

JCM Validation Report Form

A. Summary of validation

A.1. General Information

Title of the project	9.6MW Solar Power Project in Collaboration with Power-supply Company
Reference number	PH005
Third-party entity (TPE)	EPIC Sustainability Services Private Limited
Project participant contracting the TPE	Tokyo Century Corporation
Date of completion of this report	19/03/2024

A.2 Conclusion of validation

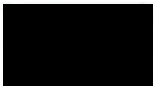
Overall validation opinion	☒ Positive ☐ Negative
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A.3. Overview of final validation conclusion

Only when all of the checkboxes are checked, overall validation opinion is positive.

Item	Validation requirements	No CAR or CL remaining
Project design document form	The TPE determines whether the PDD was completed using the latest version of the PDD forms appropriate to the type of project and drafted in line with the Guidelines for Developing the Joint Crediting Mechanism (JCM) Project Design Document, Monitoring Plan and Monitoring Report.	☒
Project description	The description of the proposed JCM project in the PDD is accurate, complete, and provides comprehension of the proposed JCM project.	☒
Application of approved JCM methodology (ies)	The project is eligible for applying applied methodology and that the applied version is valid at the time of submission of the proposed JCM project for validation.	☒
Emission sources and calculation of emission reductions	All relevant GHG emission sources covered in the methodology are addressed for the purpose of calculating project emissions and reference emissions for the proposed JCM project.	☒
	The values for project specific parameters to be fixed <i>ex ante</i> listed in the Monitoring Plan Sheet are appropriate, if applicable.	☒
Environmental impact assessment	The project participants conducted an environmental impact assessment, if required by the Republic of the Philippines, in line with Philippine procedures.	☒
Local stakeholder consultation	The project participants have completed a local stakeholder consultation process and that due steps were taken to engage stakeholders and solicit comments for the proposed project.	☒
Monitoring	The description of the Monitoring Plan (Monitoring Plan	☒

Item	Validation requirements	No CAR or CL remaining
	Sheet and Monitoring Structure Sheet) is based on the approved methodology and/or Guidelines for Developing the Joint Crediting Mechanism (JCM) Project Design Document, Monitoring Plan, and Monitoring Report. The monitoring points for measurement are appropriate, as well as whether the types of equipment to be installed are appropriate if necessary.	
Public inputs	All inputs on the PDD of the proposed JCM project submitted in line with the Project Cycle Procedure are taken into due account by the project participants.	☒
Modalities of communications	The corporate identity of all project participants and a focal point, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories are included in the MoC.	☒
	The MoC has been correctly completed and duly authorized.	☒
Avoidance of double registration	The proposed JCM project is not registered under other international climate mitigation mechanisms.	☒
Start of operation	The start of the operating date of the proposed JCM project does not predate January 1, 2013.	☒

Authorised signatory:	Mr. ☒ Ms. ☐
Last name: R.B	First name: Venkataramanaiah
Title: Director	
Specimen signature: 	Date: 19/03/2024

B. Validation team and other experts

	Name	Company	Function*	Scheme competence*	Technical competence*	On-site visit
Mr. ☒ Ms. ☐	R. Vijayraghavan	EPIC Sustainability Services Pvt Ltd	Lead Auditor/ Team Leader	☒	Qualified	☐
Mr. ☒ Ms. ☐	Karthik Lakshman	EPIC Sustainability Services Pvt Ltd	Auditor/Team Member	☒	Qualified	☒
Mr. ☒ Ms. ☐	Ashwin Kumar K.V.	EPIC Sustainability Services Pvt Ltd	Internal Reviewer	☒	Qualified	☐
Mr. ☐ Ms. ☐				☐		☐

Please specify the following for each item.

- * *Function:* Indicate the role of the personnel in the validation activity such as team leader, team member, technical expert, or internal reviewer.
- * *Scheme competence:* Check the boxes if the personnel have sufficient knowledge on the JCM.
- * *Technical competence:* Indicate if the personnel have sufficient technical competence related to the project under validation.

