



Validation report form for post-registration changes for CDM project activities

(Version 01.0)

VALIDATION REPORT ON POST-REGISTRATION CHANGES (PRCs)

Title and reference number of the project activity	Mampuri Wind Power Project
Process track	<input type="checkbox"/> Prior approval <input checked="" type="checkbox"/> Issuance <input type="checkbox"/> Renewal of crediting period
Version number of the validation report on PRCs	02
Completion date of the validation report on PRCs	28/09/2016
Type(s) of PRCs	<input type="checkbox"/> Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline <input type="checkbox"/> Corrections <input type="checkbox"/> Changes to the start date of the crediting period <input type="checkbox"/> Inclusion of a monitoring plan to a registered project activity <input checked="" type="checkbox"/> Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline <input type="checkbox"/> Changes to the project design of a registered project activity <input type="checkbox"/> Types of changes specific to afforestation and reforestation project activities
Version number of PDD to which this report applies	12
Project participant(s)	Senok Wind Power (Private) Limited Asian Development Bank, as trustee of the Future Carbon Fund ; Swedish Energy Agency
Host Party	India
Sectoral scope(s), selected methodology(ies), and where applicable, selected standardized baseline(s)	Scope 01: Energy Industries (renewable/non-renewable sources) AMS-I.D. ver. 17 - Grid connected renewable electricity generation
Name of DOE	KBS Certification Services Pvt. Ltd

Name, position and signature of the
approver of the validation report on PRCs



Kaushal Goyal
Managing Director

SECTION A. Executive summary

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The project activity is the installation of 10 MW wind power project in Mampuri village, Puttalam District, North Western Province, Sri Lanka. There are total 8 WTG in which each WTG capacity is 1.25 MW. The electricity generated from the project is supplied to National grid of Sri Lanka which is predominantly connected fossil fuel based power plants. So, the electricity generation from the project activity will avoid equivalent amount of electricity from grid connected power plants and thereby associated CO₂ emission.

KBS Certification Services Pvt. Ltd was appointed for verification of the second periodic verification of the project. During the verification, the auditing team observed permanent changes in monitoring plan in the registered PDD. The changes are validated in this report. The project applies for post registration changes with the following changes applied in the revised PDD:

Registered PDD (version 11, dated 18/12/2012)	Revised PDD (version 12, dated 03/09/2016)
<p>The Energy purchased from Ceylon Electricity Board (EG_{imp,y}) is calculated as total of below two:</p> <ul style="list-style-type: none"> • Energy Import measured through energy meter M2 installed at the Point of Supply (POS) to the national grid which is recorded in Import register • Energy import measured through energy meter M3 installed at the point of purchase of electricity from a local distribution line which is recorded in the electricity bills based 	<p>The Energy purchased from Ceylon Electricity Board (EG_{imp,y}) is monitored as below:</p> <ul style="list-style-type: none"> • Energy Import measured through energy meter M2 installed at the Point of Supply (POS) to the national grid which is recorded in Import register <p>(The energy meter M3 is removed during January 2015 and the complete energy import is routed through the same line where the energy meter M2 is installed. Hence the description about M3 is removed from the revised PDD)</p>

The only change in the PDD is permanent changes in the monitoring system installed at the site. No change in project design is reported. Hence, there is no change in emission reduction in the revised PDD.

The scope of the validation is defined as an independent and objective review of the revised project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against the CDM Validation and Verification Standard (version 09) and Project Standard (version 09), Kyoto Protocol requirements and UNFCCC rules. The report is based on the assessment of the revised project design document undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., on site visit, electronic (telephone or e-mail) interviews) and also the review of the applicable approved methodological and relevant tools, guidance and CDM decisions.

Validation methodology and process

The validation has been performed as described in the VVS version 09.0 and constitutes the following steps:

- Desk review of the revised PDD and the relevant documents
- Interviews (05/07/2016)
- Issuance of Validation Report for the post-registration changes

Validation criteria

The following CDM requirements have been considered:

- Article 12 of the Kyoto Protocol,
- Modalities and procedures for CDM (Marrakech Accords)
- Subsequent decisions by the COP/MOP and CDM Executive Board
- Host country criteria
- Criteria given to provide for consistent project operations, monitoring and reporting.

