JCM Project Design Document Form

A. Project description

A.1. Title of the JCM project

Introduction of 1MW Rooftop Solar Power System in Vehicle Assembly Factory

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

The proposed project aims the reduction of CO_2 emission by installing approximately 1MW solar photovoltaic (PV) system on the rooftop of the vehicle assembly factory of Toyota Motor Philippines Corporation (TMP), the largest automotive company in Philippines, located at the City of Santa Rosa in the Province of Laguna. The generated electricity from the project will be utilized within the vehicle assembly factory, partially replacing the grid electricity currently consumed at the factory. In the future, when the generated electricity exceeds factory's demand, the excess electricity may be fed into the grid.

A.3. Location of project, including coordinates

Country	Republic of the Philippines
Region/State/Province etc.:	Laguna
City/Town/Community etc:	City of Santa Rosa
Latitude, longitude	Latitude: N14°16'18.7" Longitude: E 121°04'42.2"

A.4. Name of project participants

The Republic of the Philippines	Toyota Motor Philippines Corporation
Japan	Toyota Motor Corporation

A.5. Duration

Starting date of project operation	4/1/2019
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 program 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 diffusion of low carbon technologies within Philippines.

B. Application of an approved methodology(ies)

B.1. Selection of methodology(ies)

Selected approved methodology No.	JCM_PH_AM002
Version number	Ver01.0

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

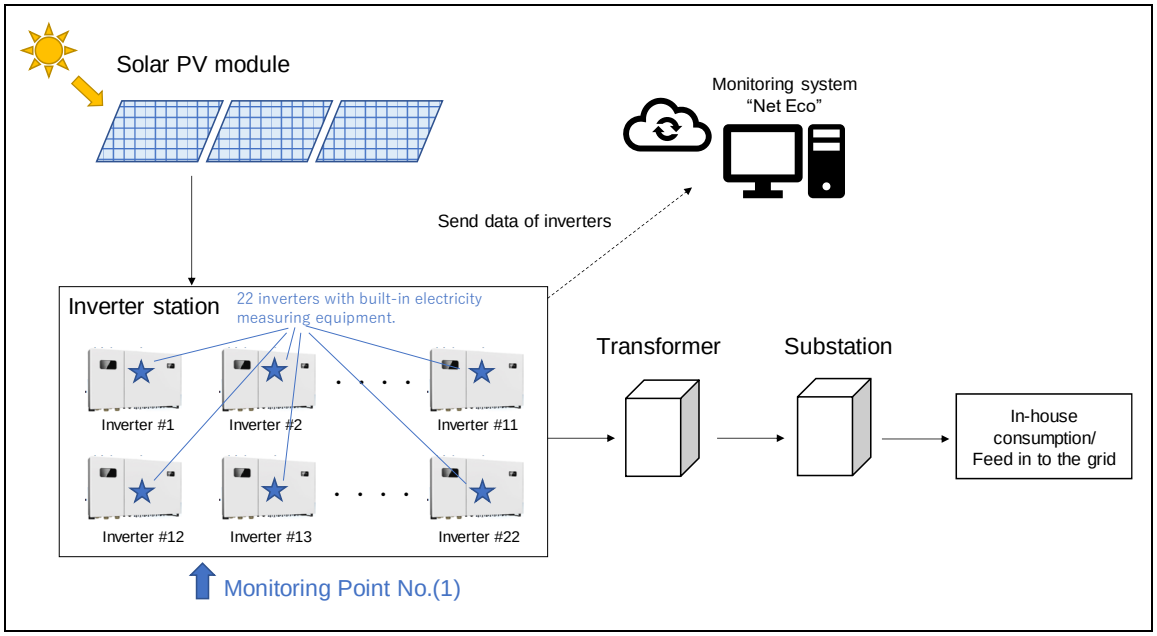
Eligibility criteria	Descriptions specified in the methodology	Project information
Criterion 1	The project installs solar PV system(s).	The project installs solar PV system.
Criterion 2	The PV modules are certified for design qualifications (IEC 61215, IEC 61646 or IEC 62108) and safety qualification (IEC 61730-1 and IEC 61730-2).	The PV modules installed by the proposed project are certified for IEC 61215 and IEC 61730.
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



