-	-
Compliance of the registered monitoring plan with applied methodologies and standardized baselines	-	-	-
Compliance of monitoring activities with the registered monitoring plan			
• Data and parameters fixed ex ante or at renewal of crediting period	-	-	-
• Data and parameters monitored	-	02	-
• Implementation of sampling plan	-	-	-
Compliance with the calibration frequency requirements for measuring instruments	-	-	-

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).

CDM-PoA-VCR-FORM

Assessment of data and calculation of emission reductions or net removals			
• Calculation of baseline GHG emissions or baseline net GHG removals by sinks	-	-	-
• Calculation of project GHG emissions or actual net GHG removals by sinks	-	-	-
• Calculation of leakage GHG emissions	-	-	-
• Summary of calculation of GHG emission reductions or net GHG removals by sinks	-	-	-
• Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included CPA	-	-	-
• Remarks on difference from estimated value in included CPA	-	-	-
Assessment of reported sustainable development co-benefits	-	-	-
Global stakeholder consultation	-	-	-
Others (please specify)	-	-	-
Total	00	05	00

SECTION E. Verification findings
E.1. General
E.1.1. Compliance of the monitoring report with the monitoring report form

Means of verification	Verification team checked the monitoring report with latest version of MR available in the UNFCCC website (i.e., version 3.0) and “Instructions for filling out the monitoring report form” mentioned as attachment to Monitoring report form (version 3.0) /13/.
Findings	CAR-01 was raised and successfully closed. Refer to Appendix 4 for further details.
Conclusion	Verification team confirms that final monitoring report is completed using the latest valid version of the applicable monitoring report form /13/. Thus, it conforms to the requirement of para 338-339 of VVS for PoA version 02.0 /9/.

E.1.2. Remaining forward action requests from validation and/or previous verifications

Verification team had checked the validation reports of PoA & CPAs /6/ and found that no FAR has been raised during validation.

E.1.3. CPAs considered for verification and covered in this report

Title and UNFCCC reference number of the CPA included in the PoA as of the end of this monitoring period	Is the CPA considered for this verification? (yes/no)	The date when the CPA was included	Version of the PoA-DD	Confirmation that a request for issuance including the CPA has been published for the previous monitoring period (Y/N)
Title: Floresta Solar Power Complex UNFCCC reference no.: 10286-P1-0003-CP1	Yes	27/10/2017	Version 04.1	N
Title: Paracatu Solar Power Complex UNFCCC reference no.: 10286-P1-0004-CP1	Yes	27/10/2017	Version 04.1	N

E.2. Programme of activities**E.2.1. Compliance of the programme implementation with the registered programme design document**

Means of verification	<p>During the current monitoring period seven CPA's have been included (whose crediting period fall within this monitoring period) but only two CPAs (i.e CPA 10286-P1-0003-CP1 and CPA 10286-P1-0004-CP1) have been considered here for verification, which is located in Brazil.</p> <p>The verification team has checked the conformity of the actual PoA and its operation with the registered PoA-DD and determined whether the implementation and operation of the registered CDM PoA has been conducted in accordance with the description contained in the registered PoA-DD /5/. A total of 3 and 4 solar power plants have been installed during the current monitoring period for CPA 10286-P1-0003-CP1 and CPA 10286-P1-0004-CP1, respectively (part of current verification) as verified during the remote site visit.</p> <p>Verification team has, by means of a desk review and remote site visit, assessed that PoA implementation and operation complies with the registered PoA-DD /5/ and that the CME/project implementer have operated the PoA as per the validated PoA-DD /5/.</p> <p>The verification team has checked the information in the monitoring report /1/ /2/ and compared against the registered PoA-DD /5/.</p> <p>During the remote site inspection, the verification team has checked the PoA implementation, technology applied, project equipment, and monitoring system against the information in the registered PoA-DD /5/.</p> <p>Remote site visit and Interviews were performed by the verification team to assess the requirements of this section.</p>
Findings	No CAR/CL raised in this regard.
Conclusion	Verification team concludes that the PoA was implemented and operated as per registered PoA-DD /5/. This confirms the compliance with VVS for PoA version 02.0 /9/.

E.2.2. Implementation and operation of the management system

Means of verification	<p>The verification team determined the implementation and operation management system through the remote site visit and interview with the CME and the CPA Implementers. The verification team checked whether the actual management system implemented in accordance with the management system described in the registered PoA-DD /5/.</p> <p>During remote site visit, verification team checked the procedures implemented for inclusion of CPA, roles and responsibilities, quality check etc.</p>
Findings	No CAR/CL raised in this regard.
Conclusion	The verification team confirms that the implementation and operation of the PoA management system, including the record-keeping system, complies with the registered PoA design document (PoA-DD) /5/.

E.2.3. Post-registration changes**E.2.3.1. Corrections**

Not applicable.

E.2.3.2. Inclusion of a monitoring plan

Not applicable

E.2.3.3. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents

Not applicable.

E.2.3.4. Changes to the programme design

Not applicable.

E.2.3.5. Addition of CPA inclusion template

Not applicable

E.2.3.6. Change of coordination/managing entity

Not applicable

E.2.3.7. Changes specific to afforestation and reforestation activities

Not applicable

E.3. Component project activities**E.3.1. Compliance of the CPA implementation with the included CPA design document**

Means of verification	The verification team checked the conformity of the actual CPAs and its operation with the approved CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/). There are 7 CPAs available in this PoA and 2 CPAs are covered in this monitoring period. The brief description of the CPAs is detailed below.				
	Title of the CPA	Project entity and Implementer	Project sites-location /34/ /28/	Commercial operation date /25/	Commissioning date /24/
	Floresta Solar Power Complex (10286-0003)	Solaire Floresta I Energia Solar Spe S.A.	Municipality of Areia Branca, state of Rio Grande do Norte, north-eastern region of Brazil.	23/12/2017	08/11/2017 08/11/2017 08/11/2017 (generator units from 1 to 11) 18/11/2017 (generator units from 12 to 18) 23/11/2017 (generator units from 19 to 22)
		Solaire Floresta II Energia Solar Spe S.A.			
	Paracatu Solar Power Complex	Solaire Paracatu I Energia Solar Spe S.A.	Municipality of Paracatu, state of Minas Gerais, southeast-	09/01/2019 09/02/2019 09/01/2019 09/01/2019	17/11/2018

