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# VALIDATION OPINION FOR REVISION OF REGISTERED MONITORING PLAN

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**CECIC Wind-power (Gansu) Co., Ltd.**

**CECIC Gansu Yumen Changma No.3  
Wind Farm Project**

**UNFCCC Ref. No. 4734**

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**SGS Climate Change Programme**

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<b>Project Title:</b>			
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<b>Organisation:</b>		<b>Client:</b>	
SGS United Kingdom Limited		CECIC Wind-power (Gansu) Co., Ltd.	
<b>Subject:</b>			
Validation Opinion for Request for Approval of Changes:			
[ ]	Temporary Deviation from the Monitoring Plan	<b>Distribution/Document Control</b>	
[X]	Correction		
[X]	Permanent changes to the monitoring plan as described in the registered PDD		
[ ]	Temporary Deviation from the monitoring plan and Permanent changes to the monitoring plan as described in the registered PDD		
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## Abbreviations

CAR	Corrective Action Request
CDM	Clean Developed Mechanism
CERs	Certified Emission Reductions
CL	Clarification Request
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring Plan
MR	Monitoring Report
PDD	Project Design Document
PP	Project Participant
PPA	Power Purchase Agreement
RMP	Revised Monitoring Plan
SGS	SGS United Kingdom Ltd.
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

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## 1. Validation Opinion

Paragraphs 247-256/262-268 of the Clean Development Mechanism Validation and Verification Standard version 02.0, require the DOE to assess temporary and permanent changes from the registered monitoring plan and/or monitoring methodology.

Paragraph 57 of the modalities and procedures for the CDM allows project participants to revise monitoring plans in order to improve accuracy and/or completeness of information, subject to the revision being validated by a Designated Operational Entity.

SGS United Kingdom Ltd has been contracted by CECIC Wind-power (Gansu) Co., Ltd. to perform such a validation of the revision of monitoring plan according to the procedure detailed in Annex 28 to EB 49 meeting report; the registered monitoring plan is part of the PDD of registered CDM project CECIC Gansu Yumen Changma No.3 Wind Farm Project with UNFCCC ref. no. 4734 (hereinafter referred to as "the Project"). The purpose of a validation is to have an independent third party assessment of the revision of monitoring plan. In particular, the level of accuracy and/or completeness in the proposed revision of the monitoring plan, and the conformity with approved monitoring methodology applicable to the project activity.

By applying the proposed revision of monitoring plan, parameter  $EG_{facility,y}$  (Quantity of net electricity generation supplied by the project plant/unit to the grid in year y) is to be monitored by the ten bi-directional electricity meters installed at the 35kV side of the 35kV/330kV substation.

This revision improves the accuracy of information provided and consistency in the registered PDD and the monitoring plan.

Furthermore, we confirm that:

- (a) the proposed revision points have been described, and an assessment has been provided to substantiate the reasons for each of the proposed revision points of the registered monitoring plan, using objective evidence;
- (b) the proposed revision of the monitoring plan ensures that the level of accuracy or completeness in the monitoring and verification process is not reduced as a result of the revisions;
- (c) the proposed revision of the monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity whilst ensuring the conservativeness of the emission reductions calculation.
- (d) the findings of the previous verification reports have been taken into account.

**Signed on Behalf of the Validation Body by Authorized Signatory**

Signature:



Name: Siddharth Yadav

Date: 06-08-2012

## **2. Introduction**

### **2.1 Objective**

Paragraphs 247-256/262-268 of the Clean Development Mechanism Validation and Verification Standard version 02.0, require the DOE to assess temporary and permanent changes from the registered monitoring plan and/or monitoring methodology.

Paragraph 57 of the modalities and procedures for the CDM allows project participants to revise monitoring plans in order to improve accuracy and/or completeness of information, subject to the revision being validated by a Designated Operational Entity.

