JCM Validation Report Form

A. Summary of validation

A.1. General Information

Title of the project	Introduction of LED Lighting to UNIQLO Sales Stores
Reference number	ID026
Third-party entity (TPE)	Japan Quality Assurance Organization (JQA) (TPE-ID-003)
Project participant contracting the TPE	FAST RETAILING CO., LTD.
Date of completion of this report	15/03/2021

A.2 Conclusion of validation

Overall validation opinion	☒ Positive ☐ Negative

A.3. Overview of final validation conclusion

Only when all of the checkboxes are checked, overall validation opinion is positive.

Item	Validation requirements	No CAR or CL remaining
Project design document form	The TPE determines whether the PDD was completed using the latest version of the PDD forms appropriate to the type of project and drafted in line with the Guidelines for Developing the Joint Crediting Mechanism (JCM) Project Design Document, Monitoring Plan and Monitoring Report.	☒
Project description	The description of the proposed JCM project in the PDD is accurate, complete, and provides comprehension of the proposed JCM project.	☒
Application of approved JCM methodology (ies)	The project is eligible for applying applied methodology and that the applied version is valid at the time of submission of the proposed JCM project for validation.	☒
Emission sources and calculation of emission reductions	All relevant GHG emission sources covered in the methodology are addressed for the purpose of calculating project emissions and reference emissions for the proposed JCM project.	☒
	The values for project specific parameters to be fixed *ex ante* listed in the Monitoring Plan Sheet are appropriate, if applicable.	☒
Environmental impact assessment	The project participants conducted an environmental impact assessment, if required by the Republic of Indonesia, in line with Indonesia's procedures.	☒
Local stakeholder	The project participants have completed a local stakeholder consultation process and that due steps were taken to engage	☒

Item	Validation requirements	No CAR or CL remaining
consultation	stakeholders and solicit comments for the proposed project unless a local stakeholder consultation has been conducted under an environmental impact assessment.	
Monitoring	The description of the Monitoring Plan (Monitoring Plan Sheet and Monitoring Structure Sheet) is based on the approved methodology and/or Guidelines for Developing the Joint Crediting Mechanism (JCM) Project Design Document, Monitoring Plan, and Monitoring Report. The monitoring points for measurement are appropriate, as well as whether the types of equipment to be installed are appropriate if necessary.	☒
Public inputs	All inputs on the PDD of the proposed JCM project submitted in line with the Project Cycle Procedure are taken into due account by the project participants.	☒
Modalities of communications	The corporate identity of all project participants and a focal point, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories are included in the MoC.	☒
	The MoC has been correctly completed and duly authorized.	☒
Avoidance of double registration	The proposed JCM project is not registered under other international climate mitigation mechanisms.	☒
Start of operation	The start of the operating date of the proposed JCM project does not predate January 1, 2013.	☒

Authorised signatory:	Mr. ☒ Ms. ☐
Last name: Asada	First name: Sumio
Title: Senior Executive	
Specimen signature:	Date: 15/03/2021

[redacted]

B. Validation team and other experts

	Name	Company	Function*	Scheme competence*	Technical competence*	On-site visit
Mr. ☒ Ms. ☐	Tadashi Yoshida	External Individual	Team Leader	☒	Authorized	☐
Mr. ☒ Ms. ☐	Hiroshi Motokawa	JQA	Internal Reviewer	☒	Authorized	☐

Please specify the following for each item.

* *Function: Indicate the role of the personnel in the validation activity such as team leader, team member, technical expert, or internal reviewer.*

* *Scheme competence: Check the boxes if the personnel have sufficient knowledge on the JCM.*

* *Technical competence: Indicate if the personnel have sufficient technical competence related to the project under validation.*

C. Means of validation, findings, and conclusion based on reporting requirements

C.1. Project design document form

<Means of validation>

The PDD form is checked and confirmed to be complete in accordance with the JCM Guidelines for Developing Project Design Document and Monitoring Report (JCM_ID_GL_PDD_MR_ver03.0). The latest version of the JCM PDD form (JCM_ID_F_PDD_ver02.0) is used for the PDD of the proposed project (Version 01.0 dated 26/11/2020 for First edition and Version 02.0 dated 21/01/2021 for Second edition). The validation was conducted on the first edition of the PDD.

