

JCM Project Design Document Form

A. Project description

A.1. Title of the JCM project

Introduction of PV-diesel Hybrid System at Fastening Manufacturing Plant
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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 hybrid solar-diesel power generation system to the Fastening Manufacturing Plant of YKK Bangladesh Pte Ltd in the Dhaka Export Processing Zone (DEPZ), Ashulia, Dhaka, Bangladesh, which currently uses captive diesel power generators. The solar power generated by the hybrid system replaces the existing captive diesel power generators.

The hybrid solar-diesel power generation system consists of the solar photovoltaic (PV) system (Capacity of approximately 340kW) and Fuel Save Controller. The system enables the share of solar power generation to a capacity of a diesel generator to be raised up to 60%, which is generally technically limited to approximately 20%. This limitation is caused by power-variation of photovoltaic module arrays. Therefore, installation of the Fuel Save Controller will enable greater reduction of fuel consumption by diesel generators and GHG emissions.

A.3. Location of project, including coordinates

Country	Bangladesh
Region/State/Province etc.:	Dhaka Division
City/Town/Community etc:	Dhaka Export Processing Zone (DEPZ)/ Ashulia City
Latitude, longitude	N 23.949247 E 90.280591

A.4. Name of project participants

The People's Republic of Bangladesh	YKK Bangladesh Pte Ltd
Japan	YKK Corporation

A.5. Duration

Starting date of project operation	01/06/2016
Expected operational lifetime of project	9 years

A.6. Contribution from Japan

The proposed JCM Project was partially supported by the Ministry of Environment, Japan through the financing programme for JCM model projects, which provided financial support up to 50% of initial investment for the projects in order to acquire JCM credits.

KYOCERA Co, manufacturer of the hybrid solar-diesel power generation system, has conducted OJT training and provided a manual on operation, maintenance and safety measures of the facilities for the garment fastener manufacturing plant.

B. Application of an approved methodology(ies)

B.1. Selection of methodology(ies)

Selected approved methodology No.	BD_AM002
Version number	Ver 1.0

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 proposed JCM Project newly installs a solar PV system in the Factory of YKK Bangladesh Pte Ltd.
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 installed PV module of Kyocera has obtained a certification of design qualifications (IEC 61215) and safety qualification (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.	The equipment to monitor output power of the solar PV system and irradiance is installed at the YKK Bangladesh Pte Ltd factory.

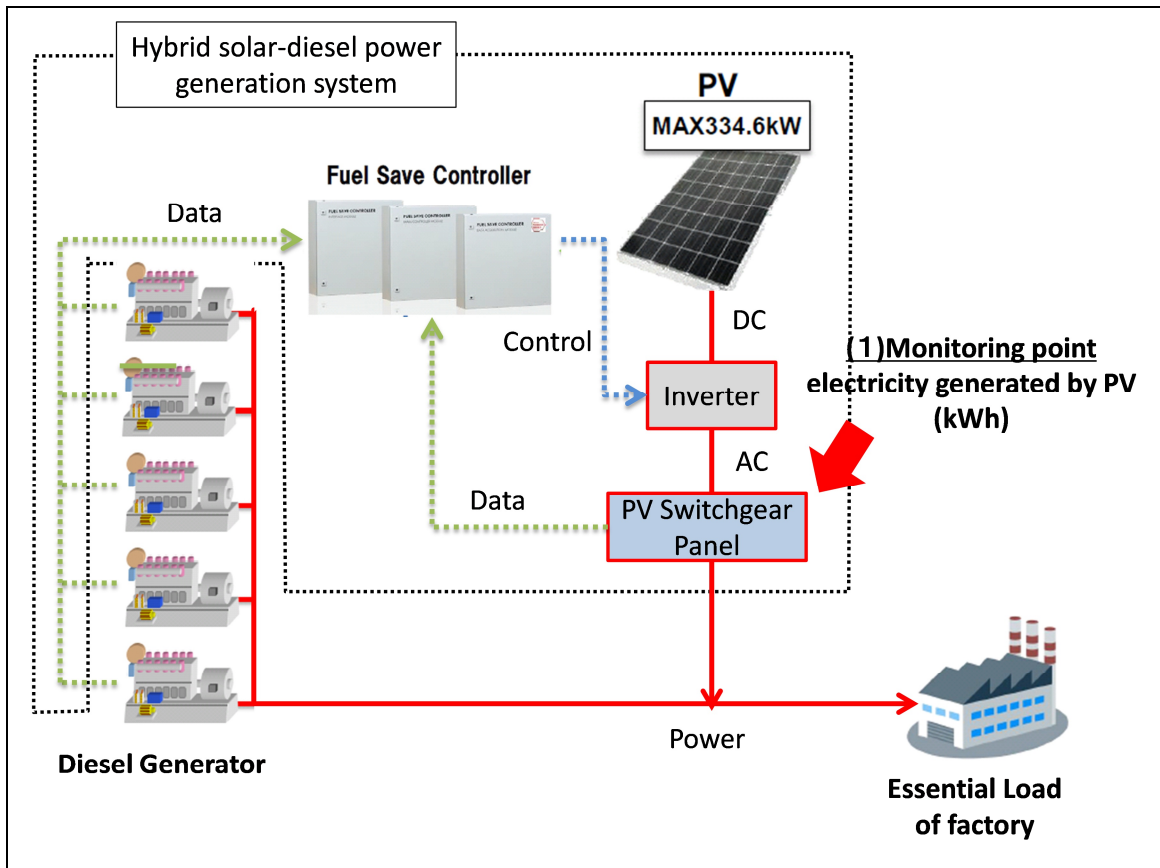
C. Calculation of emission reductions

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

Reference emissions	
Emission sources	GHG type
Consumption of captive electricity	CO ₂
Project emissions	

Emission sources	GHG type
Generation of electricity from solar PV system.	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 emissions (tCO ₂ e)	Reference	Estimated Emissions (tCO ₂ e)	Project	Estimated Emission Reductions (tCO ₂ e)
2016		124.6		0	124
2017		226.7		0	226
2018		226.7		0	226
2019		226.7		0	226
2020		226.7		0	226
2021		226.7		0	226
2022		226.7		0	226
2023		226.7		0	226
2024		226.7		0	226
2025		102.0		0	102

2026	-	-	-
2027	-	-	-
2028	-	-	-
2029	-	-	-
2030	-	-	-
Total (tCO ₂ e)			2034

D. Environmental impact assessment

Legal requirement of environmental impact assessment for the proposed project	NO
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E. Local stakeholder consultation

E.1. Solicitation of comments from local stakeholders

The main stakeholders of the project are employees of YKK Bangladesh Pte Ltd, and a local stakeholder consultation meeting (face to face meeting) was conducted for them;

[Date] 17th October 2016

[Venue] (Video conference)

- Bangladesh: Meeting room of YKK Bangladesh PTE, Dhaka
- Japan: YKK Corporation, Toyama

[Participated organization in the consultation]

- Employees of YKK Bangladesh Pte Ltd

E.2. Summary of comments received and their consideration

Stakeholders	Comments received	Consideration of comments received
Technical Adviser YKK Bangladesh PTE	How the methodology is developed and is registered?	The methodology is sent to the Joint Committee for its consideration and approval. No action is needed.
	Does the methodology include the conditions of monitoring?	The methodology includes the monitoring issues including the monitoring devices and conditions. It

		<p>is confirmed that the project plant can satisfy them.</p> <p>No action is needed.</p>
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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	22/12/2017	First edition
02.0	19/3/2018	Second edition