The review of the project design documentation and the subsequent follow-up interviews have provided KBS with sufficient evidence to determine the project's fulfilment of all the stated criteria. In our opinion, the project meets all applicable UNFCCC requirements for the CDM.

SECTION B. Validation team, technical reviewer and approver**B.1. Validation team member**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader/ Technical Expert	IR	R	Narendra Kumar	Central office	x	x	x	x
2	Verifier	IR	Sharma	Chetan Swaroop	Central Office	x			x
2	Local Expert	EI	Poddiwala	Pathmanatha	Central Office	x	x	x	

B.2. Technical reviewer and approver of the validation report on PRCs

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer/ Manager Technical & Certification	IR	Kandari	Sanjay	Central Office
3.	Authorizer	IR	Goyal	Kaushal	Central Office

SECTION C. Means of validation**C.1. Desk review**

The revised PDD and supporting background documents related to the project design and baseline were reviewed.

Furthermore, the validation team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data. The list of documents reviewed during the validation process is mentioned in the Appendix-3 of this report.

C.2. On-site inspection

The change in the monitoring plan of PDD was observed during the site visit of verification of 2nd monitoring period. Hence, the activity performed during the verification is detailed below:

Duration of on-site inspection: 05/07/2016				
No.	Activity performed on-site	Site location	Date	Team member
1.	Implementation and Operation of the CDM project activity based on registered Monitoring Plan and physical features of the project activity as per registered PDD	Mampuri village, Puttalam District, North Western Province, Sri Lanka	05/07/2016	Narendra Kumar R Pathmanatha Poddiwala
2.	Information flows for generating, aggregating and reporting the monitoring parameters			
3.	Competency of the operating personnel, monitoring personnel and calibrating agencies			
4.	Data collection procedures			
5.	Calibration performance and monitoring practices followed for monitoring equipment's used in the project activity			
6.	Quality Control and Quality Assurance procedures against the approved monitoring plan			
7.	Calculation and assumptions made in determining the GHG data and emission reductions			
8.	Compliance with CDM criterion and relevant guidance with respect to monitoring plan			
9.	Level of accuracy (Materiality) of the monitoring activity			

C.3. Interviews

The change in the monitoring plan of PDD was observed during the site visit of verification of 2nd monitoring period. Hence, the details of the interviews conducted during the verification are detailed below:

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Moraes	Rozanne	General Manager, SWPL	05/07/2016	<ul style="list-style-type: none"> - General aspects of the project - Changes since validation / previous verification - Remaining issues from validation/ previous verification - Quality management system - Involved personnel and responsibilities - Training and practice of the operational personnel - Implementation of the monitoring plan - Monitoring data management - Data analysis - Issues in the MR - ER calculation 	Narendra Kumar R Pathmanatha Poddiwala
2	Alwis	Rajika	Manager, SWPL	05/07/2016		
3	K	Chandra Kanth	Plant supervisor	05/07/2016		

C.4. Clarification requests, corrective action requests and forward action requests raised

Areas of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form	-	-	-
Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline	-	-	-
Corrections	-	-	-
Changes to the start date of the crediting period	-	-	-
Inclusion of a monitoring plan to a registered project activity	-	-	-
Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline	-	-	-
Changes to the project design of a registered project activity	-	-	-
Types of changes specific to afforestation and reforestation project activities	-	-	-
Others (please specify)	-	-	-
Total	-	-	-