SGS United Kingdom Ltd has been contracted by CECIC Wind-power (Gansu) Co., Ltd. to perform such a validation of the revision of monitoring plan according to the procedure detailed in VVS version 02.0. The registered monitoring plan is part of the PDD of registered CDM project CECIC Gansu Yumen Changma No.3 Wind Farm Project with UNFCCC ref. no. 4734. The purpose of a validation is to have an independent third party assessment of the deviation/revision of monitoring plan. In particular, the level of accuracy or completeness in the proposed revision/deviation of the monitoring plan, and the conformity with the approved monitoring methodology applicable to the project activity.

The Validation was performed in accordance with the UNFCCC criteria for the Clean Development Mechanism (CDM) and the host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

SGS reviewed the revised PDD of the project containing the permanent changes to the monitoring plan, using a risk based approach and conducted follow-up interviews.

### **2.2 Scope**

The scope of the validation is defined as an independent and objective review of revision of monitoring plan. The information in these documents is reviewed against the Kyoto Protocol requirements, the UNFCCC rules and associated interpretations.

The validation is not meant to provide any consulting towards the Client/the project. However, SGS may issue requests for clarifications and/or corrective actions which may provide input for improvement of the project design.

### **2.3 GHG Project Description**

Refer to <http://cdm.unfccc.int/Projects/DB/TUEV-RHEIN1303442859.42/view>, the project web page. There is no change in the project activity description. The project was registered on 28<sup>th</sup> April, 2011 under UNFCCC ref. no. 4734.

### 3. Methodology

#### 3.1 Review of CDM-PDD and Additional Documentation

The validation is performed primarily as a document review of the publicly available project documents. The assessment is performed by trained assessors using a validation protocol.

#### 3.2 Use of the Validation Protocol

The validation protocol used for the assessment is partly based on the templates of the Clean Development Mechanism Validation and Verification Standard version 02.0:

- it organises, details and clarifies the requirements the project is expected to meet; and
- it documents both how a particular requirement has been validated and the result of the validation.

The validation protocol consists of several tables. The different columns in these tables are described below.

Checklist Question	Ref ID	Means of Verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements are linked to checklist questions the project should meet.	Lists any references and sources used in the validation process. Full details are provided in the table at the bottom of the checklist.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (Y/OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). A Clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

The validation protocol is attached with the report as Annex 1.

#### 3.3 Findings

As an outcome of the validation process, the team can raise different types of findings.

In general, where insufficient or inaccurate information is available and clarification or new information is required the Assessor shall raise a **Clarification Request (CL)** specifying what additional information is required.

Where a non-conformance arises the Assessor shall raise a **Corrective Action Request (CAR)**. A CAR is issued, where:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions;
- Issues identified in a FAR during validation to be verified during verification have not been resolved by the project participants.

A Forward Action Request (FAR) is raised during verification for actions if the monitoring and reporting require attention and/or adjustment for the next verification period.

The validation process may be halted until this information has been made available to the assessors' satisfaction. Failure to address a CL/FAR may result in a CAR. Information or clarifications provided as a result of a CL/FAR may also lead to a CAR.

Corrective Action Requests, Clarification Requests and Forward Action Requests are raised in the draft validation protocol and detailed in a separate form (Findings Overview). In this form, the Project Developer is given the opportunity to address and "close" outstanding CARs and respond to CLs and FARs. The detailed Finding Overview is attached with this document as Annex 2.

### 3.4 Internal Quality Control

Following the completion of the assessment process and a recommendation by the Assessment team, all documentation will be forwarded to a Technical Reviewer. The task of the Technical Reviewer is to check that all procedures have been followed and all conclusions are justified. The Technical Reviewer will either accept or reject the recommendation made by the assessment team.

#### Technical Review Team

Name	Role
Simon ZHAO Xinguang	Technical Reviewer and Technical Area Expert (TA 1.2)



## 4. Validation Findings

### 4.1 Application of Monitoring Methodology and Monitoring Plan

#### **Type of Revision**

The revision of monitoring plan is a result of a recommendation by the PP/DOE during the second periodic verification. The details of the revision are discussed below.