<Findings>

No issues are raised to the requirement.

<Conclusion based on reporting requirements>

The validation team concludes that the PDD is completed using the valid version of the PDD form and drafted in line with the JCM Guidelines for Developing Project Design Document and Monitoring Report.

C.2. Project description

<Means of validation>

The purpose of the proposed project is to reduce GHG emissions from power consumption

of lighting in UNIQLO sales stores by replacing the reference lighting with light emitting diode (LED) lighting. The project covers 11 sales stores in total, each of which is a tenant in different shopping malls across the country. The conventional high-intensity discharge (HID) lamps are replaced with LED lamps at 3 existing stores and LED lamps are newly installed at 8 stores which are newly opened in 2018 after the start date of project operation.

The project LED lamps are made and designed by KOIZUMI Lighting Technology Corp. to be suitable for the use in the UNIQLO sales stores in terms of brightness, luminous intensity distribution and color. These factors are key elements in designing LED lamps to illuminate displayed clothes appropriately inside the stores.

In Indonesia, conventional lamps such as HID lamps, fluorescent lighting and compact fluorescent lamps (CFL) are commonly used in indoor facilities. For this project activity, however, LED lamps which are more efficient than the conventional lamps are adopted as reference lighting for conservativeness, in accordance with the methodology AM020. As a result, energy-saving of 15-40% is expected for each type of project LED lamp and the implementation of the proposed project would contribute to the considerable GHG emission reductions. Thus, the proposed project would reduce the emissions of 587 tCO_2 per year and 4,695 tCO_2 in total during the monitoring period of 2017 - 2025.

The proposed project is conducted at UNIQLO sales stores located in Jakarta (5 stores), Bandung (2 stores) and other cities (4 stores), Indonesia, and implemented by PT. Fast Retailing Indonesia from the Republic of Indonesia and FAST RETAILING CO., LTD. from Japan. The first commissioning of the project LED lighting was satisfactorily completed at Store No. 2 (UNIQLO Mal Taman Anggrek) on 25/01/2017, which is confirmed by Work Report issued by PT. SETSUYO ASTEC, and then 9,800 units of the LED lamps in total have been finally installed and operated at 11 sales stores. Based on these Work Reports, it is confirmed that the starting date of project operation is 25/01/2017.

The expected operational lifetime of the project is 8 years, which is based on the legal durable years for the facilities of retailing business issued by Ministry of Finance, Japan.

The proposed project was partially financed by the Ministry of the Environment (MOE), Japan, through the contract with Global Environment Centre Foundation (GEC) on 14/10/2016, which provides financial support of less than half of the initial investment for the projects in order to acquire JCM credits.

As for technology transfer, the OJT training on the operation and monitoring of the project facilities has been conducted for the engineering staffs of PT. SETSUYO ASTEC, which is an installation and maintenance company contracted with PT. Fast Retailing Indonesia, at Store 2 (UNIQLO Mal Taman Anggrek) on 19/09/2017 and at Store 1(UNIQLO Lotte Shopping Avenue) during 28/09 - 01/10/2018.

The validation team has assessed the PDD and the supporting documents through the desk

review and the e-mail interview with the PPs, without on-site visit, to validate the requirements about accuracy and completeness of the project description. No on-site visit is justified as follows: The validation of the accuracy and completeness of the project description has been conducted by the document review and the e-mail interviews with the PPs. The sufficient evidences and information relevant to the proposed project are provided by the PPs, and the team has determined whether the information and description in the PDD are accurate and complete.

The persons interviewed and documents received are provided in Section E of this report.

Regarding the description of the project activity in A.2 of the PDD, the validation team raised CL 05 and the issue was resolved as explained in "Findings".

<Findings>

< *CL 05* >

The PPs are requested to clarify the status of 8 stores where LED lamps are newly installed before the start of project activity in A.2 of the PDD.

< Comments from the PPs >

The 8 stores started store operation after the start date of project operation and are open as of January 2021.

< Assessment by the TPE >

It is confirmed through the review of the revised PDD that the 8 stores were newly opened in 2018 after the start date of project operation and hence LED lamps were newly installed at those stores. Thus, CL 05 is closed.

<Conclusion based on reporting requirements>

The validation team concludes that the description of the proposed project in the revised PDD complies with the supporting documents and information obtained through the desk review and the interview with the PPs, and the description is accurate and complete.