SECTION D. Validation findings**D.1. Compliance with PDD form**

Means of validation	The revised PDD (version 12, dated 03/09/2016) is filled in the template CDM-SSC-PDD, version 8 which is the valid version at the time of submission for request for approval of PRC along with the request for issuance of 2 nd Monitoring period. The template has not been altered and no modifications have been made to the font, format, headings and logo. All the sections of the PDD are checked for the compliance with the "Instructions for filling out the project design document form for CDM project activities" provided in the PDD template.
Findings	No finding
Conclusion	The following is confirmed: 1. The PDD is completed using the valid version of PDD at the time of submission and PP used appropriate type of template i.e., Large scale. 2. All the information has been correctly transferred from registered PDD (version 11)/3/ to the current PDD (version 12)/3/ which is filled in the latest PDD form available in UNFCCC website. Verification team confirms that the transfer of information from the old form to the new form is correct and materially the same as the information in the registered PDD/1/ 3. PDD is in compliance with the instruction provided in the template. 4. As per the requirement of PRC, both clean and track change copy of PDD is submitted for validation.

D.2. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline

Means of validation	No temporary deviation is sought
Findings	NA
Conclusion	NA

D.3. Corrections

Means of validation	No corrections in PDD is sought
Findings	NA
Conclusion	NA

D.4. Changes to the start date of the crediting period

Means of validation	No change in start date of crediting period is sought.
Findings	NA
Conclusion	NA

D.5. Inclusion of a monitoring plan to a registered project activity

Means of validation	Not applicable as monitoring plan is included in the registered PDD itself.
Findings	NA
Conclusion	NA

D.6. Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline

Means of validation	<p>As per registered PDD, the monitoring parameter 'Energy purchased from Ceylon Electricity Board' ($EG_{imp,y}$) is calculated as total of below two:</p> <ul style="list-style-type: none"> Energy Import measured through energy meter M2 installed at the Point of Supply (POS) to the national grid which is recorded in Import register Energy import measured through energy meter M3 installed at the point of purchase of electricity from a local distribution line which is recorded in the electricity bills based <p>But, the energy meter M3 is removed during January 2015 and the complete energy import/purchased is routed through the same line where the energy meter M2 (bidirectional) is installed. Hence the description about M3 is removed from the revised PDD</p> <p>Hence, as per the revised PDD, the monitoring parameter 'Energy purchased from Ceylon Electricity Board' ($EG_{imp,y}$) is monitored as below:</p> <ul style="list-style-type: none"> Energy Import measured through energy meter M2 installed at the Point of Supply (POS) to the national grid which is recorded in Import register <p>Verification confirmed the same during the site visit conducted for the verification of the 2nd monitoring period. The electricity bill for the latest months from January 2015 are checked and confirmed that there is no reading of M3 reported in it. The change is just removal of one energy meter (used for measuring import) which does not impact the applicability of applied methodology AMS. I.D, version 17. From site visit observation and from verification of PPA, it is found that the energy meters are not in the control of PP but within the control of CEB. So, the change in the metering set up is not in the purview of PP and it is done by CEB. Hence, the change is in line with para 5 (c) of Appendix-1 of Project Standard, version 9. As per para 5(c) of Appendix-1 of PS, no prior approval is required for the same and hence the request for approval of PRC is submitted along with the request for issuance of 2nd monitoring period. The changes are correctly reported in the revised PDD (version 12 dated 03/09/2016) Verification team checked same and found that the changes & reporting are in line with the requirement of section 13.8.3.4 of Project standard, version 9.</p>
Findings	No finding
Conclusion	<p>The validation team confirms the below:</p> <ul style="list-style-type: none"> PP has submitted the revised PDD in the latest format. The changes are correctly applied in the revised PDD. The change in the monitoring plan does not impact the applicability of the methodology. As per para 5 (c) of Appendix-1 of project standard, version 9, the reported changes does not require prior approval. The post registration change reported in the revised PDD fulfils the requirement of section 13.8.3.4 of Project standard, version 9. <p>Hence, validation team accepts the permanent changes from the registered monitoring plan reported in the revised PDD.</p>

D.7. Changes to the project design of a registered project activity

Means of validation	No change in project design is sought
Findings	NA
Conclusion	NA

D.8. Types of changes specific to afforestation and reforestation project activities

Means of validation	It is not afforestation or reforestation project activity.
Findings	NA

Conclusion	NA
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SECTION E. Internal quality control