	(10286-0004)	Solaire Paracatu II Energia Solar Spe S.A. Solaire Paracatu III Energia Solar Spe S.A. Solaire Paracatu IV Energia Solar Spe S.A.	eastern region of Brazil. The geographic coordination of each solar power plant: Paracatu I: Southern latitude: 17° 13' 48.8" Western longitude: 47° 4' 5.21" Paracatu II: Southern latitude: 17° 13' 14.08" Western longitude: 47° 4' 53.36" Paracatu III: Southern latitude: 17° 13' 31.45" Western longitude: 47° 5' 38.13" Paracatu IV: Southern latitude: 17° 13' 38.14" Western longitude: 47° 4' 44.11".		
			<p>Verification team has verified the capacity of the implemented solar power plants. Floresta Solar Power Complex consists in the installation of 317,160 PV modules with 320 Wp each and 86 inverters with 1,000 kW, totaling 86 MW installed capacity.</p> <p>Paracatu Solar Power Complex consists in the installation of 487,080 PV modules with 325 Wp each and 132 inverters with 1,000 kW, totaling 132 MW installed capacity.</p> <p>The generated electricity from the 2 CPAs is exported to the national grid. For the current monitoring period, the generated electricity from the 2 CPAs is evidenced from the monthly electricity report /29/.</p> <p>The CPA implementation for the 2 CPAs have been verified from commissioning certificate /24/, PPAs /36/, power operation license /28/, electricity reports /29/ etc.. The commercial operation date for the 2 CPAs have been verified from the ANEEL Dispatches /25/ and electricity reports /29/. The geographical coordinates for the 2 CPAs have been verified through the environmental licenses /34/ and power operation licenses /28/.</p> <p>Verification team has, by means of a desk review and a remote site visit, assessed that all physical features of the proposed component project activity proposed in the 2 approved CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/) are in place, and that the CPA Implementers have operated all the 2 CPAs as per the respective approved CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/). The verification team has checked the information in the monitoring report and compared against the approved CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/).</p> <p>During the remote site inspection, the verification team has checked the CPA implementation, technology applied, project equipment and monitoring system against the information in the approved CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/), interviews with operational personnel and found ok.</p>		

	Based on the review of commissioning certificates /24/, power purchase agreements /36/ and technical description /30/ of the 2 CPAs and remote site visit, verification team is able to confirm that the CPAs are commissioned and in operational. The actual commercial operation dates are reported in section A of this report.
Findings	CAR-02 and CAR-03 were raised and successfully closed. Refer to Appendix 4 for further details.
Conclusion	Thus, the verification team concludes that the CPA was implemented and operated as per approved CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/). The verification team, based on the remote site visit and document review, was able to conclude that the CPAs have been implemented as per the per approved CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/) and that all physical features of the CPAs are in place.

E.3.2. Post-registration changes

E.3.2.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

Not applicable

E.3.2.2. Corrections

Not applicable

E.3.2.3. Changes to the start-date of the crediting period

Not Applicable

E.3.2.4. Inclusion of a monitoring plan

Not applicable as monitoring plan is provided in the CPA-DDs itself.

E.3.2.5. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents

There is no permanent change identified for this monitoring period.

E.3.2.6. Changes to the project design

There is no change in the programme design of the included CPA-DD.

E.3.2.7. Changes specific to afforestation and reforestation activities

Not Applicable

E.3.3. Compliance of the registered monitoring plan with applied methodologies and standardized baselines

Means of verification	The verification team has checked the compliance of the 2 CPAs monitoring plan with the approved large scale applied methodology i.e. "ACM0002 version 16.0 – Consolidated baseline methodology for grid-connected electricity generation from renewable sources" /7/ including applicable tools /16/ - /23/. The actual procedures followed for monitoring of parameters is checked against the parameters and procedures provided in the applied methodology.
Findings	No CAR/CL raised in this regard.
Conclusion	The monitoring plan is in accordance with the applied methodology. The monitoring has been carried out in accordance with the monitoring plan contained in the

	<p>approved CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/). All parameters stated in the monitoring plan and the applied methodology has been fulfilled in the current monitoring period. All parameters used for emission reductions calculation have been verified and found satisfactory. The discussion regarding each parameter has been elaborated in the further sections of this report. The monitoring plan as mentioned in the respective CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/) is in accordance with the applied methodology /7/.</p> <p>In the opinion of the verification team the monitoring report complies with the requirement of the approved CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/) and applied methodology (ACM0002 version 16.0) /7/ in the context of the CPAs. Thus, it conforms to the requirement of §343 of CDM validation and verification standard for programmes of activities, version 02 /9/.</p> <p>There is no event or situation occurred during this monitoring period which has impacted the applicability of methodology /7/.</p>
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E.3.4. Compliance of monitoring activities with the registered monitoring plan

E.3.4.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification	<p>The verification team has checked the ex-ante parameter and data stated in Section E.1 of MR and compared with relevant section of the validated CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/) that whether the parameter fixed ex-ante for the crediting period has been applied correctly.</p> <p>The Ex-ante parameters are as follows:</p>				
	S. No.	Ex-ante Parameter and unit	Description	Value	Consistent with the respective CPA-DD (for CPA ref. no. 10286-0004 and 10286-0003 /5/) & the source mentioned in it
	1	EF _{grid,BM,2014} (tCO ₂ /MWh)	Build margin CO ₂ emission factor for the project electricity system in year y	0.2963	The value was fixed at the time of validation of CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/) in compliance with the PoA-DD /5/. KBS verified that the value applied is correct as described in the registered CPA-DDs /5/. Hence accepted by the verification team.
Findings	No CAR/CL raised in this regard.				
Conclusion	The value of ex-ante fixed parameter has been verified from the respective registered CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/). The verification team confirms that the value used/applied is correct and justified. Also, the ex-ante value has been correctly applied in the calculation of emission reductions.				

E.3.4.2. Data and parameters monitored

Means of verification	<p>The verification team has determined whether the registered monitoring plan has been properly implemented and followed by the project implementer and CME that the monitoring has been carried out in accordance with the registered monitoring plan; and determined whether all parameters including project emission parameters, baseline emission parameters and leakage parameters used for emission reduction calculation stated in the registered monitoring plan are monitored or used appropriately as per the registered CPA-DDs.</p>
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During the verification all monitoring parameters listed in Section E.2 of MR were compared with monitoring parameters and the monitoring plan of the registered CPA-DDs and have been verified with regard to the:

- (i) appropriateness of the applied measurement / determination method,
- (ii) the correctness of the values applied for ER calculation,
- (iii) the accuracy, and applied QA/QC measures.

The verification team has reviewed all the documents like commissioning certificates /24/, operation start dates /25/, monthly electricity reports /29/, calibration records /26/ etc. In line with Guidelines for Application of materiality in verifications /12/, a reasonable level of assurance is defined for the verification of the project by complete verification of all the values indicated in the emission reduction spreadsheet in documents such as Monthly electricity reports /29/, etc. at the document review stage and remote site. There are no material errors, omissions or misstatements.

The monitored values are assessed as follows:

Data / Parameter: $EG_{\text{facility},y}$
 Data unit: MWh
 Description: Net electricity supplied to the national grid by the project

CPA	$EG_{\text{facility},y}$
CPA No. 10286-0003	261,496.97 MWh
CPA No. 10286-0004	237,304.76 MWh
Total	498,801.73 MWh

Measuring frequency / Time interval: The net electricity supplied by the CPAs to the grid is continuous measured by bi-directional main and back-up meters (billing meters) installed at the grid interconnection point and monthly recorded.

During the remote site visit interview and from monthly electricity records /29/, it is observed that it is measured continuously through bi-directional power meters and recorded every month by CCEE.

The requirement of the monitoring plan i.e. "Two-way power meters will be installed at the grid-connected point to measure the amount of electricity supplied and consumed by the project activity" has been complied by all the CPAs.

Reporting frequency: Monthly recording by CCEE.

Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No): Yes

Type of monitoring equipment: The net electricity supplied by the CPAs to the grid is continuous measured by bi-directional power meters (billing meters). The metering system includes the main meter and back-up meter.

Is accuracy of the monitoring equipment as stated in the CPA-DD? The accuracy class of the power meters (main and back-up) is 0.2S as verified during the remote site visit which is in compliance with the approved CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/) and is in accordance with national standards /34/.

Calibration frequency / interval: Every 5 years. Calibration frequency is in compliance with the approved CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/).