**The proposed revision of the monitoring plan ensures that the level of accuracy and completeness in the monitoring and verification process is not reduced as a result of the revisions (details below).**

#### **The original monitoring plan in the Registered PDD**

In the original PDD, quantity of net electricity generation supplied by the project plant/unit to the grid in year  $y$  ( $EG_{\text{facility},y}$ ) is described as to be continuously measured by two sets of bi-directional meters (one main meter and one backup meter) installed at the 330kV side of the 35kV/330kV substation.  $EG_{\text{facility},y}$  is the net electricity of exports and imports. The accuracy class of the electricity meters is no less than 0.5S and the meters will be calibrated at least once a year by a qualified third party as per an appropriate industry standard or the manufacturer's specifications. Monitoring meters shall be monthly read and recorded. And monitoring data shall be cross-checked with receipt of electricity sales.

#### **The proposed Revision of Monitoring Plan**

The monitoring meters described in the original monitoring plan for measuring parameter  $EG_{\text{facility},y}$  have been shared by other project(s) since 01/01/2012 during the second monitoring period. Thus, in the revision of monitoring plan,  $EG_{\text{facility},y}$  will be monitored by ten bi-directional electricity meters installed at the 35kV side of the 35kV/330kV substation.  $EG_{\text{facility},y}$  is the net electricity of exports and imports. The electricity exported to the grid by the Project is the sum of values measured by the ten meters for exported electricity. Meanwhile, the electricity imported from the grid by the Project is the sum of values measured by the ten meters for imported electricity. The accuracy class of the ten electricity meters are no less than 0.5S and the meters will be calibrated at least once a year by a qualified third party as per an appropriate industry standard or the manufacturer's specifications. Monitoring meters shall be monthly read and recorded. And monitoring data shall be cross-checked with receipt of electricity sales. The conservative value will be adopted once the value from meter readings and the value from the receipt of electricity sales are different.

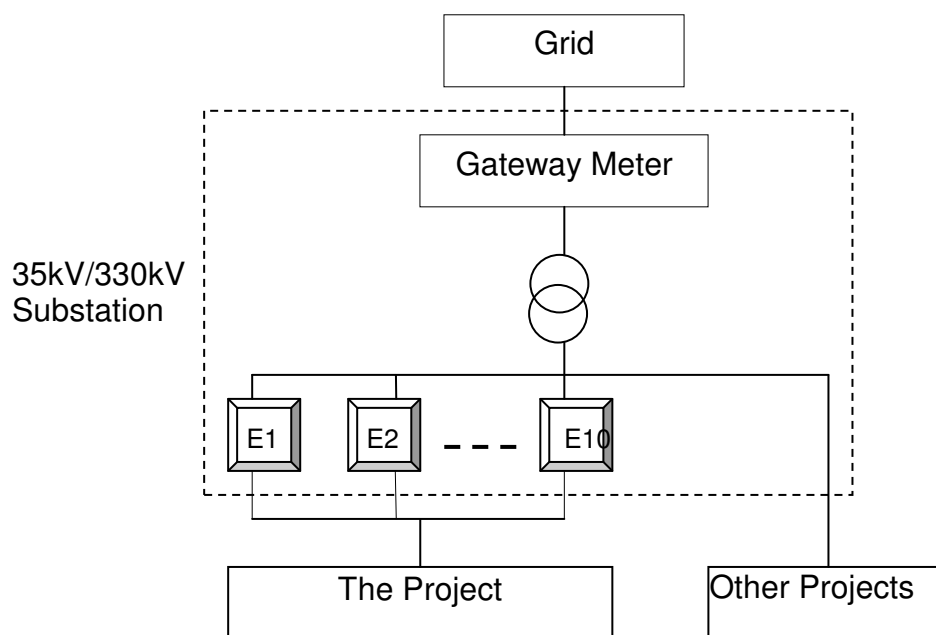
The line diagram of metering system in the proposed revision of monitoring plan is shown in Figure 1 below.