C. Means of validation, findings, and conclusion based on reporting requirements

C.1. Project design document form

<Means of validation>

The initial version of the PDD version 1.0 dated 17/01/2024 (DD/MM/YYYY) was verified and confirmed as complete in accordance with the JCM guidelines for developing Project Design Document and Monitoring Report (JCM_PH_GL_PDD_MR_ver01.0). The latest version of the JCM PDD form is used (JCM_PH_F_PDD_ver01.0). A valid form of the JCM PDD Form as of the time of commencement of the public comment period, JCM_PH_F_PDD_ver01.0 was used. The completeness was also checked for the revised PDD Version 2.0 dated 19/03/2024 submitted by the PP.

<Findings>

Please state if CARs, CLs, or FARs are raised, and how they are resolved.

No outstanding issue was raised.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team confirmed that the PDD was completed using the valid form of the JCM PDD Form and in accordance with the JCM Guidelines for Developing PDD and MR.

C.2. Project description

<Means of validation>

The proposed JCM project activity "9.6MW Solar Power Project in Collaboration with Power-supply Company" aims to reduce the CO2 emission by installing 9.6 MWe Solar PV on the rooftops of the 20 sites. The customers of Manila Electric company(MERALCO, the only electricity distributor company in metro manila and the largest in the country) uses the electricity generated by the project activity. MSpectrum Inc., subsidiary of the MERALCO has installed over the rooftops of 20 buildings of the customers of MERALCO and supplies them with the renewable energy generated by the project activity. The location of the project sites are as below:

- Metro Drug: Puratero Santa Rosa, Laguna Philippines
- Xeland Marikina: Guerilla, cor Mayor Gil Fernando Ave, Marikina, 1800 Metro Manila
- Ateneo: President Carlos P. Garcia Ave, Quezon City, 1108 Metro Manila
- Xentro Mall Antipolo: 277-303 Sumulong Hwy, Antipolo, Rizal
- Vista Mall North Molino: Molino Boulevard, Bacoor, Cavite
- Vista Mall Vibal: Salawag, Dasmariñas, Cavite
- Vista Mall General Trias: Arnaldo Hwy, General Trias, Cavite
- Vista Mall Sliang: 87a Emilio Aguinaldo Hwy, Silang, 4118 Cavite
- Vista Mall Sta. Maria: Santa Maria, Bulacan
- Vista Mall Naga: Pan-Philippine Hwy, Naga, Camarines Sur
- KLT Fruits: 2nd St, Dasmariñas, Cavite
- Asian Terminals Batangas: Batangas Port Access Rd, Batangas
- ATI Manila: Muelle de San Francisco, Port Area, Manila, Metro Manila
- Alphatech Development: 202 Panginay Road 3015 Guiguinto, Bulacan
- LRT1: Engineering BLdg, LRT A Compound, Airport Rd, Pasay, Metro Manila
- Megamart Paniqui-1: Bayan ng Paniqui, Tarlac
- Vigan Central Park: Brgy. III, Quezon Ave, Vigan City, Ilocos Sur
- Gaisano Tubod Lanao Mall: Brgy. Poblacion, Tubod, Lanao Del Norte
- Xentro Mall Calapan: Roxas Dr, Calapan, Oriental Mindoro, Philippines
- Premiere Creative: 4th St, Dasmariñas, Cavite, Philippines

This project activity will contribute the Philippines to achieve its goal of using renewable energy sources by reducing CO2 emissions and promoting stability in the country's electrical supply as a target under the "National Renewable Energy Plan" which was unveiled in 2008.

The validation team conducted a desk review and an onsite assessment from 06th March 2024 to 07th March 2024 to validate the requirements about accuracy and the completeness of the project description. The details of the persons interviewed, and the documents reviewed are provided in the section E of this report.

The information regarding the location of the project sites and other description of the proposed project activity stated in the section A of the PDD were cross-checked through the physical onsite assessment and the follow-up interviews with the representatives of the entities of the project activity.