C.3. Application of approved methodology(ies)

<Means of validation>

The approved methodology JCM_ID_AM020_ver01.0 "Introduction of energy efficient and high color rendering LED downlight/spotlight" is applied to the proposed project. The methodology is approved by the JC on 31/10/2019 (JC9, Annex 1) and valid at the time of the validation.

The validation team has assessed whether the selected methodology is applicable to the proposed project. The project applicability was checked against two eligibility criteria contained in the approved methodology. The project information for each eligibility criterion and the assessment/conclusion about its applicability to the proposed project are summarized in the following table.

<table>
<tr><th>Eligibility criteria</th><th>Descriptions specified in the methodology</th><th>Project information</th><th>Assessment and conclusion</th></tr>
<tr><td>Criterion 1</td><td>LED lighting is installed in indoor facilities.</td><td>All LED lamps are installed inside UNIQLO sales stores, which are the tenant in different shopping malls.</td><td>It is confirmed through the review of the Work Reports on the installation of LED lamps and the e-mail interview with the PPs that 9,800 units of the LED lamps are installed inside 11 UNIQLO sales stores. Hence, Criterion 1 is satisfied.</td></tr>
<tr><td>Criterion 2</td><td>The installed LED lighting is a downlight or spotlight type LED whose color rendering index stated in catalogs or other information prepared by its manufacturer is equal to or higher than 85, and luminous efficiency is equal to or higher than the corresponding threshold value set in the table below.
<table>
<tr><td>Rated power consumption [W]</td><td>0≤x <20</td><td>20≤x <40</td><td>40≤x <60</td></tr>
<tr><td>Threshold luminous efficiency value [lm/W]</td><td>77.2</td><td>77.6</td><td>73.7</td></tr>
</table>
<table>
<tr><td>Rated power consumption [W]</td><td>60≤x <80</td><td>x≥80</td></tr>
<tr><td>Threshold luminous efficiency value [lm/W]</td><td>76.3</td><td>74.8</td></tr>
</table></td><td>Each LED lamp is either downlight or spotlight type. The color rendering index is 85 for all the LED lamps, and their luminous efficiencies are above the required threshold values (See also supporting documents).</td><td>It is confirmed through the review of the specification of LED lamps that either downlight or spotlight type is installed inside the stores, or further that the color rendering index is 85 and their luminous efficiencies are higher than the required threshold values for all LED lamps. Hence, Criterion 2 is satisfied.</td></tr>
</table>

<Findings

No issues are raised to the requirement.

<Conclusion based on reporting requirements>

The validation team concludes that the proposed project is eligible for applying the valid version of the approved methodology ID_AM020 and all eligibility criteria are met by the proposed project.

C.4. Emission sources and calculation of emission reductions

<Means of validation>

The proposed project aims to reduce GHG emissions from power consumption of lighting by replacing the conventional HID lamps with LED lamps at 3 existing stores and by installing new LED lamps at 8 stores which are newly opened after the start date of project operation.

As per the methodology ID_AM020_ver. 01.0, reference emissions are sourced from the power consumption by reference LED lighting and project emissions are sourced from the power consumption by project LED lighting.

Reference emissions are calculated from power consumption of project lighting, ratio of luminous efficiency of project/reference lighting and CO_2 emission factor for consumed electricity, which is expressed by Equation (1), in accordance with the methodology ID_AM020:

$$REp = \Sigma (EC_{PJ,i,j,p} \times \eta_{PJ,i,j}/\eta_{RE,i,j} \times EF_{elec,i}) \quad \text{---------- (1)}$$

Where:

RE_p : Reference emissions during the period *p* (tCO_2/p)

$EC_{PJ,i,j,p}$: Power consumption of project lighting for group *j* in the facility *i* during the period *p* (MWh/p)

$\eta_{PJ,i,j}$: Luminous efficiency of project lighting for group *j* in the facility *i* (lm/W)

$\eta_{RE,i,j}$: Luminous efficiency of reference lighting for group *j* in the facility *i* (lm/W)

EF_{elec} : CO_2 emission factor for consumed electricity in the facility *i* (tCO_2/MWh)

i : Identification number of the facility

j : Identification number of the group of project lighting of the same model

For conservativeness, LED lighting which is more efficient than the conventional lighting is adopted as reference lighting in this methodology.

