JCM Project Design Document Form

A. Project description

A.1. Title of the JCM project

Introduction of Ultra-lightweight Solar Panels for Power Generation at International School

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

The proposed JCM Project aims to reduce emissions of greenhouse gas (GHG) by introducing a state-of-the-art solar power generation systems with the generating capacity of 200kW on the rooftop at the International School in ING City in Phnom Penh. The photovoltaic module of Asahi Glass Co. (Lightjoule) adopts the chemically strengthened specialty glass, and makes its weight 50% lighter than conventional type.

The solar power generated by the system is self-consumed and replaces the existing grid electricity.

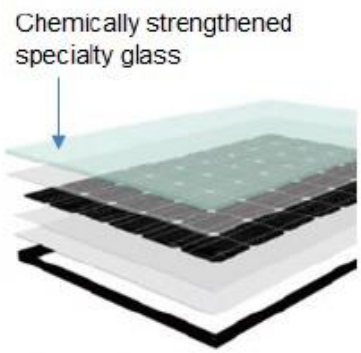

Figure 1: Ultra-lightweight solar panel

Figure 2: Location of International School of Phnom Penh (ISPP)

A.3. Location of project, including coordinates

Country	Kingdom of Cambodia
Region/State/Province etc.:	Phnom Penh
City/Town/Community etc:	Hun Neang Boulevard
Latitude, longitude	N 11° 30' 46" E 104° 55' 46"

A.4. Name of project participants

The Kingdom of Cambodia	International School of Phnom Penh (ISPP).
Japan	Asian Gateway Corp.

A.5. Duration

Starting date of project operation	01/08/2016
Expected operational lifetime of project	17 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 technologies in Cambodia. Through the financing programme by MOEJ, the green-field state-of-the-art solar power plant will be installed.
As for technology transfer, capacity building on operation and monitoring has been provided by Asian Gateway Corp.

B. Application of an approved methodology(ies)

B.1. Selection of methodology(ies)

Selected approved methodology No.	KH_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 200kW green-field solar power system on the roof of the international school in Phnom Penh.
Criterion 2	The PV modules have obtained a certification of 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 project have been certified for IEC 61215, IEC 61730-1 and IEC 61730-2).

Criterion 3	The equipment to monitor output power of the solar PV system(s) and irradiance is installed at the project site.	Electricity meter and pyranometer have been installed at the international school 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

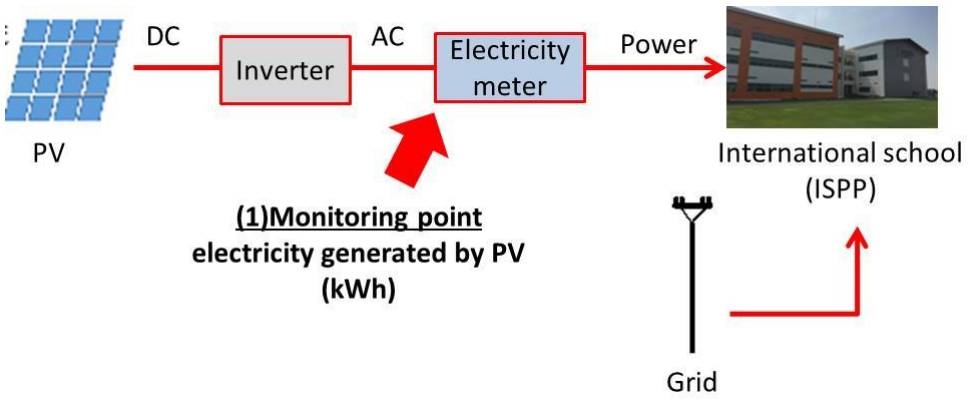

Figure 3: Monitoring point of electricity

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	40	0	40

2017	104	0	104
2018	104	0	104
2019	104	0	104
2020	104	0	104
2021	104	0	104
2022	104	0	104
2023	104	0	104
2024	104	0	104
2025	104	0	104
2026	104	0	104
2027	104	0	104
2028	104	0	104
2029	104	0	104
2030	104	0	104
Total (tCO_{2e})			1496

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

On 29/08/2017, the stakeholder meeting was held to introduce the project of the Ultra-lightweight Solar Panels for Power Generation and JCM scheme and solicit stakeholder comments at the meeting room of ISPP. The attendees to the meeting were employees of ISPP. The attendees showed no negative comments to this project and had several questions about this project as described in the following section and there are no remaining questions to be replied.

E.2. Summary of comments received and their consideration

Stakeholders	Comments received	Consideration of comments received
ISPP	How often is the monitoring report made?	Monitoring report needs to be made periodically to issue the carbon credit, and it is possible to make the

		monitoring report every 5 year for example.
ISPP	Is there any format or template of the monitoring report?	There is a monitoring spreadsheet which is attached to the approved methodology.
ISPP	When is the validation carried out and who will come here for the validation?	The schedule of the validation will be discussed among project participants and Japanese government who supports this project financially. TPE for validation will visit ISPP.

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	11/9/2017	First edition
02.0	15/12/2017	Second edition