Is the calibration interval in line with the monitoring plan of the CPA-DD? Yes.

Company performing the calibration: The calibration of all meters have been done by 3C Laboratório de Ensaios de Medidores de Energia Elétrica as verified from the calibration certificates /26/ and hence accepted.

Did calibration confirm proper functioning of monitoring equipment? (Yes / No): The calibration certificates /26/ are verified and found that the error in calibration test is less than respective accuracy class i.e. 0.2S (main and back-up meter).

Is (are) calibration(s) valid for the whole reporting period? Verification team has checked the calibration certificates /26/ and found that calibration is covering this monitoring period.

If applicable, has the reported data been cross-checked with other available data? Data in the monitoring report was cross checked against the electricity reports provided by the Electricity Chamber Company (cross check data) /29/. The verification team has verified all the electricity reports /29/ for this monitoring period and confirms that the same values are applied in the ER calculation sheet /4/.

How were the values in the monitoring report verified? Data in the monitoring report was cross checked against the electricity reports provided by the Electricity Chamber Company (cross check data) /29/. The verification team has verified all the electricity reports /29/ for this monitoring period and confirms that the same values are applied in the ER calculation sheet /3/ /4/.

Hence the verification team was able to conclude that this parameter is being monitored and recorded as per monitoring plan.

Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place? Yes. Data management was found to be reliable and appropriate.

In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved? NA

Refer section E.3.4.4 of this report for calibration.

Data / Parameter: $EF_{gridOM,y}$

Data unit: tCO₂/MWh

Description: Operation margin emission factor in year y

OPERATIONAL MARGIN												
Average Emission Factor (tCO ₂ /MWh) - MONTHLY												
2018	MONTH											
	January	February	March	April	May	June	July	August	September	October	November	December
	0.5652	0.5559	0.5750	0.5058	0.5461	0.6691	0.5989	0.5948	0.5718	0.5782	0.3654	0.3423

OPERATIONAL MARGIN												
Average Emission Factor (tCO ₂ /MWh) - MONTHLY												
2019	MONTH											
	January	February	March	April	May	June	July	August	September	October	November	December
	0.3540	0.5573	0.5075	0.5095	0.4794	0.4175	0.5914	0.5312	0.5606	0.5370	0.5720	0.5997

Measuring frequency / Time interval: Annually.

Reporting frequency: Annually.

Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No): Yes

Type of monitoring equipment: N/A

Is accuracy of the monitoring equipment as stated in the CPA-DD? N/A

Calibration frequency / interval: N/A

Is the calibration interval in line with the monitoring plan of the CPA-DD? N/A

Company performing the calibration: N/A

Did calibration confirm proper functioning of monitoring equipment? (Yes / No): N/A

Is (are) calibration(s) valid for the whole reporting period? N/A

If applicable, has the reported data been cross-checked with other available data? N/A

How were the values in the monitoring report verified? Data in the monitoring report was cross checked against the Brazilian DNA website /27/.

Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place? Yes. Data management was found to be reliable and appropriate.

In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved? NA

Refer section E.3.4.4 of this report for calibration.

Data / Parameter: $EF_{gridCM,y}$

Data unit: tCO₂/MWh

Description: Combined margin CO₂ emission factor for grid connected power generation in year y

PERIOD	BM	OM	CM (BM*25%+OM*75%)
Jan/18	0.2963	0.5652	0.4980
Feb/18	0.2963	0.5559	0.4910
Mar/18	0.2963	0.5750	0.5053
Apr/18	0.2963	0.5058	0.4534
May/18	0.2963	0.5461	0.4837
Jun/18	0.2963	0.6691	0.5759
Jul/18	0.2963	0.5989	0.5233
Aug/18	0.2963	0.5948	0.5202
Sep/18	0.2963	0.5718	0.5029
Oct/18	0.2963	0.5782	0.5077
Nov/18	0.2963	0.3654	0.3481
Dec/18	0.2963	0.3423	0.3308
Jan/19	0.2963	0.3540	0.3396
Feb/19	0.2963	0.5573	0.4921
Mar/19	0.2963	0.5075	0.4547
Apr/19	0.2963	0.5095	0.4562
May/19	0.2963	0.4794	0.4336
Jun/19	0.2963	0.4175	0.3872
Jul/19	0.2963	0.5914	0.5176

	Aug/19	0.2963	0.5312	0.4725
	Sep/19	0.2963	0.5606	0.4945
	Oct/19	0.2963	0.5370	0.4768
	Nov/19	0.2963	0.5720	0.5031
	Dec/19	0.2963	0.5997	0.5239

Measuring frequency / Time interval: Annually.

Reporting frequency: Annually.

Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No): Yes

Type of monitoring equipment: N/A

Is accuracy of the monitoring equipment as stated in the CPA-DD? N/A

Calibration frequency / interval: N/A

Is the calibration interval in line with the monitoring plan of the CPA-DD? N/A

Company performing the calibration: N/A

Did calibration confirm proper functioning of monitoring equipment? (Yes / No): N/A

Is (are) calibration(s) valid for the whole reporting period? N/A

If applicable, has the reported data been cross-checked with other available data? N/A

How were the values in the monitoring report verified? Data in the monitoring report was cross checked against the Brazilian DNA website /27/.

Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place? Yes. Data management was found to be reliable and appropriate.

In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved? NA

Refer section E.3.4.4 of this report for calibration.

Findings	CAR-04 and CAR-05 were raised and successfully closed. Refer to Appendix 4 for further details.
Conclusion	Corresponding to the §346 of VVS for PoA version 02.0 /9/, the verification team confirm that the monitoring has been carried out in accordance with the validated CPA-DDs /5/. The monitoring system is in compliance with the information flow for the parameters as mentioned in monitoring plan in approved CPA-DDs /5/. The monitored data for the parameters has been verified by checking the procedure for information flow and found to be complete and consistent.

E.3.4.3. Implementation of sampling plan

Means of verification	Not applicable.
Findings	Not applicable.

Conclusion	Not applicable.
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E.3.5. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	From the onsite visit and from the calibration certificates /26/, Verification team checked whether the calibration of the measuring equipment that has an impact on the claimed emission reductions is conducted by the project implementer or CME at a frequency specified in the registered monitoring plan of approved CPAs (for CPA ref. no. 10286-0004 and 10286-0003 /5/). KBS verified the following calibration certificates:					
	<u>CPA 10286-P1-0003-CP1: Floresta Solar Power Complex</u>					
	Manufacturer: Schneider Electric Type: ION 8650 bi-directional Accuracy: 0.2S Calibration frequency: Every 5 years. Operation period: Beginning of the monitoring period until now.					
	Solar power plant	Power Meter	Description	Serial Number	Date of Last Calibration	Validity
	FLORESTA I	M1P	Circuit 1	MW-1703A610-02	12/05/2017	11/05/2022
	FLORESTA I	M1R	Circuit 1	MW-1703A613-02	11/05/2017	10/05/2022
	FLORESTA I	M2P	Circuit 2	MW-1703A595-02	12/05/2017	11/05/2022
	FLORESTA I	M2R	Circuit 2	MW-1703A791-02	12/05/2017	11/05/2022
	FLORESTA II	M3P	Circuit 1	MW-1703A607-02	12/05/2017	11/05/2022
	FLORESTA II	M3R	Circuit 1	MW-1704A038-02	16/05/2017	15/05/2022
	FLORESTA II	M4P	Circuit 2	MW-1703A597-02	12/05/2017	11/05/2022
	FLORESTA II	M4R	Circuit 2	MW-1703A609-02	11/05/2017	10/05/2022
	FLORESTA III	M1P	Circuit 1	MW-1703A603-02	12/05/2017	11/05/2022
	FLORESTA III	M1R	Circuit 1	MW-1703A796-02	12/05/2017	11/05/2022
FLORESTA III	M2P	Circuit 2	MW-1703A601-02	12/05/2017	11/05/2022	
FLORESTA III	M2R	Circuit 2	MW-1703A799-02	12/05/2017	11/05/2022	
TRAFO T1	MF-T1-P	SMF-T1	MW-1706A061-02	10/07/2017	09/07/2022	