The electricity meters indicated in Figure 1 were installed during the project construction period and are all operated and maintained by the grid company. The electricity exported to the grid and imported from the grid by the Project are measured by meters E1 to E10. In accordance with the applied methodology, sales receipts will be used for cross check. Values to be settled on sales receipts are determined by the grid company based on the monitoring result of the gateway meter and meters of this project and meters of other project(s) sharing the gateway meter. The electricity exported to the grid and imported from the grid by other project(s) which share the same gateway meter with the Project can be measured by their own meters. The gateway meter can measure the total electricity exported to the grid and imported from the grid by all these projects. By reviewing the approach defined in the PPA agreed by the project company and grid company for issuing receipts of electricity sales, it can be confirmed that both values of electricity exported to the grid by the project and the electricity imported from the grid by the project used for settlement in sales receipts are issued monthly based on the meter readings of E1 to E10, gateway meter and the meters installed for other project(s) following pro-rata principle.

- ✧ For electricity exported to the grid by the project, the settlement value in the receipts of electricity sales is prorated according to the measurement results for electricity exported by E1 to E10, the gateway meter and the meters of other project(s).

- ✧ For electricity imported from the grid by the project, the settlement value in the receipts of electricity sales is prorated according to the measurement results for electricity imported by meters E1 to E10, the gateway meter and the meters of other project(s).

Considering the gateway meter is installed at the 330kV side of the 35kV/330kV substation, the measurement results from which do not include the transmission and line losses, the assessment team confirmed that the transmission and line losses have been taken into seriously account in the receipt of electricity sales issuing approach defined in PPA and this approach ensures the conservativeness of the values used for emission reductions calculation since only the conservative one from the two sources (values from meter readings of E1 to E10 and values from the receipts of electricity sales) will be adopted.



**Figure 1 Illustrative metering diagram**

The meters of other project(s) and the gateway meter are not involved in the revised monitoring plan as parameters to be monitored due to the following reasons:

1. As stated above, the meters of other project(s) and the gateway meter are operated and maintained by the grid company which are out of the project company's control. Thus, it is not feasible to involve the above mentioned meters in the revised monitoring plan as parameters to be monitored.
2. The electricity exported to the grid by the project and the electricity imported from the grid by the project are directly measured by the meters E1 to E10. The meters of other project(s) and the gateway meter do not directly involve in the electricity measuring of the project. The measurement results from them are only used for issuing the receipts of electricity sales as per the approach defined in PPA. Furthermore, the values from the receipts of electricity sales are only used for cross checking purpose. Thus, as per the applied methodology, there is no need to involve the meters of other project(s) and the gateway meter in the monitoring plan as parameters to be monitored.
3. Although the meters of other project(s) and the gateway meter are out of the project company's control, the project company still can ensure the reasonability and reliability of the data obtained and used for Emission Reduction calculation. This is because besides the grid company, the project company can also read the meter readings of E1 to E10 through telecommunication system in the wind farm. Then, when the grid company inform the meter readings of E1 to E10 and final settlement electricity to the project company, the staff of project company can compare the values of final settlement electricity with the values from meter readings of E1 to E10 to see if the gap between the two sets of values are in a reasonable range considering the transmission and line losses.

Through document review, onsite visit performed by all team members and analysis above, the assessment team confirmed that it is reasonable and appropriate not to involve the meters of other project(s) and gateway meter as parameters in the proposed revision of monitoring plan. And the monitoring methods and procedures of Parameters  $EG_{facility,y}$  in the proposed revision of monitoring plan, including the monitoring meters and locations, monitoring and recording frequencies, are compliance with the applied monitoring methodology, i.e. ACM0002 version 12. The accuracy of the meters and the calibration frequency comply with Chinese nation standard, and are not reduced compared with the provisions in the monitoring plan of the registered PDD. The QA/QC procedures are also validated to be reliable and in line with actual monitoring of project by the assessment team. The statements of parameters in section B.7.1 and in item “Measurement meters” of section B.7.2 of the proposed revision of the monitoring plan are compliance with the actual monitoring system and the implementation of the project activity. Therefore, it is confirmed that the changes in the proposed revision of monitoring plan will not impact the accuracy and completeness of the monitoring plan in the registered PDD.