The first installation of the solar PV system was completed at the site of Xeland Marikina on 07th January 2021. The subsequent installation of solar systems were also completed at 19 project sites across Philippines by the end of 2022. Even though the first installation of the first Solar PV system was completed on 07th January 2021, the start date of the operation of the project activity is 1st July 2021, which is the first day of the generation of the first kW energy of the project sites(Metro Drug, Xeland Marikina, Ateneo, Xentro Mall Antipolo) and expected to have a lifetime about 17 years for all the sites as per the technical specifications of the solar PV.

The proposed JCM project activity is partially supported by the Ministry of Environment, Japan(MOEF) through the Financing Programme for JCM Model Projects, which provided financial support of less than half of the initial investment for the projects in order to GHG emission reduction project in Philippines and to acquire JCM credits. Contribution from Japan is described appropriately in the PDD.

As a result, the validation team determined that the description of the proposed JCM project in the PDD is accurate, complete and provides an understanding of the proposed JCM project activity.

<Findings>

Please state if CARs, CLs, or FARs are raised, and how they are resolved.

No outstanding issue was raised.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team concludes that the description of the proposed project in the revised PDD complies with the supporting documents and information obtained through the desk review and the interview with the PP, and the description is accurate and complete.

C.3. Application of approved methodology(ies)

<Means of validation>

The project activity applies the approved JCM methodology PH_AM002 version 1.0. "Installation of the Solar PV System" (hereinafter, the methodology).

The methodology was approved on 02 Feb 2020, it is confirmed that the applied methodology is the latest and the valid version used at the time of submission of the project for the validation process.

The validation team evaluated the applicability of the applied methodology for the proposed JCM project. The project activity's applicability was validated in comparison to the three eligibility requirements outlined in the approved methodology. The steps taken to validate each eligibility criterion and the conclusion about its applicability to the proposed JCM project are summarized as below:

Criterion 1: "The project installs solar PV system(s)".

Project Information: The solar PV systems are installed on the rooftops of 20 buildings

Validation Opinion:

The project activity is an installation of solar PVs on the rooftops of the 20 different project site which is confirmed during the onsite visit and with the document review of the technical specifications of the solar PVs, Power supply agreement of each project site etc.

Criterion 2: "The PV modules are certified for design qualifications (IEC 61215, IEC 61646 or IEC 62108) and safety qualification (IEC 61730-1 and IEC 61730-2)".

Project Information: The PV modules installed by the proposed project are certified for IEC 61215 and IEC 61730.

Validation Opinion:

The validation team confirms that the used solar PVs in the proposed project activity are certified for design qualifications of IEC 61215 and safety qualification of IEC- 61730. This is verified during the onsite visit and confirmed with the document review of the technical specifications of the solar PVs, certificate issued by TUV SUD which authorises the manufacturer of the solar PVs to use design qualification IEC- 61215 and safety qualification IEC- 61730.

Criterion 3: "The equipment to monitor output power of the solar PV system(s) and irradiance is installed at the project site."

Project Information: The equipment to monitor output power of the solar PV systems and irradiance are installed at the proposed project sites.

Validation Opinion:

The validation team confirms that the equipment to monitor the output power of the solar PV system(s), (i.e., the electricity meter and the pyranometer) and irradiance is installed at the project site which is confirmed during the onsite visit. The monitoring of the solar plant is done with the help of fusion solar software.

<Findings>

Please state if CARs, CLs, or FARs are raised, and how they are resolved.

No outstanding issue was raised.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team concludes that the proposed project is eligible for applying the valid version of the approved methodologies JCM_PH_AM002 ver 01.0 and all eligibility criteria have been met by the proposed project.

C.4. Emission sources and calculation of emission reductions

<Means of validation>

The proposed project activity aims to reduce the CO₂ emissions emitted by the fossil fuel-based power plants which are connected to national grid of Philippines by installing Solar PV on the roof tops of the 20 project sites. The energy generated from the project activity is consumed by the customers of MERALCO which replaces the same amount of the electricity used from the grid.