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TRAFO T1	MF-T1-R	SMF-T1	MW-1705B681-02	12/07/2017	11/07/2022
TRAFO T2	MF-T2-P	SMF-T2	MW-1706A008-02	10/07/2017	09/07/2022
TRAFO T2	MF-T2-P	SMF-T2	MW-1706A048-02	10/07/2017	09/07/2022

CPA 10286-P1-0004-CP1: Paracatu Solar Power Complex

Manufacturer: Schneider Electric

Type: ION 8650 bi-directional

Accuracy: 0.2S

Calibration frequency: Every 5 years.

Operation period: Beginning of the monitoring period until now.

Solar power plant	Power Meter	Description	Serial Number	Date of Last Calibration	Validity
PARACATU I	M1P	Circuit C1	MW-1710B259-02	22/01/2018	21/01/2023
PARACATU I	M1R	Circuit C1	MW-1711A522-02	17/01/2018	16/01/2023
PARACATU I	M2P	Circuit C2	MW-1710A303-02	26/01/2018	25/01/2023
PARACATU I	M2P	Circuit C2	MW-1710B258-02	25/01/2018	24/01/2023
PARACATU II	M3P	Circuit C1	MW-1709A917-02	20/01/2018	19/01/2023
PARACATU II	M3R	Circuit C1	MW-1710A709-02	20/01/2018	19/01/2023
PARACATU II	M4P	Circuit C2	MW-1710A006-02	18/01/2018	17/01/2023
PARACATU II	M4R	Circuit C2	MW-1707A816-02	22/01/2018	21/01/2023
PARACATU III	M1P	Circuit C1	MW-1709A825-02	25/01/2018	24/01/2023
PARACATU III	M1R	Circuit C1	MW-1710B169-02	20/01/2018	19/01/2023
PARACATU III	M2P	Circuit C2	MW-1707A196-02	24/01/2018	23/01/2023
PARACATU III	M2P	Circuit C2	MW-1709A904-02	20/01/2018	19/01/2023
PARACATU IV	M3P	Circuit C1	MW-1707A238-02	20/01/2018	19/01/2023

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	PARACATU IV	M3R	Circuit C1	MW-1709A840-02	22/01/2018	21/01/2023
	PARACATU IV	M4P	Circuit C2	MW-1707A785-02	20/01/2018	19/01/2023
	PARACATU IV	M4R	Circuit C2	MW-1707A779-02	20/01/2018	19/01/2023
	PARACATU IV BAY 138KV	M1	-	MW-1709A064-02	17/11/2017	16/11/2022
	PARACATU IV BAY 138KV	M2	-	MW-1709A089-02	18/11/2017	17/11/2022
	<p>Verification team has verified meter no. during the remote site visit and found consistent with the monitoring report /2/. There was no change of power meters during this monitoring period.</p> <p>Verification team has checked the calibration certificates /26/ and found that calibration is covering this monitoring period. Calibration result shows that the errors were within the permissible limit. The calibration frequency is following approved CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/) requirement i.e. each five years. Further the calibration of the power meters was done by 3C Laboratório de Ensaios de Medidores de Energia Elétrica and hence accepted. The verification team was able to conclude that QA/QC of the net export meter is ensured.</p>					
Findings	No CAR/CL raised in this regard.					
Conclusion	From the remote site visit and from the calibration certificates /26/, verification team confirms that the calibration of the monitoring equipment's was done as per the calibration frequency mentioned in the approved CPA-DDs (for CPA ref. no. 10286-0004 and 10286-0003 /5/).					

E.3.6. Assessment of data and calculation of emission reductions or net removals
E.3.6.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	<p>Verification team confirm that the calculation, applied formulae and the method for calculation of baseline emissions are in accordance with the registered PoA-DD /5/ and are in line with the requirements of the applied methodology (ACM0002 ver. 16.0 /7/). The formulae and the methods referred in the MR /2/ and the emission reduction calculation spread sheet /4/ for estimation of emission reduction complies with the corresponding formulae and methods in the registered PoA-DD /5/.</p> <p>The baseline emissions are calculated using the formula:</p> $BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$ <p>BE_y = Baseline emissions in year y (tCO₂); EG_{PJ,y} = 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 year y (MWh); EF_{grid,CM,y} = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO₂/MWh) /20/.</p> <p>Calculation of EG_{PJ,y}: As the CPAs consist of the installation of a Greenfield plant, the calculation of EG_{PJ,y} is carried out using the approach (a) as mentioned in ACM0002 /7/, equation 7 as below:</p> $EG_{PJ,y} = EG_{facility,y}$
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	<p>Where:</p> <p>$EG_{PJ,y}$ = 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 year y (MWh).</p> <p>$EG_{facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh).</p> <p>The ex-ante parameter ($EF_{grid,BM,y}$) has been justified in the section E.3.4.1 of this report. Verification team confirms that the ex-ante parameter used in the ER sheet /4/ are in accordance with the registered PoA-DD /03/ and also the applied methodology /7/ and tools /16/-/23/.</p> <p>Also the ex-post parameters ($EF_{grid,CM,y}$, $EF_{grid,OM,y}$ and $EG_{facility,y}$) have been justified in the section E.3.4.2 of this report. Verification team confirms that all ex-post parameters have been monitored in accordance with the registered PoA-DD /5/ and also the applied methodology /7/ and tools /16/-/23/.</p> <p>The steps taken and the equations and parameters applied in the ER sheet /4/ to calculate emission reductions comply with the requirements of the registered PoA-DD /03/ and the selected methodology /05/. The emission reduction calculation is completely traceable and verified by reviewing the ER spread sheet /4/ submitted by the CME.</p> <p>Hence baseline emission for this monitoring period is 234,859 tCO_{2e} (Rounded down).</p> <table border="1"> <thead> <tr> <th>CPA UNFCCC reference number</th><th>Baseline GHG emissions or baseline net GHG removals (t CO_{2e})</th></tr> </thead> <tbody> <tr> <td>CPA 10286-0003</td><td>124,309</td></tr> <tr> <td>CPA 10286-0004</td><td>110,550</td></tr> <tr> <td>Total</td><td>234,859</td></tr> </tbody> </table> <p><u>Determine total CPA emission reduction:</u></p> <p>PP has submitted the calculation in the excel sheet /4/. The baseline calculation in the excel sheet is checked whether the calculation is in accordance with the formula given in the validated CPA-DD /5/ and the selected methodology /7/ and found OK.</p>	CPA UNFCCC reference number	Baseline GHG emissions or baseline net GHG removals (t CO _{2e})	CPA 10286-0003	124,309	CPA 10286-0004	110,550	Total	234,859
CPA UNFCCC reference number	Baseline GHG emissions or baseline net GHG removals (t CO _{2e})								
CPA 10286-0003	124,309								
CPA 10286-0004	110,550								
Total	234,859								
Findings	No CAR/CL raised in this regard.								
Conclusion	<p>The verification team confirms the following:</p> <ul style="list-style-type: none"> • The calculations of baseline GHG emissions have been carried out in accordance with the equations and methods described in the registered monitoring plan and applied methodology. • Any assumptions used in emission or removal calculations have been justified. • Appropriate emission factor and other reference values have been correctly applied. It can be confirmed that the baseline calculation is overall correct. • The ER calculation sheet provided is clear, transparent and the calculations provided in the sheet are reproducible. • Hence, the baseline emission in the monitoring report for the monitoring period (i.e. 234,859 tCO_{2e}) is verified to be correct. 								

