JCM Project Design Document Form

A. Project description

A.1. Title of the JCM project

Installation of High Efficiency Loom at Weaving Factory

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

The proposed JCM project aims to reduce CO_2 emissions by installing energy efficient air jet looms in Bangladesh's textile industry. Under the proposed project, 60 air jet looms have been adopted and installed at a weaving factory situated in Narshingdi, Bangladesh; instead of rapier type looms which is more prevalent technology adopted in the country. The advanced technology introduced by the proposed project achieves reduced energy consumption and increased productivity for mechanical weaving simultaneously. As a result, GHG emission reductions are expected to be achieved.

A.3. Location of project, including coordinates

Country	The People's Republic of Bangladesh
Region/State/Province etc.:	Narshingdi
City/Town/Community etc:	Shilmandi
Latitude, longitude	latitude: 23.896420 longitude: 90.667664

A.4. Name of project participants

The People's Republic of Bangladesh	Hamid Fabrics Limited
Japan	Toyota Tsusho Corporation

A.5. Duration

Starting date of project operation	24/06/2018
Expected operational lifetime of project	7 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 Bangladesh as high efficiency air jet looms equipped with energy saving technologies are installed through the MOEJ's programme,.

B. Application of an approved methodology(ies)

B.1. Selection of methodology(ies)

Selected approved methodology No.	BD_AM003
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 air jet loom(s) are introduced at a textile factory. The air jet looms introduced as part of the project are equipped with energy saving technologies such as an optimized shape reed's tunnel of nozzles and a pressure sensor to measure air pressure of nozzles for optimization of compressed air consumption of weft insertion.	The air jet looms are introduced at a textile factory. The air jet looms introduced as part of the project are equipped with optimized shape reed's tunnel of nozzles and a pressure sensor to measure air pressure of nozzles for optimization of compressed air consumption of weft insertion.
Criterion 2	Periodical checks of the project air jet loom(s) are conducted at least once every calendar year.	Periodical checks of the project air jet looms will be conducted at least once every calendar year.
Criterion 3	Shedding mechanism of the project air jet loom(s) is either Cam or Dobby shedding.	Shedding mechanism of the project air jet looms are either Cam or Dobby shedding.
Criterion 4	The effective reed width of the project air jet loom(s) is less than or equal to 190 cm.	The effective reed width of the project air jet looms is 190 cm.

C. Calculation of emission reductions

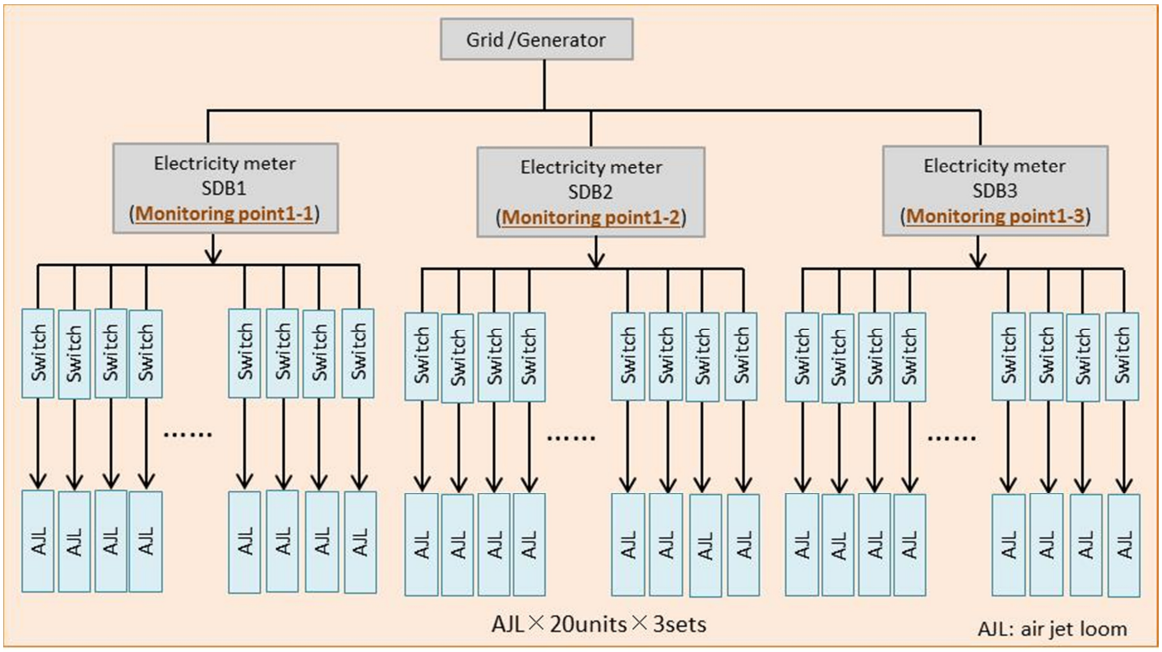
C.1. All emission sources and their associated greenhouse gases relevant to the JCM project

Reference emissions	
Emission sources	GHG type
Electricity consumption by the reference rapier loom(s)	CO_2
Project emissions	
Emission sources	GHG type
Electricity consumption by the loom motor(s) of the project air jet loom(s)	CO_2
Electricity consumption by the air compressor(s) of the project air jet loom(s)	CO_2

