JCM Project Design Document Form

A. Project description

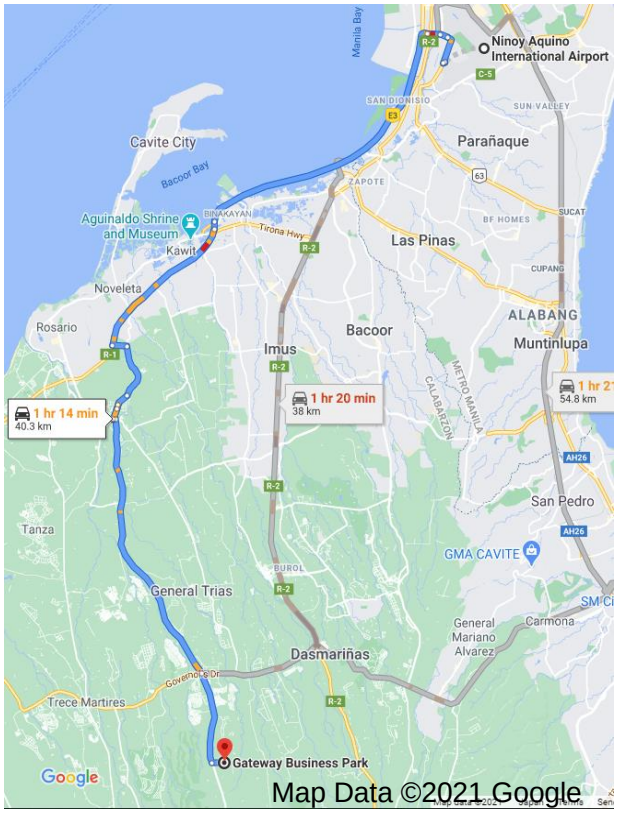
A.1. Title of the JCM project

Introduction of 1.53MW Rooftop Solar Power System in Auto Parts Factories

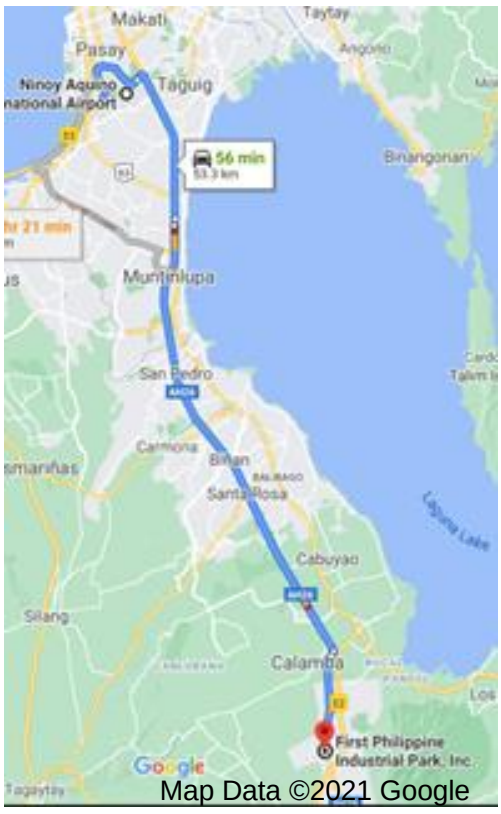
A.2. General description of project and applied technologies and/or measures

The proposed project aims to contribute to Philippines' sustainable development through the use of renewable energy and reduction in greenhouse gases (GHG) by introduction of rooftop 1.53MW solar photovoltaic facility to auto parts factories of Enomoto Philippine Manufacturing Inc. (EPMI) located in PEZA-Gateway Business Park Javalera, Gen, Cavite, Philippines and Aikawa Philippines Inc. (API) located First Philippine Industrial Park, SEZ, Brgy. Sta. Anastacia, Sto. Tomas, Batangas 4234, Philippines. (Figure 1 below shows the project location).

Figure 1: Project locations



Enomoto Philippines, Inc.



Aikawa Philippines, Inc.

The electricity produced by the solar PV facility will replace part of the electricity consumption from the grid and will be fully utilized for own consumption of two manufacturing facility within

the project site. The expected emission reduction that would be achieved by the proposed project is 9,549 tCO_2 until May 2027. Actual emission reduction may vary depending on the actual operation of the power plant and the sun radiation in the area throughout the year.

