JCM Project Design Document Form

A. Project description

A.1. Title of the JCM project

Introduction of Solar PV System at shopping mall in Ho Chi Minh

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

The proposed JCM project aims to reduce CO_2 emissions in Viet Nam by introducing a total of 320kW power conditioning system and 366.18kW(for rated capacity of module panel) grid-connected solar photovoltaic (PV) modules on the roofs of car parking area and bicycle parking area of shopping mall in Ho Chi Minh.

The PV system in a proposed project activity is connected to an internal grid which is connected to both the national grid and a captive power generator. The solar PV systems replace electricity mostly derived from fossil-fuel and they contribute to greenhouse gas emissions reduction in Viet Nam. All electricity generated by the solar PV systems is self-consumed and not fed into the grid.

A remote monitoring system to monitor the performance of the system is also installed.

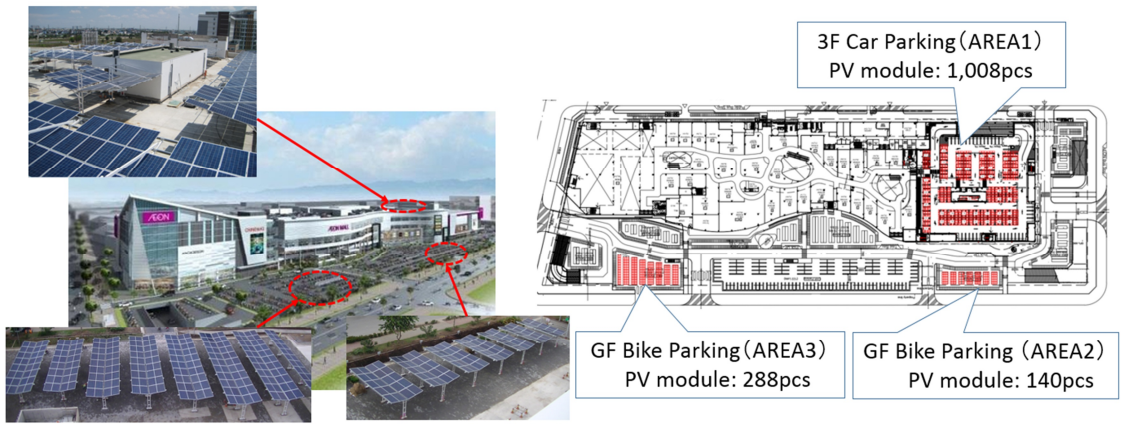

Figure 1: Location of solar photovoltaic (PV) modules

A.3. Location of project, including coordinates

Country	The Socialist Republic of Vietnam
Region/State/Province etc.:	Lot PT1, Hi-tech Healthcare Park, 532A Kinh Duong Vuong, Binh Tri Dong B ward, Binh Tan District
City/Town/Community etc:	Ho Chi Minh City
Latitude, longitude	10° 44' 34.4" N 106° 36' 41.9" E

A.4. Name of project participants

The Socialist Republic of Viet Nam	AEON VIETNAM CO., LTD.
Japan	AEON RETAIL CO., LTD.

A.5. Duration

Starting date of project operation	01/07/2016
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.

As for technology transfer, capacity building on operation and monitoring has been provided by AEON RETAIL CO., LTD. together with the supplier of solar photovoltaic (PV) systems.

B. Application of an approved methodology(ies)

B.1. Selection of methodology(ies)

Selected approved methodology No.	VN_AM007
Version number	Ver1.0

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 newly installs solar PV system(s).	The solar PV systems are newly installed on to the rooftops of shopping mall in Ho Chi Minh.
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 module installed in the project have been certified for IEC61215, IEC61730-1,IEC61730-2.
Criterion 3	The equipment to monitor output power of the solar PV system(s) and irradiance is installed at the project site.	Electricity meters and pyranometer have been installed at the project site to monitor output power and irradiance respectively.

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

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

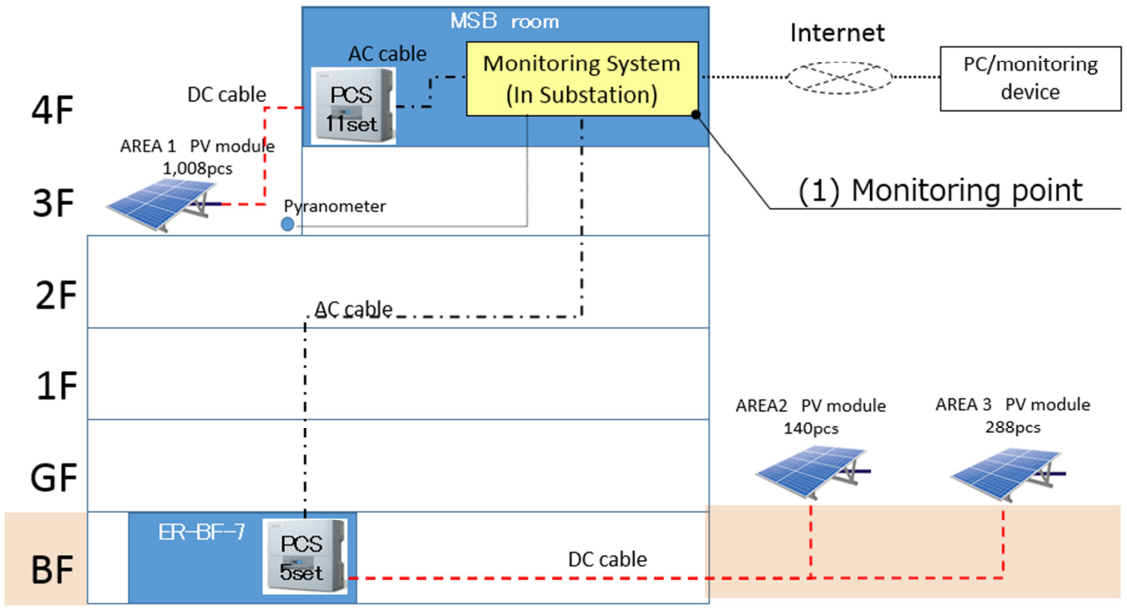

Figure 2: Monitoring Point

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	62.8	0	62
2017	125.6	0	125
2018	125.6	0	125

2019	125.6	0	125
2020	125.6	0	125
Total (tCO_{2e})	565.2	0	562

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

The main stakeholders of the project are people working at the project sites. In order to collect comments from these stakeholders, the project participants held a stakeholder meeting.

Date and time	Venue	Participants
5th-Sep-2017 13:30 – 15:00	Meeting room in AEON MALL Bình Tân	Managers of AEON VIETNAM CO., LTD. and Engineers of EPC companies

E.2. Summary of comments received and their consideration

Stakeholders	Comments received	Consideration of comments received
AEON VIETNAM CO., LTD.	What is the reason of difference of power generation between expected value and actual value?	Actual power generation value depends on actual solar radiation value. Participants confirmed that actual power generation value and actual solar radiation value have a positive correlation. (No action is needed.)

F. References

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

Annex

Revision history of PDD		
Version	Date	Contents revised
01.0	08/11/2017	First edition