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

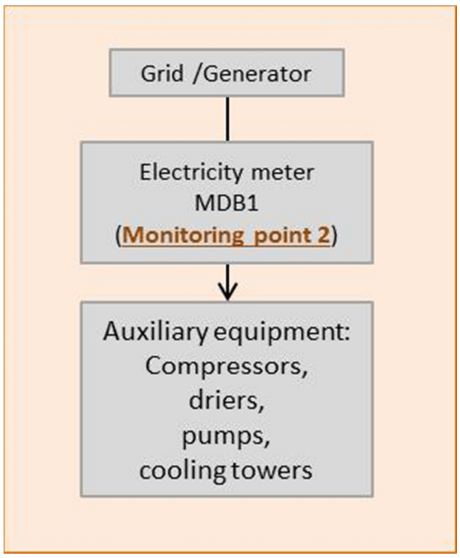
[Monitoring points for $\Sigma EC_{PJLM,p}$]

$\Sigma EC_{PJLM,p}$: the sum of electricity meter readings measuring electricity consumption of loom motors of AJL (= SDB1 + SDB2 + SDB3)[1]



[Monitoring points for $\Sigma EC_{PJAC,p}$]

$\Sigma EC_{PJAC,p}$: the sum of electricity meter readings measuring electricity consumption of air compressors and other auxiliary equipment. (MDB1 and other meters measuring the power consumption of relevant auxiliary equipment are included.)[2]



[1] SDB: Sub Distribution Board
[2] MDB: Main Distribution Board

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	971.5	753.0	218
2019	1,943.1	1,505.9	437
2020	1,943.1	1,505.9	437
2021	1,943.1	1,505.9	437
2022	1,943.1	1,505.9	437
2023	1,943.1	1,505.9	437
2024	1,943.1	1,505.9	437
2025	971.5	753.0	218
2026	-	-	-
2027	-	-	-
2028	-	-	-
2029	-	-	-
2030	-	-	-
Total (tCO_2e)			3,058

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 identified for the project are those who operate and maintain the project facility at the project site. To solicit comments towards the proposed project from stakeholders, a stakeholders' meeting was held as follows:

Date and Time	8 August, 2017 10:30－12:30 Bangladesh standard time (BST)

	(or 13:30 – 15:30 Japan standard time (JST))
Venue	The following two locations were connected via TV conference system: ・Meeting room at Hamid Fabrics Ltd. Factory , Shilmandi, Narshingdi ・Meeting room at Toyota Tsusho Corporation, Shinagawa, Tokyo
Participants	Managing director, managers, and engineers of Hamid Fabrics Ltd., and Hannan Consultancy Co., and factory staff who are involved in operation and maintenance/monitoring of air-jet looms at the project site.
Invitees who were not available[3]	JETRO Dhaka

E.2. Summary of comments received and their consideration

Stakeholders	Comments received	Consideration of comments received
Engineer, Hamid Fabrics Co., Ltd.	Are the procedures for emission reduction calculation publicly available?	Procedures and formula for emission reduction calculation are provided in the JCM methodology. The JCM methodology will be made publicly available upon the approval by the Joint Committee (JC) of the JCM. *No further action necessary.*
Managing Director, Hamid Fabrics Co., Ltd.	Technical staff at the project site would like to know detailed procedures for the emission reduction calculations. With a deeper understanding of process involved in emission reduction calculation, technical staff at the site can actively involve in optimizing emission reduction for the project, achieving the target emission reductions.	Emission reduction calculation worksheet along with the JCM methodology will be publicly available upon the approval by the JC. Using the calculation sheet, the technical staff of Hamid Fabrics can have a better grasp on how equations in the methodology are used for emission reduction calculation. *No further action necessary.*
Hannan Consultancy Co.	When will the JCM validation for the project be conducted? We would like to be informed of the schedule in advance.	Our target schedule for requesting registration for the project is early October this year. However, due to the situation such as methodology approval etc., some delay may be expected. Updated schedule will be

[3] For the invitees who were not available to come to the meeting, comments were sought separately. No further comments were received.

		shared with Hamid Fabrics when it became available. *No further action necessary.*
Hamid Fabrics Co., Ltd.	Being a part of environmentally conscious company, Hamid Fabrics is working hard to minimize the environmental load originating from its production activity. To become the active participant to the JCM scheme, Hamid Fabrics would like its technical staff to be trained for the JCM. As such, the know-how transfer in the JCM procedures including methodology application from Japan side is very much appreciated.	It is very much appreciated that Hamid Fabrics being a very environmental conscious entity and showing willingness of active involvement in implementation of the project as a JCM project. To a certain extent, both governments (i.e. Bangladesh and Japan) provide seminars and workshop relating the JCM and attending such events may be one way to acquire JCM know-how. Moreover, experience gained through procedures of validation and verification, will be the best way to get practical knowledge on the JCM procedures. *No further action necessary.*

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
1.0	27/11/2017	1st draft
2.0	12/03/2018	2nd draft
3.0	19/03/2018	3rd draft