A.3. Location of project, including coordinates

Country	The Republic of the Philippines
Region/State/Province etc.:	EPMI: PEZA-Gateway Business Park Javalera, Gen, API: First Philippine Industrial Park, SEZ, Brgy. Sta. Anastacia, Sto. Tomas
City/Town/Community etc:	EPMI: Cavite API: Batangas
Latitude, longitude	EPMI: Latitude: N 14°15' 26.8" Longitude: E 120° 55' 12.1" API: Latitude: N 14° 08' 13.3" Longitude: E 121° 07' 41.2"

A.4. Name of project participants

The Republic of the Philippines	Enomoto Philippine Manufacturing Inc. (EPMI) Aikawa Philippines Inc. (API)
Japan	Tokyo Century Corporation

A.5. Duration

Starting date of project operation	04/06/2018
Expected operational lifetime of project	9 years

A.6. Contribution from Japan

The proposed project was partially supported by the Ministry of the Environment, Japan (MOEJ) 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 acquire JCM credits. Further, implementation of the proposed project promotes technology transfer of low carbon power generation technologies within the Philippines. Through the MOEJ program, know-hows on operation and monitoring of solar power generation are transferred to the project sites.

B. Application of an approved methodology(ies)

B.1. Selection of methodology(ies)

Selected approved methodology No.	JCM_ PH_AM002
Version number	Version01.0

B.2. Explanation of how the project meets eligibility criteria of the approved methodology

Eligibility criteria	Descriptions specified in the methodology	Project information
Criterion 1	The project installs solar PV system(s).	The proposed project installs a new solar PV system.
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).	The PV modules installed in the proposed project are certified for design qualifications (IEC 61646) and safety qualification (IEC 61730 (JET/TUV)).
Criterion 3	The equipment used for monitoring output power of the solar PV system(s) and irradiance is installed at the project site.	The equipment to monitor output power of the solar PV system(s) and irradiance is installed at the proposed project site.

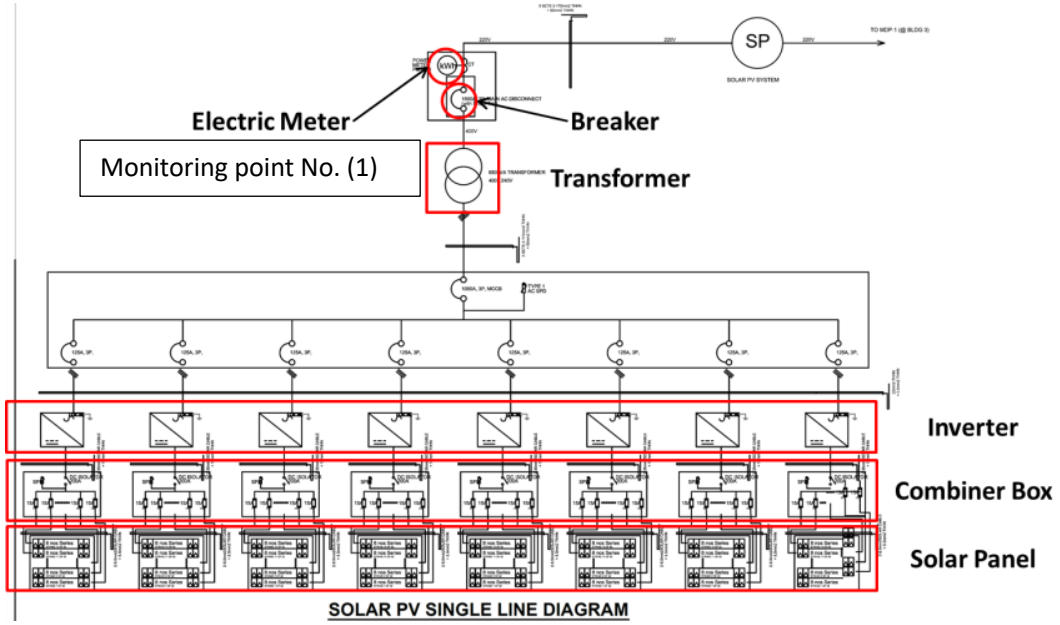
C. Calculation of emission reductions

C.1. All emission sources and their associated greenhouse gases relevant to the JCM project

Reference emissions	
Emission sources	GHG type
Consumption of national grid electricity and/or captive electricity	CO_2
Project emissions	
Emission sources	GHG type
Generation of electricity from the solar PV system(s)	N/A

C.2. Figure of all emission sources and monitoring points relevant to the JCM project

The same structure is used for API factory and Buildings 1, 2, and 3 of EPMI Factory as shown below.