In addition, two other revised points in the monitoring plan of the proposed revised PDD are discussed below:

- ✧ The “Corrective actions” in section B.7.2 of the revised PDD. As meters E1 to E10 were involved in the monitoring system in the proposed revision of monitoring plan. The “Corrective actions” was amended taken them into consideration and therefore could improve the accuracy and completeness of monitoring. The revised “Corrective actions” is validated to be consistent with actual monitoring situation through onsite interview by the assessment team and thus deemed reasonable.
- ✧ The “Training” in section B.7.2 of the revised PDD. The assessment team considered the “Training” in the revised PDD is feasible and appropriate.

There are also some wording/editorial changes in the proposed revision of monitoring plan that improves the readability / quality of the document.

Based on the above descriptions, the assessment team can confirm that the proposed revision of the monitoring plan ensures that the level of accuracy and completeness in the monitoring process.

**The proposed revision of the monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity (details below).**

The project was registered against ACM0002 version 12. The Parameters  $EG_{facility,y}$  are continuously monitored and monthly recorded in the proposed revision of monitoring plan. Receipt of electricity sales are used for cross check with the measurement results. The accuracy of the meters and calibration frequency comply with Chinese national standard. The frequency of measurements and the quality of monitoring equipment, including calibration requirements and QA/QC procedures, comply with the methodology.

In accordance to paragraphs 263 to 266 of the VVS version 02.0, it has been validated that the proposed revision of monitoring plan improves the accuracy and completeness of monitoring, consistency between actual monitoring situation and the proposed revision of monitoring plan. The proposed revision of monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity, i.e. ACM0002 Version 12.

The proposed revision of monitoring plan applies from 01/01/2012 onwards. And this revision has no effect on the previous first monitoring period.

### Corrections

According to the Appendix 1 of EB65 Annex 5 “Clean Development Mechanism Project Standard” version 01.0, there are two corrections in the proposed revised PDD which do not require prior approval by the board. Considering the permanent change of the monitoring plan need prior approval, the three corrections are combined in this validation report for submission. Please refer to below paragraphs for details.

- ✧ The section A.3 “Project participants” of the revised PDD is updated as per information on the UNFCCC website.
- ✧ The “Figure B.3-1 Project Boundary” in section B.3 of the revised PDD. Compared to the original figure in the original PDD, the new figure deletes the locations of monitoring point(s) and equipments(s). The assessment team considered the new figure is more appropriate than the original one since firstly, the monitoring point(s) and equipment(s) indicated in the original figure are not accurate and complete any more; Secondly, the new monitoring points and equipments in compliance with the actual monitoring

situation have already been indicated in the “B.7-2 Illustrative meter diagram” in section B.7.2 of the revised PDD. Thus, there is no need to indicate those points and equipments in the Figure of Project Boundary repeatedly. In addition, the project boundary indicated in the new figure is the same as the original one, which is verified by the assessment team and confirmed to be in compliance with the actual situation.

- ✧ The section C.2.1.1 “Starting date of the first crediting period” of the revised PDD is updated as per information on the UNFCCC website.

## 4.2 Findings of Previous Verification Reports

This proposed revision of monitoring plan is triggered during the second periodic verification. No FAR was raised in the previous verification. 3 CARs were raised and closed during the first periodic verification. These findings were taken into account. These findings do not have impact on the revision of monitoring plan.