E.3.6.2. Calculation of project GHG emissions or actual net GHG removals by sinks

Means of verification	In accordance with the methodology /7/ and registered CPA-DDs /5/, project emissions are zero.
Findings	No CAR/CL raised in this regard.
Conclusion	Project emissions were considered zero in accordance with the applied methodology /7/ and methodology tool /16/-/23/.

E.3.6.3. Calculation of leakage GHG emissions

Means of verification	In accordance with the methodology /7/ and registered CPA-DDs /5/, leakage is not applicable.
Findings	No CAR/CL raised in this regard.

Conclusion	Leakage was considered zero in accordance with the applied methodology /7/.
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E.3.6.4. Summary of calculation of GHG emission reductions or net GHG removals by sinks

Means of verification	<p>The verification team has checked whether calculations of GHG emission reduction have been carried out in accordance with the formulae and methods described in the registered monitoring plan.</p> <p>Section F.4 of MR demonstrate the summary of GHG emission reductions for the monitoring period and calculated according to the applied methodology as follows: $ER_y = BE_y - PE_y - L_y$</p> <table border="1"> <tr> <th>CPA UNFCCC reference number</th><th>GHG emission reductions or net anthropogenic GHG removals (t CO₂e)</th></tr> <tr> <td>CPA 10286-0003</td><td>124,309</td></tr> <tr> <td>CPA 10286-0004</td><td>110,550</td></tr> <tr> <td>Total</td><td>234,859</td></tr> </table> <p>The ER calculation sheet and monitoring report is verified to check the calculation.</p>	CPA UNFCCC reference number	GHG emission reductions or net anthropogenic GHG removals (t CO ₂ e)	CPA 10286-0003	124,309	CPA 10286-0004	110,550	Total	234,859
CPA UNFCCC reference number	GHG emission reductions or net anthropogenic GHG removals (t CO ₂ e)								
CPA 10286-0003	124,309								
CPA 10286-0004	110,550								
Total	234,859								
Findings	No CAR/CL raised in this regard.								
Conclusion	<p>The verification team confirms the following:</p> <ul style="list-style-type: none"> The emission reduction value reported (i.e., 234,859 tCO₂e) is verified to be correct. The summary table in the MR has been filled correctly and the values are in line with the related emissions reduction spreadsheet. Since the complete monitoring period falls after 31/12/2012, the complete emission reductions are correctly reported under the respective column in the MR. 								

Title and UNFCCC reference number of the CPA	Baseline emissions or baseline net GHG removals by sinks (tCO ₂ e)	Project emissions or actual net GHG removals by sinks (tCO ₂ e)	Leakage (tCO ₂ e)	GHG emission reductions or net GHG removals by sinks (tCO ₂ e)		
				Amount achieved before 1 January 2013	Amount achieved from 1 January 2013	Amount achieved in the entire monitoring period
Title: Floresta Solar Power Complex UNFCCC reference no.: 10286-0003	124,309	0	0	0	124,309	124,309
Title: Paracatu Solar Power Complex UNFCCC reference no.: 10286-0004	110,550	0	0	0	110,550	110,550
Total	234,859	0	0	0	234,859	234,859

E.3.6.5. Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included CPA

Means of verification	The verification team has checked whether the MR includes a comparison of actual values of the monitoring period with the estimations in the approved CPA-DDs /5/. Section F.5 of the MR includes a comparison of the calculated actual emission reductions with the ex-ante calculated values in the approved CPA-DDs /5/.
------------------------------	---

	For the 2 CPAs, the actual achieved emission reduction is less than estimated emission reduction mentioned in the respective CPA-DD /5/.
Findings	No CAR/CL raised in this regard.
Conclusion	The estimated emission reduction as per CPA-DDs and the actual emission reduction achieved for the monitoring period are correctly reported in the section F.5 of MR. For the 2 CPAs, the actual achieved emission reduction is less than the respective CPA-DD estimation. Hence no justification is required.

Title and UNFCCC reference number of the CPA	Actual values achieved by the CPAs during this monitoring period	Value estimated in ex ante calculation in the included CPA-DD(s)
Title: Floresta Solar Power Complex UNFCCC reference no.: 10286-0003	124,309 tCO ₂ e	239,610 tCO ₂ e
Title: Paracatu Solar Power Complex UNFCCC reference no.: 10286-0004	110,550 tCO ₂ e	161,341 tCO ₂ e
Total	234,859 tCO₂e	400,951 tCO₂e

E.3.6.6. Remarks on difference from estimated value in included CPA

Means of verification	The actual achieved emission reduction for CPA during this monitoring period is less than the CPA-DD estimation /5/. There is a decrease of 48.1 % (10286-P1-0003-CP1) and 31.5% (10286-P1-0004-CP1) in the actual emission reduction as against stated in the registered CPA-DDs.
Findings	No CAR/CL raised in this regard.
Conclusion	The actual achieved emission reduction for CPA during this monitoring period is less than the CPA-DD estimation.

E.3.7. Assessment of reported sustainable development co-benefits

Means of verification	Not applicable to the proposed programme of activity.
Findings	Not applicable to the proposed programme of activity.
Conclusion	Not applicable to the proposed programme of activity.

E.3.8. Global stakeholder consultation

Means of verification	No comments received during the 1 st monitoring period.
Findings	No comments received during the 1 st monitoring period.
Conclusion	No comments received during the 1 st monitoring period.

SECTION F. Internal quality control

The draft verification report prepared by team leader is reviewed by an independent technical reviewer (having competence of relevant technical area himself/herself or through an independent technical area expert) to confirm the internal procedures established by KBS are duly followed and the verification report/opinion is reached in an objective manner and complies with the applicable CDM requirements.

The independent technical reviewer may approve or reject the draft verification report. The findings may be identified even at this stage, which needs to be satisfactorily resolved, before the request for issuance is submitted to UNFCCC. The final decision is taken by the Manager Technical and Certification. The technical reviewer and Manager (Technical & Certification) can be same person.

The final decision is authorized by Managing Director, KBS once the report is approved by the Manager (Technical & Certification).

SECTION G. Verification opinion

The verification team confirms that the evidence is of sufficient quantity, appropriate quality and reliable. The reported values, notation, units and sources in the monitoring report for all the monitoring parameters have been cross checked with the emission reduction sheet and monitoring report. During the course of verification

and remote site visit, the data submitted by PP was cross verified with the values mentioned in the emission reduction sheet and monitoring report. The procedure for data monitoring, recording, transfer and compilation was also verified and found in compliance with the monitoring plan as mentioned in the registered PoA-DD & included CPA-DD.