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Following the completion of the assessment process and a recommendation by the assessment team, the validation opinion prepared by Team Leader is independently reviewed by internal Technical Reviewer. TR reviews if all the KBS procedures have been followed and all conclusions are justified in accordance with applicable standards, procedures, guidance and CDM decisions. The TR either is qualified for the technical area within the CDM sectoral scope(s) applicable to project activity or is supported by qualified independent technical expert at this stage

The Technical Reviewer will either accept or reject the recommendation made by the assessment team. The findings can be raised at this stage and PP must resolve them within agreed timeline

The opinion recommended by Technical Reviewer will be confirmed by Manager Technical & Certification and finally authorized by the Managing Director on behalf of KBS as final validation opinion.

SECTION F. Validation opinion

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KBS Certification Services Pvt. Ltd. has been contracted by 'Senok Wind Power (Private) Limited' to undertake independent verification of 2nd monitoring period and validation of the post registration changes of the CDM Project activity "Mampuri Wind Power Project" and UNFCCC Reference Number 9074 as described in the revised PDD, version 12, dated 03/09/2016 to ensure that the post registration changes meet all relevant requirements of the UNFCCC for CDM project activities including CDM VVS. The request is to perform the independent and objective validation on PDD for the permanent changes change from the registered monitoring plan reported in the revised PDD.

Validation methodology and process:

The validation has been performed as described in the VVS, version 09.0, and consists of the following steps:

- Review of the Registered PDD, version 11 dated 18/12/2012
- Desk review of the revised PDD, version 12 dated 03/09/2016, and the relevant documents
- Interviews
- Preparation of the Validation Report

The validation team confirms that the revised PDD has been submitted in the new format and is materially the same as the information in the registered PDD. The validation team also accepts the permanent changes in the registered monitoring plan reported in the revised PDD.

It is DOE's opinion that the revised documentation submitted is conforming to the requirements for Post Registration Changes as stipulated in the Clean Development Mechanism Validation and Verification Standard and thus DOE is recommending the approval of the post registration changes.

Appendix 1. Abbreviations

Abbreviations	Full texts
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CEB	Ceylon Electricity Board
CERs	Certified Emission Reductions
CH ₄	Methane
CL	Clarification Request
CO ₂ e	Carbon dioxide equivalent
COP	Conference of Parties
CMP	Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
DNA	Designated National Authority
DOE	Designated Operational Entity
EF	Emission Factor
ERPA	Emission Reduction Purchase Agreement
ERs	Emission Reductions
FAR	Forward Action Request
GHGs	Greenhouse Gas(es)
GWP	Global Warming Potential
ISO	International Organization of Standardization
IPCC	Intergovernmental Panel on Climate Change
KBS	KBS Certification Services Pvt. Ltd.
KP	Kyoto Protocol
LE	Leakage Emissions
MR	Monitoring Report
MP	Monitoring Plan
NGO	Non Governmental Organisation
OP	Operating Procedure
PE	Project Emissions
PDD	Project Design Document
PS	Project Standard
PCP	Project Cycle Procedure
SPPA	Small Power Purchase Agreement
SWPL	Senok Wind Power (Private) Limited
QA/QC	Quality Assurance/Quality Control
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation & Verification Standard
WTG	Wind Turbine Generator

Appendix 2. Competence of team members and technical reviewers

Personnel Name:		Narendra Kumar	
Qualified to work as:			
Team Leader	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>
Validator/Verifier	<input checked="" type="checkbox"/>	Financial Expert	<input checked="" type="checkbox"/>
Technical Reviewer	<input checked="" type="checkbox"/>	Local Expert	<input checked="" type="checkbox"/>
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
Energy Industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		
Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources		
Energy Demand	TA 3.1: Energy Demand		
Approved by (Manager C& T)	Akhilesh Joshi		
Approval date:	16/01/2016		