Here, $EC_{PJ,i,j,p}$ is calculated by using Option 1 or Option 2:

【Option 1】 In case that total power consumption by project lighting is measured for the facility *i*,

$$EC_{PJ,i,j,p} = EC_{PJ,i,total,,p} \times (P_{PJ,i,j} \times n_{PJ,i,j\ i})/P_{PJ,i,total} \quad \text{----------} \quad (2)$$

$$P_{PJ,i,total} = \Sigma (P_{PJ,i,j} \times n_{PJ,i,j})$$

Where:

$EC_{PJ,i,total,,p}$: Total power consumption by project lighting in the facility *i* during the period *p* (MWh/p)

$P_{PJ,i,total}$: Total rated power consumption of project lighting in the facility *i* (W)

$P_{PJ,i,j}$: Rated power consumption per unit of project lighting for group *j* in the facility *i* (W)

$n_{PJ,i,j}$: Number of the unit of project lighting for group *j i*n the facility *i*

【Option 2】 In case that total power consumption is not measured for the facility *i*,

$$EC_{PJ,i,j,p} = P_{PJ,i,j} \times n_{PJ,i,j} \times 10^{-6} \times h_i \times D_{i,p} \quad \text{----------} \quad (3)$$

Where:

h_i : Daily opening hours of the facility *i* (hour/day)

$D_{i,p}$: Opening days of the facility *i* during the period p (day/p)

As the grid electricity is consumed by the project lighting, the most recent CO_2 emission factors (EF_{elec}) of 0.877 tCO_2/MWh for Jamali grid, 0.832 tCO_2/MWh for Sumatera grid and 0.723 tCO_2/MWh for South & West Sulawesi grid (*ex-post* value) are applied in the calculation of reference emissions. The values are sourced from "Emission Factor of Electricity Interconnection Systems (2016)", Indonesia Joint Crediting Mechanism (JCM) website, based on data obtained by Directorate General of Electricity, Ministry of Energy and Mineral Resources, Indonesia.

It is confirmed through the review of relevant documents and the interview with the PPs that the project-specific parameters to be fixed *ex-ante* such as $\eta_{PJ,i,j}$, $\eta_{RE,i,j}$, $P_{PJ,i,j}$ and EF_{elec} are correctly applied in the calculation of reference emissions.

Project emissions are calculated from power consumption of project lighting and CO_2 emission factor for consumed electricity, which is expressed by Equation (4):

$$PE_p = \Sigma EC_{PJ,i,j,p} \times EF_{elec} \quad \text{----------} \quad (4)$$

Where:

PE_p : Project emissions during the period *p* (tCO_2/p)

$EC_{PJ,i,j,p}$: Power consumption of project lighting for group *j* in the facility $_i$ during the period *p* (MWh/p)

FF_{elec} : CO_2 emission factor for consumed electricity (tCO_2/MWh)

The *ex-ante* value of $EC_{PJ,i,j,p}$ in the MPS(input_separate) is calculated by using Option 2 given in the methodology. The values used for h_i and $D_{i,p}$ are 11 hour and 365 days, respectively, in the calculation of $EC_{PJ,i,j,p}$.

Thus, the GHG emission reductions during the period *p* are calculated by Equation (5), in line with the methodology:

$$ER_p = RE_p - PE_p \quad \text{----------} \quad (5)$$

Where:

ERp : Emission reductions during the period *p* (tCO_2/p)

REp : Reference emissions during the period *p* (tCO_2/p)

PEp : Project emissions during the period *p* (tCO_2/p)

As a result, the annual emission reductions estimated *ex-ante* for 9,800 units of project lighting installed at 11 UNIQLO sales stores in the MPS are calculated as follows:

$$\begin{aligned} ER_p &= RE_p - PE_p \\ &= \Sigma (EC_{PJ,i,j,p} \times \eta_{PJ,i,j}/\eta_{RE,i,j} \times EF_{elec,i}) - \Sigma EC_{PJ,i,j,p} \times EF_{elec} \\ &= 587\ tCO_2 \end{aligned}$$

The GHG annual emission reductions are estimated to be 587 tCO_2 and the sum of the emission reductions for the period of 2017 – 2025 is estimated to be 4,695 tCO_2.