It is confirmed by the assessment team that the reported emission reductions have been conservatively calculated. A list of referred documents for verification is also included in Appendix 3 of this report.

Based on the information seen and evaluated we confirm that the implementation of the PoA has resulted in 234,859 tCO₂e emission reductions during monitoring period 01/01/2017 to 31/12/2019 (first and last days are included).

SECTION H. Certification statement

KBS Certification Services Pvt. Ltd. has been contracted by “ENGIE Brasil Energia S.A.” to undertake independent verification and certification for the greenhouse gas (GHG) emission reductions reported from the CDM PoA “Brazilian PoA for NAMA incentivized NCRE Projects” and UNFCCC Reference Number 10286 for the monitoring period 01/01/2017 to 31/12/2019 (including both dates) in the Monitoring Report Version 1.2 (first version) dated 25/06/2020.

The verification is based on the approved revised PoA-DD /03/ & approved CPA-DD /03/ and the monitoring report for this PoA. Our verification approach was based on the requirements as defined under the Kyoto Protocol, as well as those defined by the CDM Executive Board.

The management of the “ENGIE Brasil Energia S.A.” is the Coordinating/Managing Entity and it is responsible for inclusion of CPAs under this PoA. “ENGIE Brasil Energia S.A.” is also responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the PoA. The CPA Implementers are responsible for the maintenance of the solar power plants. The calculation and determination of GHG emission reductions from the PoA is the responsibility of the management of the “ENGIE Brasil Energia S.A.”. The development and maintenance of records and reporting procedures are in accordance with the Monitoring Report Version 2.2 dated 03/09/2020.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the PoA for the monitoring period 01/01/2017 to 31/12/2019 (including both dates) based on the reported emission reductions in the Final Monitoring Report Version 2.2 dated 03/09/2020 for the same period.

Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, KBS planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that this reported amount of GHG emission reductions for the period is fairly stated. KBS confirms the following;

Reporting period: 01/01/2017 to 31/12/2019 (including both dates)

Verified and certified emission in the above reporting period:

Baseline emissions (BE) (tCO₂e)	Project emissions (PE) (tCO₂e)	Leakage emissions (LE) (tCO₂e)	Certified emission reductions (CERs) (tCO₂e)
234,859	0	0	234,859

Appendix 1. Abbreviations

Abbreviations	Full texts
ANEEL	Brazilian Electric Energy Agency (from Portuguese “Agência Nacional de Energia Elétrica”)
BE	Baseline Emissions
CAR	Corrective Action Request
CCEE	Chamber of Electrical Energy Commercialization (from Portuguese Câmara de Comercialização de Energia Elétrica)
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CI	CPA Implementer
CL	Clarification request
CME	Coordinating/managing entity
CO ₂	Carbon dioxide
COP	Conference of Parties
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
DOE	Designated Operational Entity
DNA	Designated National Authority
ERs	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse gas(es)
IDEMA	From Portuguese Instituto de Desenvolvimento sustentável e Meio Ambiente do Rio Grande do Norte
IPCC	Intergovernmental Panel on Climate Change
KBS	KBS Certification Services Pvt. Ltd.
MCTI	Ministry of Science, Technology and Innovations (from Portuguese “Ministério da Ciência, Tecnologia e Inovações”)
MP	Monitoring Plan
MR	Monitoring Report
ONS	National Grid Operator (from Portuguese “Operador Nacional do Sistema”)
PPA	Power Purchase Agreement
PE	Project Emissions
PCP	Project Cycle Procedure
PoA	Programme of Activity
PoA-DD	Programme of Activity Design Document
QA/QC	Quality Assurance/Quality Control
SEMA	(Secretary of State for Environmental and Sustainable Development) from portuguese Secretaria de Estado de Meio Ambiente e Desenvolvimento Sustentável
TA	Technical Area
T&C	Technical & Certification
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation & Verification Standard

Appendix 2. Competence of team members and technical reviewers

Appendix 3.	Personnel Name:	Andrea Leiroz
Qualified to work as:		

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Team Leader	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>
Validator/Verifier	<input checked="" type="checkbox"/>	Financial Expert	<input type="checkbox"/>
Technical Reviewer	<input type="checkbox"/>	Local Expert (India)	<input checked="" type="checkbox"/>
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
Energy industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		
	TA 1.2: Energy generation from renewable energy sources		
Waste handling and disposal	TA 13.1. Solid waste and wastewater TA 13.2. Manure		
Approved by (Manager C & T)	Sanjay Kandari		
Approval date:	17/12/2018		

(Technical reviewer) Personnel Name:		Sanjay Kandari	
Qualified to work as:			
Team Leader	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>
Validator/Verifier	<input checked="" type="checkbox"/>	Financial Expert	<input checked="" type="checkbox"/>
Technical Reviewer	<input checked="" type="checkbox"/>	Local Expert (India)	<input checked="" type="checkbox"/>
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
Energy Industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		
Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources		
Energy demand	TA 3.1. Energy Demand		
Waste Handling and Disposal	TA 13.1 Waste Handling and Disposal TA 13.2 Manure		
Approved by (Manager C & T)	Akhilesh Joshi		
Approval date:	11/12/2015		

Appendix 4. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
/1/	CME	Monitoring Report.	Version 1.2, dated 25/06/2020	CME
/2/	CME	Final Monitoring Report.	Version 2.2, dated 03/09/2020	CME
/3/	CME	ER calculation sheet for the 2 CPAs corresponding to MR version 1.2.	Corresponding to MR version 1.2	CME
/4/	CME	Final ER calculation sheet for the 2 CPAs corresponding to Final MR.	Corresponding to MR version 2.2	CME
/5/	CME	Registered PoA-DD.	Version 04.1, dated 13/07/2016	Publicly available
	CME	Generic CPA-DD.	-	
	CME	Specific CPA-DD of CPA reference no. 10286-0003.	Version 3.1, dated 26/10/2017	
	CME	Specific CPA-DD of CPA reference no. 10286-0004.	Version 3.0, dated 11/10/2017	
/6/	TÜV NORD CERT GmbH	PoA validation report.	Dated 01/11/2016	Publicly available
	Earthood Services Private Limited	Validation report for Specific CPA-DD of CPA reference no. 10286-0003.	Dated 26/10/2017	
	Earthood Services Private Limited	Validation report for Specific CPA-DD of CPA reference no. 10286-0004.	Dated 11/10/2017	
/7/	UNFCCC	Large-scale Consolidated Methodology ACM0002: Grid-connected electricity generation from renewable sources.	Version 16.0	Publicly available
/8/	UNFCCC	Kyoto Protocol (1997).	Web link	Publicly available
/9/	UNFCCC	CDM Validation and Verification Standard for programmes of activities.	Version 02.0	Publicly available
/10/	UNFCCC	CDM Project Standard for programmes of activities.	Version 02.0	Publicly available
/11/	UNFCCC	Glossary “CDM terms”.	Version 10	Publicly available
/12/	UNFCCC	Guidelines for Application of materiality in verifications.	version 2.0	Publicly available
/13/	UNFCCC	MR filling guideline: “CDM-PoA-MR-FORM Monitoring report form for CDM programme of activities”.	Version 03.0	Publicly available
/14/	UNFCCC	Standard “Sampling and surveys for CDM project activities and programme of activities”.	Version 08.0	Publicly available