It is confirmed through the desk review and the onsite visit that the emission sources and GHGs, which are described in the PDD, are in line with the evidential documents properly. It is also confirmed through on-site inspection that they are corroborated as below,

As illustrated in the PDD, the proposed JCM project includes Solar PV modules, Monitoring system, inverters, and the corresponding monitoring point (electricity meters).

Reference emissions(REp) are sourced from the consumption of the grid electricity and project emissions are sourced from the generation of the electricity from the solar PV system.

Reference emissions(REp) are calculated on the basis of the AC output of the solar PV system multiplied by the conservative emission factor of the grid electricity, which is expressed in the equation (1), in accordance with the methodology applied JCM_PH_AM002.:

$$REp = \sum (EGi,p \times EFRE) \quad \text{----- (1)}$$

Where:

REp = Reference Emissions during the period p (tCO₂/p)

EGi,p = Quantity of the electricity generated by the project solar PV system i during the period p (MWh/p)

$EFRE$ = Reference CO₂ emission factor of grid electricity and/or captive electricity (tCO₂/MWh)

The value of the $\sum EGi,p$ is the sum of electricity generated by the solar PV system at 20 project sites. The quantity of electricity generated at each site is estimated ex – ante by using the pyranometer based on solar irradiance data.

As the sites in the proposed project activity consumes grid electricity, the CO₂ emission factor of the Philippines grid is used in the calculation of reference emissions. The project activity is connected to an Internal grid connecting to both regional grid and a captive power generator, it falls under “Emission factor for Case 2”. In order to calculate the reference emissions conservatively, the applied methodology JCM_PH_AM002 requires to use the “Emission factor for Case 2” which is :

Regional grid name:	Emission factor for Case 2:
Luzon-Visayas	0.507 tCO ₂ /MWh
Mindanao	0.468 tCO ₂ /MWh

It is confirmed through the review of the relevant documents and the interviews with PPs that the project-specific parameters to be fixed ex-ante such as $EFRE$ is correctly applied in the calculation of reference emissions.

Project emissions are the emissions from the solar PV system, which are assumed to be zero as per the methodology. Hence, the project emissions are expressed Equation 2:

$$PE = 0 \quad \text{----- (2)}$$

Where:

PEp : Project emissions during the period p (tCO₂/p)

Thus, the GHG emission reductions during the period p are calculated by Equation (3), in line with the applied methodology:

$$\begin{aligned} ERp &= REp - PEp \\ &= REp \end{aligned} \quad \text{----- (3)}$$

Where:

ERp = Emission reduction during the period p (tCO₂/p)

REp = Reference emissions during the period p (tCO₂/p)

PEp = Project emissions during the period p (tCO₂/p)

As a result, the annual emission reductions are calculated as follows:

$$ERp = REp - PEp$$

$$= \sum (EG_{i,p} \times EFRE)$$

As there are two different regional grids involved in this project,

EFRE (Luzon-Visayas Grid) = 0.507 (19 project sites)

EFRE (Mindanao Grid) = 0.468 (1 project site- Gaisano Tubod Lanao Mall)

$$ER_p = 12,493.6 \times 0.507 + 638.2 \times 0.468$$

$$= 6,334 + 298$$

$$= 6,632 \text{ tCO}_2\text{e.}$$

The GHG annual emission reduction are estimated to be 6,632 tCO₂e and the sum of the emission reductions for the period 2021 to 2040 is estimated to be 111,137 tCO₂e.

The validation team confirms that through the review of the relevant documents and the interview with the PP, that all the GHG emission sources specified by the applied methodology are identified, and the reference emission (RE_p), project emissions(PE_p) and emission reductions(ER_p) in the PDD version 2.0 dated 19/03/2024 and the Monitoring Plan Sheet are correctly calculated, in accordance with the methodology PH_AM002 version 1.0.

<Findings>

Please state if CARs, CLs, or FARs are raised, and how they are resolved.