It is confirmed through the review of relevant documents and the e-mail interview with the PPs that all GHG emission sources specified by the applied methodology are identified, and the reference emissions (RE_p), project emissions (PE_p) and emission reductions (ER_p) in the revised PDD (ver02.0) and Monitoring Plan Sheet are correctly calculated, in accordance with the methodology ID_AM020_ver01.0.

Regarding the CO_2 emission source and comment described in C.2 of the PDD, the validation team raised CL 01 and CL 02 and these issues were resolved as explained in "Findings".

<Findings>

< CL 01 >

The source of CO_2 emissions from the project LED lamps is not illustrated in C.2 of the

PDD.

< Comments from the PPs >

The source of CO_2 emissions from the project LED lamps is added in C.2 of the PDD.

< Assessment by the TPE >

It is confirmed through the review of the revised PDD that the source of CO_2 emissions from the project LED lamps is appropriately added. Thus, CL 01 is closed.

< *CL 02* >

*The comment *1 in C.2 of the PDD is not clearly explained. The PPs are requested to explain it clearly, according to the comment in F.2 of ID_AM020.*

< Comments from the PPs >

The comment *1 in C.2 of the PDD has been revised in line with the comment *1 in F.2 of ID_AM020. The revised comment means, if those other than the project LED lamps which meet the eligibility criterion 2 of ID_AM020 are included in the monitored value of the total power consumption, they are appropriately excluded from the calculated value of the emission reductions in line with ID_AM020.

< Assessment by the TPE >

It is confirmed through the review of the revised PDD that the comment *1 in C.2 of the revised PDD is appropriately corrected in line with the comment in F.2 of ID_AM020, and therefore the power consumption of the lamps other than the project LED lamps is excluded in the calculation of emission reductions. Thus, CL 02 is closed.

<Conclusion based on reporting requirements>

The validation team confirms that all emission sources and GHG types specified in the approved methodology are appropriately identified. The validation team concludes that the value of parameter ($EC_{PJ,i,total,p}$) to be monitored *ex-post* in the MPS are correctly estimated by the summation of power consumption of project lighting for group *j* ($EC_{PJ,i,j,p}$) calculated by Option 2, and the values for the project-specific parameters to be fixed *ex-ante* listed in the MPS are also correctly determined. In addition, the equations to calculate reference emissions, project emissions and emission reductions for the proposed project are also appropriately derived and the annual emission reductions are correctly calculated using parameters and data in the MPS, in accordance with the applied methodology.

C.5. Environmental impact assessment

<Means of validation>

The purpose of the proposed project is to reduce CO_2 emissions from power consumption of lighting by replacing reference LED lighting with project LED lighting. The PDD states that an Environmental Impact Assessment (EIA) is not required, because the proposed project does not conduct a physical development with an impact to the society as well as the environment around the project site. According to the Types of Business and/or Activity Requiring AMDAL issued by Minister of the Environment and Forestry (2019), there is no regulation which requires EIA assessment to such kind of the technology implementation. Therefore, the validation team confirms that EIA is not required.

<Findings>

No issues are raised to the requirement.

<Conclusion based on reporting requirements>

The validation team concludes that the proposed project does not require the EIA. The implementation of the project is in line with the regulations in the Republic of Indonesia and the requirements of the JCM.

C.6. Local stakeholder consultation

<Means of validation>

The PPs conducted a local stakeholder consultation at Office of PT. Fast Retailing Indonesia on 30/08/2018. Prior to the meeting, the invitation letter was delivered to the stakeholders on 30/07/2018.

Following public and private entities are identified as stakeholders and they were invited for Local Stakeholders' Consultation Meeting:

- Indonesia JCM Secretariat
- Green Building Council Indonesia
- Dinas Lingkungan Hidup Provinsi DKI Jakarta
- FAST RETAILING CO., LTD.
- PT. Fast Retailing Indonesia

The local stakeholders provided positive comments for the proposed project. No negative issues that require actions to be taken by the PPs were raised through the consultation. It is confirmed through the review of the relevant documents and the e-mail interview with the PPs that the stakeholder consultation process was appropriately conducted to collect stakeholders' opinions on the project. The summary of the comments received in the consultation and due

account of all comments taken by the PPs are fully described in the PDD.