Personnel Name:		Pathmanatha Poddimala	
Qualified to work as:			
Team Leader	<input type="checkbox"/>	Technical Expert	<input type="checkbox"/>
Validator/Verifier	<input type="checkbox"/>	Financial Expert	<input type="checkbox"/>
Technical Reviewer	<input type="checkbox"/>	Local Expert (Srilanka)	<input checked="" type="checkbox"/>
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
N/A	N/A		
Approved by (Manager C & T)	Mayank Kumar Jain		
Approval date:	26/06/2012		

Personnel Name:		Chetan Swaroop Sharma	
Qualified to work as:			
Team Leader	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>
Validator/Verifier	<input checked="" type="checkbox"/>	Financial Expert	<input checked="" type="checkbox"/>
Technical Reviewer	<input checked="" type="checkbox"/>	Local Expert (India)	<input checked="" type="checkbox"/>
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources		
	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		
Approved by (Manager C & T)	Gagandeep Kakkar		
Approval date:	09/10/2015		

Personnel Name:		Sanjay Kandari	
Qualified to work as:			
Team Leader	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>
Validator/Verifier	<input checked="" type="checkbox"/>	Financial Expert	<input checked="" type="checkbox"/>
Technical Reviewer	<input checked="" type="checkbox"/>	Local Expert (India)	<input checked="" type="checkbox"/>

Area(s) of Technical Expertise	
Sectoral Scope	Technical Area
Energy Industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar
Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources
Energy demand	TA 3.1. Energy Demand
Waste Handling and Disposal	TA 13.1 Waste Handling and Disposal TA 13.2 Manure
Approved by (Manager C & T)	Akhilesh Joshi
Approval date:	11/12/2015

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	SWPL	Monitoring Report,	Version 01, dated 07/04/2016	SWPL
	SWPL	Monitoring Report	Version 02, dated 03/09/2016	SWPL
2	SWPL	ER Calculation Sheet	Version 01, dated 07/04/2016	SWPL
	SWPL	ER Calculation Sheet	Version 02, dated 03/09/2016	SWPL
3	SWPL	Registered PDD	Version 11, 08/12/2012	Publically available
	SWPL	Revised PDD (Submitted for PRC validation)	Version 12, dated 03/09/2016	Publically available
4	SGS	Validation Report	Dated 18/12/2012	Publically available
5	KBS	Verification report of 1 st Monitoring period	Dated 03/11/2014	Publically available
6	UNFCCC	AMS-I.D - Grid connected renewable electricity generation	Version 17	Publically available
7	IPCC	1. 1996 IPCC Guidelines for National Greenhouse Gas Inventories: work book 2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book	Web link	Publically available
8	UNFCCC	Kyoto Protocol (1997)	Web link	Publically available
9	UNFCCC	Monitoring Report Form (CDM-MRFORM), Version 05.1	Version 05.1	Publically available
10	UNFCCC	CDM Project Standard	Version 9.0	Publically available
11	UNFCCC	CDM Validation and Verification Standard	Version 09	Publically available
12	UNFCCC	Glossary "CDM terms"	Version 08	Publically available
13	CEB	Commissioning Certificate	Commissioning date 06/05/2010	SWPL
14	Suzlon	Technical Specification of WTG	-	SWPL
15	CEB & SWPL	Small Power Purchase Agreement (SPPA) signed between SWPL		SWPL

		and CEB		
16	SWPL & CEB	Invoices for the electricity sale to CEB	-	SWPL
	SWPL	Export register	-	SWPL
17	CEB	Monthly electricity bill	-	SWPL
	SWPL	Electricity import register	-	SWPL
18	CEB	Calibration Certificates of energy meters	-	SWPL
19	KBS	PRC Validation report		NA

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. CL from this validation

CL ID		Section no.		Date: DD/MM/YYYY
Description of CL				
NA				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY

Table 2. CAR from this validation

CAR ID		Section no.		Date: DD/MM/YYYY
Description of CAR				
NA				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY

Table 3. FAR from this validation

FAR ID	xx	Section no.		Date: DD/MM/YYYY
Description of FAR				
NA				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY

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Document information

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01.0	23 March 2015	Initial publication.
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