No outstanding issue was raised.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team confirms that the all the emission sources and GHG types specified in the applied methodology are appropriately identified. The validation team concludes that the value of the parameter to be monitored ex-post in the MPS(Monitoring Plan sheet) ($\sum EG_{i,p}$) is correctly estimated based on the total quantity of electricity generated by the proposed project and the value for the project-specific parameter to be fixed ex-ante listed in the MPS (EFRE) is also correctly determined as per the methodology. In addition, the equations to calculate reference emissions, project emissions and emission reductions for the proposed project are appropriately derived and the annual emission reductions are correctly calculated using the parameters and data in the MPS.

C.5. Environmental impact assessment

<Means of validation>

The proposed JCM project activity is an installation of 9.6 MW Solar PV on the rooftops of the 20 sites, each site with a capacity of less than 1 MW each which is confirmed through the desk review of the technical specification, commissioning certificates and during the onsite inspection.

The PDD states that the Environmental Impact Assessment is not required, which is accepted

by the validation team as it complies with the “Revised Guidelines for Coverage Screening and Standardized Requirements in the Philippines EIS System”. As per the guidelines, the project falls under Category D, because each of the solar PVs capacity in the project activity is less than the capacity of 1 MW, which does not require Environmental Impact Assessment.

<Findings>

Please state if CARs, CLs, or FARs are raised, and how they are resolved.

No outstanding issue was raised.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The Validation team concludes that the proposed project does not require an EIA. The implementation of the proposed project activity is in line with the “Revised Guidelines for Coverage Screening and Standardized Requirements in the Philippines EIS System”. Thus, it meets the host country requirements and the PDD satisfies the requirements of the JCM.

C.6. Local stakeholder consultation

<Means of validation>

As per the “Revised Guidelines for Coverage Screening and Standardized Requirements in the Philippines EIS System”, the project activity does not require an EIA assessment as each Solar PV falls under 1 MW, so local stakeholder consultation was carried out in accordance to JCM requirements as described in the PDD.

By reviewing the relevant documents and the interview with the PP, the validation team confirms following:

- The LSC for the project activity was held on 29th September 2023,
- The organisation participated in LSC are provided in the PDD.
- The summary of the comments received is provided in the PDD.
- The local stakeholder provided no negative comments and no issues were raised

regarding the project activity during the LSC.

As a result, it is found that, no other stakeholders excluding MERALCO were invited for the LSC, as issue was raised regarding the same.

<Findings>

Please state if CARs, CLs, or FARs are raised, and how they are resolved.

CAR 1: Based on the review of the LSC report and the submitted PDD, it is found that only Manila Electric Railroad and Light Company (MERALCO) was invited to the local stakeholder consultation and no other local stakeholders were invited including the representatives of the sites. PP to clarify on this regard.

<PP response to the issue>

- It is not realistic to invite all the owners of sites.
- We have a good relationship with the owners of sites, as we have a contract that includes O&M.
- MSpectrum's parent company, MERALCO, supplies electricity to the owners of sites from the grid, and the relationship is good.
- We have explained JCM and project operations to them, and they understood this project well.

<Assessment on PP response>

Based on the Agreements between the PP and the owner of the sites, and the interviews with the PP and the owners, it is found that the owners of the project sites have the knowledge about the project activity. The interviews with the project site owners revealed that there is no issue with the project activity installed on the project sites. The Validation team is of the opinion that the explanation provided by pp is acceptable as it meets the requirement.

Hence, CAR1 is closed.

<**Conclusion based on reporting requirements**>

Please state conclusion based on reporting requirements.

The validation team concludes that the LSC has been conducted as per JCM requirements and the comments have been invited on the proposed project activity from the local stakeholder. The summary of the comments received is provided in the PDD and the PP has taken due account of all the considered and described in the PDD.