<Findings>

No issues are raised to the requirement.

<Conclusion based on reporting requirements>

The validation team concludes that the PPs have completed a local stakeholder consultation process and invited comments on the proposed project from the local stakeholders. The summary of the comments received is provided in the PDD in a complete manner and the PPs have taken due account of all the comments and described this process in the PDD.

C.7. Monitoring

<Means of validation>

The Monitoring Plan consists of the Monitoring Plan Sheet and Monitoring Structure Sheet which comply with the approved Methodology JCM_ID_AM020_ver01.0. Total power consumption by project LED lighting in the facility *i* during the period *p* ($EC_{PJ,j,total,p}$) is continuously measured with electricity meter at each of the 11 sales stores. The electricity data in the server is read by Store manager at each store and sent to Person in charge of the MRV activities of PT. Fast Retailing Indonesia through the internet and then aggregated on a monthly basis.

The monitoring point for power consumption of project LED lighting (1) is located at the right positions of electricity line system, as illustrated by the figure in C.2 of the PDD. The manufacturer's specification of electricity meter has been prepared by the time of validation. The accuracy of electricity meter installed by the proposed project is ±2%, which is within ±5% set in the MPS(input).

All monitored data which are required for verification and issuance are kept and archived electronically for two years after the final issuance of the credits by Person in charge of the MRV activities of PT. Fast Retailing Indonesia.

The roles and responsibilities of the personnel are described in Monitoring Structure Sheet. The monitoring structure consists of Project Manager (Japanese side), Person in charge of the project (Japanese side), and Person in charge of the MRV activities (Indonesian side) and Store Manager (Indonesian side). Project Manager is responsible for entire project management and Person in charge of the project prepares monitoring report. Person in charge of the MRV activities is responsible for data aggregation, archiving of monitored data and maintenance of monitoring equipment, and Store Manager is responsible for the reading of data on-site.

It is confirmed through the review of the relevant documents and e-mail interview with the PPs that the monitoring plan complies with the requirements of the approved methodology and the PPs are able to implement the monitoring activity appropriately according to the monitoring plan.

Regarding the data collection/aggregation and the affiliation of responsible personnel, the validation team raised CL 03 and CL 04 and these issues were resolved as explained in "Findings".

<Findings>

< *CL 03* >

The PPs are requested to clarify the meaning of the sentence "investigators extract and aggregates the data on-site" for the parameter $EC_{PJ,i,total,p}$ in Table 1 of MPS(input).

< Comments from the PPs >

The sentence means that Person in charge of the MRV activities aggregates the collected data. This description is moved to the MSS.

< Assessment by the TPE >

It is confirmed through the review of the revised MPS (input) and MSS and interview with the PPs that the sentence in the MPS(input) is moved to the MSS and Person in charge of the MRV activities of PT. Fast Retailing Indonesia is responsible for the aggregation of the data collected by Store manager. Thus, CL 03 is closed.

< *CL 04* >

The PPs are requested to clarify the affiliation of each personnel in the MSS.

< Comments from the PPs >

The affiliation of each personnel is added in the revised MSS.

< Assessment by the TPE >

It is confirmed through the review of the revised MSS and the interview with the PPs that *the affiliation and role of each personnel are appropriately* added or revised. Thus, CL 04 is closed.

<Conclusion based on reporting requirements>

The validation team concludes that the description of the MPS and MSS complies with the requirements of applied methodology and JCM Guidelines for Developing Project Design Document and Monitoring Report, and the monitoring point as well as measuring equipment is also appropriate. Thus, the PPs have demonstrated feasibility of the monitoring structure

and their abilities to implement the monitoring activity appropriately.

C.8. Modalities of Communication

<Means of validation>

The MoC was provided to JQA for review on 30/11/2020, in the valid form (JCM_ID_F_MoC_ver01.0) at the time of validation, in which FAST RETAILING CO., LTD. is nominated as the focal point. The MoC was signed by the authorized representatives of PT. Fast Retailing Indonesia on 15/10/2020 and by the authorized representatives of FAST RETAILING CO., LTD. on 27/11/2020, along with the contact details.