C.3. Estimated emissions reductions in each year

Year	Estimated Reference emissions (tCO_2e)	Estimated Project Emissions (tCO_2e)	Estimated Emission Reductions (tCO_2e)
2013	-	-	-
2014	-	-	-
2015	-	-	-
2016	-	-	-
2017	-	-	-
2018	-	-	-
2019	670.4	0.0	670
2020	675.7	0.0	675
2021	675.7	0.0	675
2022	675.7	0.0	675
2023	675.7	0.0	675
2024	675.7	0.0	675
2025	675.7	0.0	675
2026	675.7	0.0	675
2027	675.7	0.0	675
2028	5.2	0.0	5
2029	-	-	-

2030	-	-	-
Total (tCO_2e)			6,075

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

To solicit comments from the local stakeholders, the project participant conducted a local stakeholders consultation meeting as follows:

- Date /Time: 22 November 2018, 13:15-16:00
- Venue: Toyota Motor Philippines Corporation, Toyota Special Economic Zone, Santa Rosa-Tagaytay Highway, Santa Rosa City, Laguna 4026, Philippines
- Attendees (total 32 representing the following organizations):
  -Environmental Management Bureau of Department of Environment and Natural Resources (EMB-DENR, JCM secretariat from the Philippine side)
  -Toyota Motor Philippines Corporation (TMP, project participant, project site)
  -Toyota Aisin Philippines Corporation (TAP, an affiliate of TMP)
  -Spectrum Inc. (design and construction of the project facility)
  - Toyota Motor Corporation (TMC, project participant)
  - Toyota Daihatsu Engineering & Manufacturing (TDEM, an affiliate of TMC)
  - Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.
- Meeting agenda
  - Opening remarks
  - JCM in Philippines
  - Project outline and project technology
  - MRV of the project
  - Q & A
  - Closing remark

Received comments from the local stakeholders, along with the responses/action to the comments, are listed in the following section.

E.2. Summary of comments received and their consideration

Stakeholders	Comments received	Consideration of comments received
TMP	Is it safe to work underneath the PVC structure?	Prior to installation of the PVC modules on roof top, the building was retrofitted to reinforce the durability. The structure of the factory building is now sufficiently durable to support the PVC structure. As such, the safeties of workers are ensured. No further action required.
TDEM	What kind of activity that TMP need to prepare for the validation activity?	For JCM validation, the third-party entity (TPE) will check if the project is conducted as planned in the PDD, in which the proposed project is outlined. As the project participant, TMP is expected to host a site visit by the TPE, providing additional information requested by the TPE regarding the JCM project. No further action required.
TMP	TMP has a potential of additional 3MW solar power generation capacity. If TMP were to build the additional capacity without JCM, is it possible to sell the carbon credit from the additional capacity to Japanese government or Philippine government?	So far there is no assistance scheme for Japanese government to purchase JCM credit from participants of host countries. The additional 3 MW solar power project may be eligible to apply for JCM model project for the next round. No further action required.
TAP	In the presentation by EMB-DENR, there was some waste management project receiving JCM subsidy. Is there any chance for TAP to receive financial support for our waste management project?	It will be depending on the type of waste and the methodology to quantify the GHG emission reduction through waste management. So far there is no JCM methodology available for waste management project in Philippines. You may need to develop a methodology. No further action required.

TAP	Where can we find the guidelines regarding the JCM activity?	There is a website where all JCM related information, including guidelines and the methodologies, can be found as follows: https://www.jcm.go.jp/ph-jp/rules_and_guidelines Note that the information on the website is updated from time to time. No further action required.

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	11/09/2020	First edition
02.0	22/03/2021	Second edition
03.0	13/09/2021 09/04/2023	Third edition Initial registration by the Joint Committee through electronic decision