



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

(Version 01.0)

## VALIDATION REPORT ON POST-REGISTRATION CHANGES (PRCs)

<b>Title and reference number of the project activity</b>	Mampuri Wind Power Project 3
<b>Process track</b>	<input type="checkbox"/> Prior approval <input checked="" type="checkbox"/> Issuance <input type="checkbox"/> Renewal of crediting period
<b>Version number of the validation report on PRCs</b>	02
<b>Completion date of the validation report on PRCs</b>	13/02/2017
<b>Type(s) of PRCs</b>	<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
<b>Version number of PDD to which this report applies</b>	05
<b>Project participant(s)</b>	Senok Wind Resources Pvt. Ltd.
<b>Host Party</b>	Sri Lanka
<b>Sectoral scope(s), selected methodology(ies), and where applicable, selected standardized baseline(s)</b>	Scope 01: Energy Industries (renewable/non-renewable sources) <a href="#">AMS-I.D. ver. 17</a> - Grid connected renewable electricity generation
<b>Name of DOE</b>	KBS Certification Services Pvt. Ltd
<b>Name, position and signature of the approver of the validation report on PRCs</b>	

	<div>Kaushal Goyal Managing Director KBS Certification Services Pvt. Ltd.</div>
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**SECTION A. Executive summary**

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The project activity is the installation of 10.5 MW wind power project in Mampuri/Nawakkaduwa villages, Puttalam District, North Western Province, Sri Lanka. There are total 5 WTG in which each WTG capacity is 2.10 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 CO<sub>2</sub> emission.

KBS Certification Services Pvt. Ltd was appointed for verification of the first 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 04, dated 30/06/2014)	Revised PDD (version 05, dated 05/12/2016)
The accuracy of energy meter is 0.1S	The accuracy of energy meter is 1

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
- site visit and Interviews (07/07/2016)
- 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
3	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 registered monitoring plan was observed during the site visit of verification of 1<sup>st</sup> monitoring period. Hence, the activity performed during the verification is detailed below:

Duration of on-site inspection: 07/07/2016				
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/ Nawakkaduwa village, Puttalam District, North Western Province, Sri Lanka	07/07/2016	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 1<sup>st</sup> 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, SWEPL	07/07/2016	<ul style="list-style-type: none"> <li>- General aspects of the project</li> <li>- Changes since validation / previous verification</li> <li>- Remaining issues from validation/ previous verification</li> <li>- Quality management system</li> <li>- Involved personnel and responsibilities</li> <li>- Training and practice of the operational personnel</li> <li>- Implementation of the monitoring plan</li> <li>- Monitoring data management</li> <li>- Data analysis</li> <li>- Issues in the MR</li> <li>- ER calculation</li> </ul>	Narendra Kumar R Pathmanatha Poddiwala
2	Alwis	Rajika	Manager, SWEPL	07/07/2016		
3	K	Chandra Kanth	Plant supervisor, SWEPL	07/07/2016		

**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)	-	-	-
<b>Total</b>	-	-	-

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

<b>Means of validation</b>	The revised PDD (version 05, dated 05/12/2016) 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 the 1 <sup>st</sup> 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.
<b>Findings</b>	The triggering finding for PRC is reported in verification report.
<b>Conclusion</b>	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., Small scale. 2. All the information has been correctly transferred from registered PDD (version 04) to the current PDD (version 05) 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 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**

<b>Means of validation</b>	No temporary deviation is sought
<b>Findings</b>	NA
<b>Conclusion</b>	NA

**D.3. Corrections**

<b>Means of validation</b>	No corrections in PDD is sought
<b>Findings</b>	NA
<b>Conclusion</b>	NA

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

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

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

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

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

<b>Means of validation</b>	<p>As per registered PDD, the accuracy class of energy meter is 0.1S. In actual the accuracy class of energy meter installed at site is 1 which is less accurate than the accuracy mentioned in the registered monitoring plan. However, the energy meter is in the control of CEB and hence the type &amp; accuracy of meter installed is not in the purview of PP. This is a permanent change from the registered monitoring plan. This change was identified during the verification of 1<sup>st</sup> monitoring period of this project. PP has submitted revised PDD with the correction in accuracy of meter for the PRC approval.</p> <p>Verification team confirmed the same during the site visit conducted for the verification of the 1<sup>st</sup> monitoring period. This is only change in accuracy of energy meter which does not affect the applicability of applied methodology AMS-I.D., version 17. From site visit observation and from verification of SPPA, 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 accuracy of energy meter is not in the purview of PP and it is done by CEB. Hence, the change is in line with para 5 (b) of Appendix of Project Standard, version 9. As per para 5 of Appendix of PS, no prior approval is required for the same and hence the request for approval of PRC is submitted alone with the request for issuance of 1<sup>st</sup> monitoring period. The changes are correctly reported in the revised PDD (version 05 dated 05/12/2016). Verification team checked same and found to be in line with the requirement of section 13.8.3.4 of Project standard, version 9.</p>
<b>Findings</b>	No finding
<b>Conclusion</b>	<p>The validation team confirms the below:</p> <ul style="list-style-type: none"> <li>• PP has submitted the revised PDD in the latest format.</li> <li>• The changes are correctly applied in the revised PDD.</li> <li>• The change in the monitoring plan does not impact the applicability of the methodology.</li> <li>• As per para 5 of Appendix of project standard, version 9, the reported changes does not require prior approval.</li> <li>• The post registration change reported in the revised PDD fulfils the requirement of section 13.8.3.4 of Project standard, version 9.</li> </ul> <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**