C.7. Monitoring

<**Means of validation**>

The Monitoring plan consists of the monitoring plan sheet and the Monitoring structure sheet which comply with the applied methodology JCM_PH_AM002 version 1.0. The monitoring parameter, i.e., total quantity of electricity generated by the project activity during the period p ($\sum E_{Gi,p}$), is measured by the electricity revenue meters. The monitoring point of the electricity generation is located at the right position after the inverters. The measured data will be automatically transmitted via cloud system to the PC server at MSpectrum, Inc for recording.

The electricity meters are designed to comply with the IEC62053-22 and IEC62053-23 and the accuracy class is 0.2S. The electricity meters are calibrated according to the procedures of National Energy regulatory Commission every two years based on the official announcement. (ERC resolution 12-09)

The roles and responsibilities of the personnel described in the Monitoring Structure Sheet. The

Monitoring structure consists of Project Manager(Tokyo Century Corporation), Deputy Project Manager(MSpectrum, Inc.), QA/QC Manager(MSpectrum, Inc.) and Operator(MSpectrum, Inc.). Project Manager is responsible for the project implementation and the preparation of monitoring report, Deputy Project Manager is for the confirmation of recorded data and archived data, QA/QC Manager is responsible for checking the archived data for irregularity and the calibration of the monitoring equipment and the Operator is responsible for inclusion of the monitored data into the spreadsheet.

It is confirmed through the review of the relevant documents and the interview with the PP, that the monitoring plan complies with the requirements of the applied methodology and the PP are able to implement the monitoring activity appropriately according to the monitoring plan.

<Findings>

Please state if CARs, CLs, or FARs are raised, and how they are resolved.

No outstanding issue was raised.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team concludes that the description of the Monitoring plan is based on the approved methodology and JCM Guidelines for developing project design document and monitoring report, and the monitoring point as well as the monitoring equipment for measurements are also appropriate. Thus, the PP has demonstrated feasibility of the monitoring structure and their abilities to implement the monitoring activity appropriately.

C.8. Modalities of Communication

<Means of validation>

The Modalities of Communication (MoC) was submitted to EPIC for review on 30/01/2024, in the valid form JCM_PH_F_MoC_ver01.0 at the time of validation, in which the Tokyo Century Corporation is nominated as the focal point. The MoC was signed by the authorised representatives of MSpectrum, Inc. on 30/01/2024 and Tokyo Century Corporation on 30/01/2024, along with the contact details.

It is confirmed through the check of business cards and the interview with the PP that all corporate and personal details including specimen signatures and the information in the MoC are valid and accurate as requested in the JCM Guidelines for Validation and Verification.

<Findings>

Please state if CARs, CLs, or FARs are raised, and how they are resolved.

No outstanding issue was raised.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The Validation team concludes that the MoC is completed using the valid version of the form, and the information and the specimen signature of the PPs provided in the MoC are correct and sufficient, in compliance with the requirements of JCM guidelines. It is demonstrated that the MoC is correctly completed and dully authorised.

C.9. Avoidance of double registration

<Means of validation>

The validation team confirms that through the review of the relevant website (UNFCCC, GS, etc.,) that the proposed JCM project activity either has not been registered or applied under any other international climate mitigation mechanism. Also, the written confirmation of the avoidance of the double registration was provided through the signed MoC, and was cross-verified through interview with the project participant.

Thus, it can be concluded that the proposed project will not result in double counting of GHG emission reductions.

<Findings>

Please state if CARs, CLs, or FARs are raised, and how they are resolved.

No outstanding issue was raised.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team concludes that the proposed project is not registered under any other international climate mitigation mechanisms and hence will not result in double counting of GHG emission reductions.

C.10. Start of operation

<Means of validation>

As per the PDD, the start date of the proposed JCM project is 01st July 2021. The validation team confirms that through the review of commissioning certificates, the onsite inspection and the interview with the PP.

The start date of the operation of the proposed JCM project is 01st July 2021, which does not predate the 01st January 2013.

<Findings>

Please state if CARs, CLs, or FARs are raised, and how they are resolved.