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/15/	UNFCCC	Guidelines for sampling and surveys for CDM project activities and programme of activities.	Version 04.0	Publicly available
/16/	UNFCCC	TOOL01: Methodological tool: Tool for the demonstration and assessment of additionality.	Version 07.0.0	Publicly available
/17/	UNFCCC	TOOL02: Methodological tool: Combined tool to identify the baseline scenario and demonstrate additionality.	Version 07.0	Publicly available
/18/	UNFCCC	TOOL03: Methodological tool: Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion.	Version 03.0	Publicly available
/19/	UNFCCC	TOOL05: Methodological tool: Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation.	Version 03.0	Publicly available
/20/	UNFCCC	TOOL07: Methodological tool: Tool to calculate the emission factor for an electricity system.	Version 07.0	Publicly available
/21/	UNFCCC	TOOL10: Methodological tool: Tool to determine the remaining lifetime of equipment.	Version 01	Publicly available
/22/	UNFCCC	TOOL11: Methodological tool: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period.	Version 03.0.1	Publicly available
/23/	UNFCCC	TOOL32: Methodological tool: Positive lists of technologies.	Version 02.0	Publicly available
/24/	ANEEL	Commissioning dates - ANEEL Dispatch: Floresta I: # 3752 issued on 07/11/2017. Floresta II: # 3753 issued on 07/11/2017. Floresta III: # 3754 issued on 07/11/2017 for generator units from 1 to 11, # 3861 issued on 17/11/2017 for generator units from 12 to 18 and # 3928 issued on 22/11/2017 for generator units from 19 to 22. Paracatu I: # 2627 issued on 16/11/2018 Paracatu II: # 2628 issued on 16/11/2018 Paracatu III: # 2629 issued on 16/11/2018 Paracatu IV: # 2630 issued on 16/11/2018	-	Publicly available
/25/	ANEEL	Start date of operation - ANEEL dispatch: Floresta I: # 4357 issued on 22/12/2017. Floresta II: # 4358 issued on 22/12/2017. Floresta III: # 4359 issued on 22/12/2017. Paracatu I: # 038 issued on 08/01/2019 Paracatu II: # 388 issued on 08/02/2019 Paracatu III: # 039 issued on 08/01/2019 Paracatu IV: # 040 issued on 08/01/2019	-	Publicly available
/26/	3C Laboratório de Ensaio de Medidores de Energia Elétrica	Calibration certificates of the energy meters covering the monitoring period to each CPA reference no. 10286-0003, 10286-0004.	-	CME
/27/	MCTI	Interministerial Commission of Global Climate Change (Brazilian DNA): Grid emission factor for the year 2017, 2018 and 2019. Available at Brazilian DNA official website: http://www.mctic.gov.br/mctic/opencms/cienc	-	Publicly available

		ia/SEPED/clima/textogeral/emissao_despacho.html?searchRef=fator%20de%20emissao&tipoBusca=expressaoExata .		
/28/	ANEEL	<p>Power operation license - ANEEL ordinances and dispatches:</p> <p>Floresta I: Ordinance # 209 issued on 31/05/2016. Floresta II: Ordinance # 258 issued on 17/06/2016. Floresta III: Ordinance # 259 issued on 17/06/2016.</p> <p>Floresta I: Dispatch # 2320 issued on 01/08/2017. Floresta II: Dispatch # 2321 issued on 01/08/2017. Floresta III: Dispatch # 2322 issued on 01/08/2017.</p> <p>Paracatu I: Ordinance # 125 issued on 26/04/2016. Paracatu II: Ordinance # 198 issued on 25/05/2016. Paracatu III: Ordinance # 197 issued on 25/05/2016. Paracatu IV: Ordinance # 260 issued on 17/06/2016. Paracatu I: Dispatch # 1038 issued on 09/05/2018. Paracatu II: Dispatch # 1039 issued on 09/05/2018. Paracatu III: Dispatch # 1040 issued on 09/05/2018. Paracatu IV: Dispatch # 1041 issued on 09/05/2018.</p>	-	Publicly available
/29/	CCEE	Electricity reports covering the monitoring period to each CPA	Entire monitoring period.	CI
/30/	Manufacturer	Technical specification of the project equipment's: PV module, tracker, inverter, transformer and energy meters for each CPA ref. no. 10286-0004 and 10286-0003.	-	CI
/31/	CPA Implementer	Training Manual along with Training records for the operation division during this monitoring period.	-	CI
/32/	CPA Implementer	Photographs of the name plate of PV models, trackers, inverters, energy meters etc.	-	CI
/33/	SEMA (Secretary of State for Environmental and Sustainable Development)	Environmental operation licenses: Paracatu I and II: LO #001/2019 valid until 22/12/2028. Paracatu III and IV: LO #089/2018 valid until 24/10/2028.	21/01/2019 18/02/2019	CI
/34/	IDEMA (Sustainable Development and Environment Institute of Rio Grande)	Environmental operation licenses: Floresta I: LO #2017-112650/TEC/LO-0202 valid until 12/09/2022. Floresta II: LO #2017-112651/TEC/LO-0203 valid until 31/10/2022. Floresta III: LO #2017-113599/TEC/LO-0255 valid until 07/12/2023.	12/09/2017 31/10/2017 07/12/2017	CI

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	do Norte State)			
/35/	ONS	<p>Grid Procedures: Module 12. Procedure for energy meter class: Sub-module 12.2 v2019.08. Available at: http://www.ons.org.br/%2FProcedimentosDeRede%2FMódulo%2012%2FSubmódulo%2012.2%2FSubmódulo%2012.2%202019.08.pdf. Procedure for calibration: Sub-module 12.3 v2016.12. Available at: http://www.ons.org.br/%2FProcedimentosDeRede%2FMódulo%2012%2FSubmódulo%2012.3%2FSubmódulo%2012.3%202016.12.pdf.</p>	<p>04/09/2019</p> <p>16/12/2016</p>	Publicly available
/36/	CPA Implementer and CCEE	Power Purchase Agreement with for each CPA ref. no. 10286-0004, 10286-0003.	2016	CI
/37/	UNFCCC	<p>CDM Executive Board agrees to relax mandatory site visits by DOEs for a period of three months (23 March to 23 June 2020) because of COVID-19. The Executive Board of the Clean Development Mechanism (CDM) agreed on 23 June 2020 to, on an exceptional basis, considering the COVID-19 pandemic, to extend the period in which CDM Designated Operational Entities (DOEs) may apply alternative measures of validation/verification to mandatory on-site inspections until 31 December 2020.</p>	<p>23/03/2020</p> <p>23/06/2020</p>	Publicly available
/38/	CPA Implementer	ERPA Agreement signed between Itaú Unibanco S.A. (Buyer) and Solaire Floresta Holding S.A. (Seller).	10/2018	CI

Appendix 5. Clarification requests, corrective action requests and forward action requests

Table 1. Remaining FARs from validation and/or previous verification

There is no remaining FAR from validation and/or previous verification.