<b>Means of validation</b>	No change in project design is sought
<b>Findings</b>	NA
<b>Conclusion</b>	NA

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

<b>Means of validation</b>	It is not afforestation or reforestation project activity.
<b>Findings</b>	NA
<b>Conclusion</b>	NA

**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 Energy (Private) Limited' to undertake independent verification of 1<sup>st</sup> monitoring period and validation of the post registration changes of the CDM Project activity "Mampuri Wind Power Project 3" and UNFCCC Reference Number 9990 as described in the revised PDD, version 5, dated 05/12/2016 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 04 dated 30/06/2014
- Desk review of the revised PDD, version 05 dated 05/12/2016, 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 <sub>4</sub>	Methane
CL	Clarification Request
CO <sub>2</sub> 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

<b>Personnel Name:</b>		<b>Narendra Kumar</b>	
<b>Qualified to work as:</b>			
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"/>
<b>Area(s) of Technical Expertise</b>			
<b>Sectoral Scope</b>	<b>Technical Area</b>		
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		

<b>Personnel Name:</b>		<b>Chetan Swaroop Sharma</b>	
<b>Qualified to work as:</b>			
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"/>
<b>Area(s) of Technical Expertise</b>			
<b>Sectoral Scope</b>	<b>Technical Area</b>		
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		

<b>Personnel Name:</b>		<b>Pathmanatha Poddiala</b>	
<b>Qualified to work as:</b>			
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"/>
<b>Area(s) of Technical Expertise</b>			
<b>Sectoral Scope</b>	<b>Technical Area</b>		
N/A	N/A		
Approved by (Manager C & T)	Mayank Kumar Jain		
Approval date:	26/06/2012		

<b>Personnel Name:</b>		<b>Sanjay Kandari</b>	
<b>Qualified to work as:</b>			
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"/>
<b>Area(s) of Technical Expertise</b>			
<b>Sectoral Scope</b>	<b>Technical Area</b>		
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		
Waste Handling and Disposal	TA 13.1 Waste Handling and Disposal TA 13.2 Manure		
Approved by (Manager C & T)	Gagandeep Kakkar		
Approval date:	03/11/2015		

### Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	SWRPL	Monitoring Report,	Version 01, dated 19/05/2016	SWRPL
	SWRPL	Monitoring Report	Version 02.2, dated 09/02/2017	SWRPL
2	SWRPL	ER Calculation Sheet	Version 01, dated 19/05/2016	SWRPL
	SWRPL	ER Calculation Sheet	Version 02.2, dated 09/02/2017	SWRPL
3	SWRPL	Registered PDD	<a href="#">Version 4, 30/06/2014</a>	Publically available
	SWRPL	Revised PDD (Submitted for PRC validation)	Version 5, dated 05/12/2016	Publically available
4	KBS	Validation Report	<a href="#">Dated 17/07/2014</a>	Publically available
5	UNFCCC	Project webpage	<a href="#">Web link</a>	Publically available
6	UNFCCC	AMS-I.D - Grid connected renewable electricity generation	<a href="#">Version 17</a>	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	<a href="#">Web link</a>	Publically available
8	UNFCCC	Kyoto Protocol (1997)	<a href="#">Web link</a>	Publically available
9	UNFCCC	Monitoring Report Form (CDM-MRFORM), Version 05.1	<a href="#">Version 05.1</a>	Publically available
10	UNFCCC	CDM Project Standard	<a href="#">Version 9.0</a>	Publically available
11	UNFCCC	CDM Validation and Verification Standard	<a href="#">Version 09</a>	Publically available
12	UNFCCC	Glossary "CDM terms"	<a href="#">Version 08</a>	Publically available
13	CEB	Commissioning Certificate	Commissioning date 19/05/2014	SWRPL
14	Suzlon	Technical Specification of WTG	-	SWRPL
15	CEB & SWRPL	Small Power Purchase Agreement (SPPA) signed between SWPL	Dated 22/11/2010	SWRPL

		and CEB		
16	SWRPL & CEB	Invoices for the electricity sale to CEB	-	SWRPL
	SWRPL	Export register	-	SWRPL
17	CEB	Monthly electricity bill issued by CEB	-	SWRPL
	SWRPL	Electricity import register	-	SWRPL
18	CEB	Calibration Certificates of energy meters	-	SWRPL

## 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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