No outstanding issue was raised.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

The validation team concludes that the starting date of project operation is set as 01st July 2021 and does not predate 01st January 2013 as required by the Guideline of the JCM project.

C.11. Other issues

<Means of validation>

No other issue was identified.

<Findings>

Please state if CARs, CLs, or FARs are raised, and how they are resolved.

Not applicable.

<Conclusion based on reporting requirements>

Please state conclusion based on reporting requirements.

Not applicable.

D. Information on public inputs

D.1. Summary of public inputs

The PDD of the proposed JCM project, which is submitted inline with the project cycle procedure, was made publicly available through the JCM website for Public Inputs. The public commenting period was from 01st February 2024 to 01st March 2024.

<https://www.jcm.go.jp/ph-jp/projects/118>

There were no public inputs were received.

D.2. Summary of how inputs received have been taken into account by the project participants

Not Applicable.

E. List of interviewees and documents received

E.1. List of interviewees

S.no	Name of the Interviewee	Designation
1.	Precious King Somoray	Deputy Project Manager - MSpectrum, Inc.
2.	Myca Catapany	QA/QC Manager - MSpectrum, Inc.
3.	Edward Shan Esanosa	Operator - MSpectrum, Inc.
4.	Htet Aung Shine	Project Manager- Tokyo Century Corporation
5.	Shintaro Higashi	Consultant – NTT Data IOMC

E.2. List of documents received

S.no	Document
1	PDD, ver 01.0, dated 17/01/2024 PDD, ver 02.0 dated 19/03/2024
2	Monitoring spreadsheet version 01.0
3	JCM MoC form dated 30/01/2024.
4	JCM Approved methodology (JCM_PH_AM002_ver01.0)
5	JCM Glossary of Terms (JCM_PH_Glossary_ver01.0)
6	JCM Project Cycle Procedure (JCM_PH_PCP_ver01.0)
7	JCM Project Design Document Form (JCM_PH_F_PDD_ver01.0)
8	JCM Guidelines for Developing Project Design Document and Monitoring Report (JCM_PH_GL_PDD_MR_ver01.0)
9	JCM Validation Report Form (JCM_PH_F_Val_Rep_ver01.0)
10	JCM Guidelines for Validation and Verification (JCM_PH_GL_VV_ver01.0)
11	Calibration certificates of the meters.
12	Records of the measured data.
13	Technical specifications of the Solar PVs i. Canadian Solar ii. Shanghai JA Solar Technology Co. Ltd iii. Jinko Solar Co. Ltd iv. Sun power Corporation
14	Technical specifications of the meters
15	Ownership of the project
16	Maintenance schedule plan
17	Certificate of design and safety qualification of the solar PVs-TUV SUD
18	Power purchase agreement signed between the MSpectrum and Site owners.
19	Document supporting the contribution of the Ministry of Environment, Japan dated September 25, 2019
20	Commissioning certificates of all the project sites .
21	Agreement signed between MSpectrum, Inc and Tokyo century Corporation dated 12th September 2019.
22	Source of irradiance data.
23	Copies of Business cards and signatures of the personnel in the MoC

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Annex Certificates or curricula vitae of TPE's validation team members, technical experts and internal technical reviewers

Please attach certificates or curricula vitae of TPE's validation team members, technical experts and internal technical reviewers.

Vijayraghavan R. (Mr), holds BE in Mechanical Engineering, M.Tech in Energy Conservation and Management and MBA in Technology Management. He has around 15 years of industry experience and is qualified as a lead auditor for sectoral scope 1, 7 and 13 in various GHG / Energy reduction project audits in various countries under various standards and protocols.

Karthik Lakshman(Mr), holds a B.E in Mechanical Engineering. He has two years of industry experience. He is qualified as an auditor for various GHG / Energy reduction project audits in various countries under various standards and protocols.

Ashwin Kumar K. V.(Mr), holds a B.E in Mechanical Engineering. He has 11 years of industry experience and is qualified as an auditor for various GHG / Energy reduction project audits in various countries under various standards and protocols.