C.3. Estimated emissions reductions in each year

Year	Estimated Reference emissions (tCO_2e)	Estimated Project Emissions (tCO_2e)	Estimated Emission Reductions (tCO_2e)
2018 (7 months)	613.7	0	613
2019	1,061.7	0	1,061
2020	1,061.7	0	1,061
2021	1,061.7	0	1,061
2022	1,061.7	0	1,061
2023	1,061.7	0	1,061
2024	1,061.7	0	1,061
2025	1,061.7	0	1,061
2026	1,061.7	0	1,061
2027 (5 months)	448.0	0	448
Total (tCO_2e)			9,549

D. Environmental impact assessment	
Legal requirement of environmental impact assessment for the proposed project	No

E. Local stakeholder consultation

E.1. Solicitation of comments from local stakeholders

As part of JCM process, the project participants held a local stakeholder consultation meeting in order to take due steps to engage stakeholders and solicit comments for the proposed project. Details of the local stakeholder consultation meeting is summarized as follows:

Date and Time: Tuesday, 16 October 2018, 09.00 – 13.00
Venue: TDG in.hub Building, AFPRSBS Industrial Park
Address: Km. 12, East Service Road cor. C-5, Western Bicutan, Taguig City, Philippines
The following public and private entities have been identified as stakeholders and invitations were provided through letter or e-mail followed up by telephone calls.

1	Philippines JCM Secretariat (Environmental Management Bureau of Philippines)
2	Metropac Movers Inc.
3	Mayekawa Philippines Corporation
4	Engie Services Philippines
5	EMD Technologies Philippines Inc.
6	TeaM Energy Corporation
7	Sumitomo Mitsui Banking Corporation
8	Mizuho Bank, Ltd.
9	Bank of the Philippine Islands
10	Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.
11	NNA Philippines Co., Inc.
12	Aikawa Philippines Inc.
13	Enomoto Philippine Manufacturing Inc.
14	Magsaysay Transport & Logistics
15	Magsaysay Shipping & Logistics
16	Transnational Uyeno Solar Corporation
17	Uyeno Green Solutions Ltd.

18	Joint Research & Development Corporation

The total of 29 stakeholders from the invited public and private entities attended the meeting with the following agenda:

- Opening remarks and Introduction by project participants
- "Progress of Joint Crediting Mechanism (JCM) in Philippines" by Philippines JCM Secretariat
- "Project Outline" by Tokyo Century Corporation
- "Project Technology" by Transnational Uyeno Solar Corporation
- MRV (Monitoring, Reporting, and Verification) of the projects" by Mitsubishi UFJ Morgan Stanley Securities, Co., Ltd. (MUMSS)
- "Project Outline and Company Profiles" by Enomoto Philippine Manufacturing (EPMI) and Aikawa Philippines.
- Q &A
- Closing remarks by BPI Century Tokyo Lease & Finance Corporation

There were no negative comments toward the proposed project expressed during the stakeholders meeting by the attendees. The project was well received by all the stakeholders attended. For those who were invited but were not available to attend the meeting, the project participants sent presentation materials used during the meeting, requesting them to send their comments, if any. Comments were solicited via ordinary mail and e-mail but no further comments have been received.

E.2. Summary of comments received and their consideration

Stakeholders	Comments received	Consideration of comments received
MAYEKAWA PHILIPPINES CORPORATION	Is the JCM limited for installing solar panels? Can it be applied to other equipment such as eco-green machinery or carbon free equipment?	JCM can be applied to other materials and not limited to solar system. However, we have to establish the methodology of how much GHG or CO_2 can be reduced by installing the machines. (No action is needed.)

F. References

N/A

Reference lists to support descriptions in the PDD, if any.

Annex
N/A

Revision history of PDD		
Version	Date	Contents revised
01.0	06/01/2021	First Edition
02.0	20/04/2021 04/11/2021	Second Edition Initial registration by the Joint Committee through electronic decision