The validation team has checked the personal identities and employment status of the authorized signatories through their business cards. Primary authorized signatory of FAST RETAILING CO., LTD. is Group Officer of Global Store Development, and alternate authorized signatory is Facility Manager of the same Division. Primary authorized signatory of PT. Fast Retailing Indonesia is Co-COO and alternate authorized signatory is Manager of Store Development.

It is confirmed through the check of business cards and the e-mail interview with the PPs that all corporate and personal details including specimen signatures and the information in the MoC are valid and accurate as requested in the JCM Guidelines for Validation and Verification.

<Findings>

No issues are raised to the requirement.

<Conclusion based on reporting requirements>

The validation team concludes that the MoC is completed using the valid version of the form, and the information and the specimen signature of the PPs provided in the MoC are correct and sufficient, in compliance with the requirements of the JCM Guidelines.

C.9. Avoidance of double registration

<Means of validation>

The representative of focal point entity in the MoC, Group Officer of Global Store Development of FAST RETAILING CO., LTD., declares that the proposed project is not registered under any other international climate mitigation mechanism other than the JCM. It is confirmed through the check of publicly available information (e.g. CDM/JI website, etc.) that the proposed project is not registered under any other international climate mitigation mechanisms in terms of the name of entity, applied technology, scale and location.

<Findings>

No issues are raised to the requirement.

<Conclusion based on reporting requirements>

The validation team concludes that the proposed project is not registered under any other international climate mitigation mechanisms and hence it will not result in double counting of GHG emission reductions.

C.10. Start of operation

<Means of validation>

For the proposed project, the first commissioning of the project LED lighting was satisfactorily completed on 25/01/2017 at UNIQLO Mal Taman Anggrek in West Jakarta. It is confirmed through the review of Work Report issued by PT. SETSUYO ASTEC and the e-mail interview with the PPs that the monitoring activity of the proposed project was actually commenced on 25/01/2017.

<Findings>

No issues are raised to the requirement.

<Conclusion based on reporting requirements>

The validation team concludes that the starting date of project operation, 25/01/2017, is correct and does not predate 01/01/2013 as required by the Guideline of the JCM project.

C.11. Other issues

<Means of validation>

No more issues are raised in the validation of the proposed project.

<Findings>

Not applicable.

<Conclusion based on reporting requirements>

Not applicable.

D. Information on public inputs

D.1. Summary of public inputs

In line with the JCM Project Cycle Procedure, the PDD was made publicly available for 30 days between 03/12/2020 and 01/01/2021 to invite public comments on the following JCM website:
https://www.jcm.go.jp/id-jp/projects/82

No public comments were received.

D.2. Summary of how inputs received have been taken into account by the project participants

Not applicable.

E. List of interviewees and documents received

E.1. List of interviewees

- Yuji Yamada	Facility Manager, Global Store Development, FAST RETAILING CO., LTD.
- Muzaffar Ikhsan Wibowo	Store Maintenance, PT. Fast Retailing Indonesia
- MAHATIDANA Anthya Dwita	Store Construction, PT. Fast Retailing Indonesia

E.2. List of documents received

1. PDD, ver. 01.0 dated 26/11/2020 and ver. 02.0 dated 21/01/2021
2. Monitoring Plan Sheet and Monitoring Structure Sheet, ver. 01.0 dated 26/11/2020, ver. 02.0 dated 21/01/2021
3. List of project lighting including model, type, color rendering index, rated power consumption, luminous efficiency
4. JCM Modalities of Communication Statement Form (MoC) submitted for JC, dated 30/11/2020
5. Business cards of Primary authorised signatory, Alternate authorised signatory from Japanese and Indonesian sides along with Contact person
6. JCM Approved Methodology ID_AM020_ver01.0, 31/10/2019 (JC9, Annex 1)
7. Monitoring Spreadsheet JCM_ID_AM020_ver01.0
8. JCM Modalities of Communication Statement Form (JCM_ID_F_MoC_ver01.0)