FAR ID	XX	Section no.		Date: DD/MM/YYYY
Description of FAR				
CME response				Date: DD/MM/YYYY
Documentation provided by CME				
-				
DOE assessment				Date: DD/MM/YYYY

Table 2. CL from this Verification

No CL from this verification

CL ID	XX	Section no.		Date: DD/MM/YYYY
Description of CL				
CME response				Date: DD/MM/YYYY
Documentation provided by CME				
-				
DOE assessment				Date: DD/MM/YYYY

Table 3. CAR from this verification

CAR ID	01	Section no.	E.1.1	Date: 17/08/2020
Description of CAR				
From the review of the hosted MR, Verification team has found that CPA Implementer has used futuristic language in the Monitoring report. The verification is for the monitoring period for which monitoring is already done.				
CME response				Date: 19/08/2020
The Monitoring Report (version 2) was revised to reflect the appropriate chronological language.				
Documentation provided by CME				
Revised Monitoring Report (version 2)				
DOE assessment				Date: 20/08/2020
KBS verified the revised MR and confirmed that language used in the document is appropriate. Thus, this CAR is closed.				

CAR ID	02	Section no.	E.3.1	Date: 17/08/2020
Description of CAR				
More information regarding the description of the implemented CPAs should be provided in section C.1 of the monitoring report.				
CME response				Date: 19/08/2020
Additional information about the description of the main equipment and their technical specifications implemented in the CPAs were provided in section C.1 of the revised Monitoring Report (version 2).				
Documentation provided by CME				
Revised Monitoring Report (version 2)				

DOE assessment	Date: 20/08/2020
KBS verified the revised MR and confirmed that information regarding the description of the implemented CPAs were correctly included in section C.1. Thus, this CAR is closed.	

CAR ID	03	Section no.	E.3.1	Date: 17/08/2020
Description of CAR				
CPA ref. no. 10286-0004: Evidence of the geographic coordinates should be provided. The link in the monitoring report is no more available.				
CME response				Date: 19/08/2020
It was observed that the previous link provided for the geographic coordinates of the CPA Paracatu is no longer available, indeed. Therefore, the information in the Monitoring Report was revised based on new documental evidences from the Minister of State of Mines and Energy.				
Documentation provided by CME				
Minister of State of Mines and Energy. Geographical coordinates were extracted and converted from the following official documents:				
<ul style="list-style-type: none"> - Ordinance No 125, of April 26, 2016 (Paracatu I); - Ordinance No 198, of May 25, 2016 (Paracatu II); - Ordinance No 197, of May 25, 2016 (Paracatu III); - Ordinance No 260, of June 17, 2016 (Paracatu IV). 				
DOE assessment				Date: 20/08/2020
KBS verified that the link in the monitoring report was updated. In addition, the Ordinances were checked and the geographical coordinates mentioned in the MR found correct. Thus, this CAR is closed.				

CAR ID	04	Section no.	E.3.4.2	Date: 17/08/2020
Description of CAR				
CPA ref. no. 10286-0003: From the review of the ER sheet and electricity reports, Verification team has found that the electricity export and import values mentioned under the ER sheet are not consistent with the electricity report for few months.				
CME response				Date: 19/08/2020
The Monitoring Report (version 2) and the ER calculation spreadsheet (version 2) were revised based on the electricity export and import values found in the electricity reports extracted from the Electric Power Commercialization Chamber (from Portuguese "CCEE – Câmara de Comercialização de Energia Elétrica") system during the verification audit.				
Documentation provided by CME				
<ul style="list-style-type: none"> - Monitoring Report (version 2); - ER calculation spreadsheet (version 2). 				
DOE assessment				Date: 20/08/2020
The revised monitoring report and excel spreadsheet were verified by KBS. The values applied for electricity export and import are consistent with evidences provided during the remote audit. Thus, this CAR is closed.				

CAR ID	05	Section no.	E.3.4.2	Date: 17/08/2020
Description of CAR				
CPA ref. no. 10286-0004: From the review of the ER sheet and dispatches from ANEEL (start date of operation), Verification team has found that the electricity export and import values mentioned under the ER sheet are not consistent with the start date of operation.				
CME response				Date: 19/08/2020
We would like to clarify that the beginning of the testing phase for all 4 units within Paracatu Solar Power Complex (CPA ref. no. 10286-0004) started on 17/11/2018, i.e. prior to the commercial operation date, as well as before the starting date of its crediting period. Nevertheless, it should be noted that the operation start under the testing period or phase is the operational situation that subsequently happens after the completion of the construction and installation of the power generation facilities. This is necessary in order to make the necessary adjustments on the equipment, as well as to verify its operational behaviour from a systemic point of view and this is established in ANEEL's Normative Resolution nº 583/2013. In addition, according to the Commercialization Rules - Booklet 02 - Accounting Measurement of the CCEE – on page 77, and in line with ANEEL's Normative Resolution nº 583/2013, before entering into commercial operation, the generating units of a plant undergo a testing period in which the energy produced is settled				

in the Short Term Market (from the Portuguese “*Mercado de Curto Prazo - MCP*”). At the end of this testing period, the commercial generation, as the energy generated by the units in commercial operation is called, can be sold under the CCEE scope and this is considered to meet contractual obligations, which in the case of Solar Power Plants Floresta I, II and III as well as Paracatu I, II, III and IV, it refers to the reserve energy contracts. The Booklet 02 - Accounting Measurement is clear in informing that “*due to the total electricity production of a power plant and its systemic characteristics, the volume of commercial generation is used to meet commercial obligations and the volume of the testing phase generation is obligatorily settled in the Short Term Market (MCP).*”

Therefore, it is clear that even when the dispatch of electricity by the power plant to the grid happens during the testing phase it is indeed measured, acknowledged and accounted by the regulatory authorities involved, like ANEEL and CCEE.

Moreover, regardless of the commercial arrangements, the fact that the power plants generate and dispatch renewable electricity to the grid, even during the testing phase, are indeed recognized and quantified.

Hence, the electricity export and import values mentioned in the ER sheet and in the Monitoring Report (version 2) are accurate and deemed appropriate, thus resulting in the emissions reductions achieved by the project activity during the monitoring and crediting period covered in this Monitoring Report (version 2).

Documentation provided by CME

- Monitoring Report (version 2);
- ANEEL's Normative Resolution nº 583/2013;
- CCEE's Commercialization Rules - Booklet 02 - Accounting Measurement;
- ANEEL's Dispatch Nº. 2627, dated 16/11/2018, allowing the start of the operation test for Paracatu I;
- ANEEL's Dispatch Nº. 2628, dated 16/11/2018, allowing the start of the operation test for Paracatu II;
- ANEEL's Dispatch Nº. 2629, dated 16/11/2018, allowing the start of the operation test for Paracatu III;

ANEEL's Dispatch Nº. 2630, dated 16/11/2018, allowing the start of the operation test for Paracatu IV.

DOE assessment

Date: 20/08/2020

Verification team has checked the mentioned documents and verified that the explanation provided is coherent. KBS concluded that according to ANEEL's and CCEE's rules, the electricity export and import values mentioned under the ER sheet are consistent with the commissioning date of solar power plants. Thus, this CAR is closed.

Table 2. FAR from this verification

No FAR from this verification

FAR ID	Xx	Section No.	Date: DD/MM/YYYY
Description of FAR			
CME response			Date: DD/MM/YYYY
Documentation provided by CME			
DOE assessment			Date: DD/MM/YYYY

- - - - -

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
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 programmes of activities” (CDM-EB93-A08-STAN);• Make structural and editorial improvements.
02.0	29 December 2017	Revision to align with the requirements of the “CDM validation and verification standard for programme of activities” (version 01.0).
01.0	5 June 2015	Initial publication.

Decision Class: Regulatory
Document Type: Form
Business Function: Issuance
Keywords: programme of activities, verifying and certifying