9. JCM Glossary of Terms (JCM_ID_Glossary_ver02.0)
10. JCM Project Cycle Procedure (JCM_ID_PCP_ver05.1)
11. JCM Project Design Document Form (JCM_ID_F_PDD_ver02.0)
12. JCM Guidelines for Developing Project Design Document and Monitoring Report (JCM_ID_GL_PDD_MR_ver03.0)
13. JCM Validation Report Form (JCM_ID_F_Val_Rep_ver01.0)
14. JCM Guidelines for Validation and Verification (JCM_ID_GL_VV_ver01.0)
15. Catalogue and specification of project LED lamp manufactured by KOIZUMI Lighting Technology Corp.
16. Catalogue and specification of conventional HID lamp
17. Work Report on the installation of LED lamps at 11 UNIQLO sales stores, issued by PT. SETSUYO ASTEC
18. Company profile of PT. Fast Retailing Indonesia, https://www.uniqlo.com/id/corp/corp_about.html
19. Company profile of FAST RETAILING CO., LTD. https://www.fastretailing.com/jp/

20-1. Commissioning certificate to demonstrate the starting date of project operation (25/01/2017) at UNIQLO Taman Anggrek, issued by PT. SETSUYO ASTEC

20-2. Photos of installation of LED lighting system at UNIQLO Taman Anggrek

21. Legal durable year list issued by Ministry of Finance, Japan, to demonstrate the expected operational lifetime (8 years) of the LED lighting
22. Contract of the proposed project between FAST RETAILING CO., LTD. and Global Environment Centre Foundation (GEC) dated 14/10/2016

23-1. Records of the staff training for operation and monitoring of the LED lighting system conducted at Store 2 (UNIQLO Mal Taman Anggrek) on 19/09/2017

23-2. Records of the staff training for operation and monitoring of the LED lighting system conducted at Store 1 (UNIQLO Lotte Shopping Avenue) during 28/09 – 01/10/2018

24. Photos of LED lightings installed at Store 1 (UNIQLO Lotte Shopping Avenue)
25. Electricity line diagram of LED lighting system at Store 1 (UNIQLO Lotte Shopping Avenue)
26. Operation manual of data monitoring system (EcoServer III)
27. Sample of daily data sheet recorded by the proposed project
28. Types of Business and/or Activity Requiring AMDAL, issued by Minister of the Environment and Forestry (2019)

29-1. Minutes of the LSC meeting held on 30/08/2018

29-2. Attendee's list for the LSC meeting

29-3. Invitation letter sent to the stakeholders dated on 30/07/2018

29-4. Presentation materials at the LSC meeting
30. Specification of electricity meter (EMU4-HM1-MB) installed by the project activity
31. 2016 CO_2 emission factor of the national grid, issued by Directorate General of Electricity, Ministry of Energy and Mineral Resources, Indonesia
32. Schematic diagram of monitoring structure for the proposed project
33. Photos of electricity meter installed at Lotte Shopping Avenue (No.1), Sun Plaza (No. 5) and Paris Van Java Mall (No. 11)

Annex Certificates or curricula vitae of TPE's validation team members, technical experts and internal technical reviewers

Please attach certificates or curricula vitae of TPE's validation team members, technical experts and internal technical reviewers.

Statement of competence

Name: Dr. Tadashi Yoshida

Qualified and authorized by Japan Quality Assurance Organization.

Function	Date of qualification
Validator	2014/12/22
Verifier	2014/12/22
Team leader	2014/12/22

Technical area within sectoral scopes	Date of qualification
TA 1.1. Thermal energy generation	2014/12/22
TA 1.2. Renewables	2014/12/22
TA 3.1. Energy demand	2014/12/22
TA 4.1. Cement and lime production	2015/11/12
TA 5.1. Chemical industry	2014/12/22
TA 10.1. Fugitive emissions from oil and gas	2014/12/22
TA 13.1. Solid waste and wastewater	2014/12/22
TA 14.1. Afforestation and reforestation	-

Statement of competence

Name: Mr. Hiroshi Motokawa

Qualified and authorized by Japan Quality Assurance Organization.

Function	Date of qualification
Validator	2014/12/22
Verifier	2014/12/22
Team leader	2014/12/22

Technical area within sectoral scopes	Date of qualification
TA 1.1. Thermal energy generation	2014/12/22
TA 1.2. Renewables	2014/12/22
TA 3.1. Energy demand	2014/12/22
TA 4.1. Cement and lime production	2014/12/22
TA 5.1. Chemical industry	-
TA 10.1. Fugitive emissions from oil and gas	-
TA 13.1. Solid waste and wastewater	2014/12/22
TA 14.1. Afforestation and reforestation	-