## 5. List of Persons Interviewed

Date of site visit	Name	Position	Short description of subject discussed
26/06/2012	MA Xiaobing	Engineer, CECIC Wind-power (Gansu) Co., Ltd.	Monitoring equipment and QA/QC procedures in the monitoring plan
26/06/2012	YANG Shuai	CDM Project Manager, CECIC Wind-power (Gansu) Co., Ltd.	Monitoring equipment and QA/QC procedures in the monitoring plan
26/06/2012	ZHANG Qingxi	CDM Project Manager, Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.	Monitoring equipment and QA/QC procedures in the monitoring plan
26/06/2012	SHEN Hongshuai	Consultant, CECEP Wind Power Corporation	Parameters and formulae

## 6. Document References

Category 1 Documents (documents provided by the Client that relate directly to the GHG components of the project, (i.e. the CDM Project Design Document, confirmation by the host Party on contribution to sustainable development and written approval of voluntary participation from the designated national authority):

/1/ Revised PDD version 11.0, dated 2<sup>nd</sup> July, 2012

Category 2 Documents (background documents used to check project assumptions and confirm the validity of information given in the Category 1 documents and in validation interviews):

/2/ Registered PDD of the project, version 10.2 dated 20<sup>th</sup> April, 2011.

/3/ Validation Report of the project, issued by TUV Rheinland, Report No. 01 997 9105061567, version 05 dated 20<sup>th</sup> April, 2011.

/4/ ACM0002: "Consolidated Methodology for Grid-Connected Electricity Generation from Renewable Sources", version 12.

/5/ Verification report of the project for the first Monitoring Period, issued by SGS, revision No. 0 dated 26<sup>th</sup> December, 2011.

/6/ Clean Development Mechanism Validation and Verification Standard version 02.0.

/7/ Clean Development Mechanism Project Standard version 01.0.

/8/ Clean Development Mechanism Project Cycle Procedure version 02.0.

/9/ Power Purchase Agreement (PPA) signed between the project company and grid company.



## Annex 1: Validation Protocols

Checklist Question	Reference	MoV*	Comments	Conclusion/ CARs/CLs
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Checklist Question	Reference	MoV*	Comments	Conclusion/ CARs/CLs
<b>A.1. General Requirements</b> <i>(Note that the sections A.1.1- A.1.4 may be completed after the other sections are completed)</i>				
A.1.1. Is the deviation/revision in the monitoring plan based on a decision by the CDM EB	EB49, Annex 29	DR	No. The revision of the monitoring plan is proposed by the PP/DOE.	OK
A.1.2. Is the deviation/revision based on a decision by CDM EB but also additional revisions are proposed by the PP/DOE	EB49, Annex 29	DR	No. The revision of the monitoring plan is proposed by the PP/DOE.	OK
A.1.3. Is the need for deviation/revision in monitoring plan spotted during the first monitoring period?	EB49, Annex 29 Project page on UNFCCC website	DR	No. The revision of monitoring plan is spotted during the second monitoring period, since the reason which lead to the revision of monitoring plan was happened during the second monitoring period.	OK
A.1.4. Is the revised monitoring plan complete and does the revised monitoring plan follow the registered PDD template?	Registered PDD	DR	Yes. The revised monitoring plan is complete, contains Section B.7 and Annex 4 of the PDD, and follows the template for CDM PDD version 03, which was applied by the registered PDD.	OK
A.1.5. Has the revised monitoring plan been submitted in track change mode for each of the revision point (issue)?	Revised monitoring plan	DR	Yes. Track change version of the revised monitoring plan was submitted by the PP. Each of the revision point was clearly tracked.	OK
A.1.6. is there an objective evidence for each of the proposed revision/deviation points (issue)?			Yes. There are objective evidences for each of the proposed revision point.	OK
A.1.7. Does the revised monitoring plan also include the Annex 4 (Annex 5 (VVS)) ?	Registered PDD	DR	Yes. The revised monitoring plan also includes the Annex 4.	OK

Checklist Question	Reference	MoV*	Comments	Conclusion/ CARs/CLs
A.1.8. Does the revised monitoring plan lead/associate to any kind of change in the project registered design?	Registered PDD & EB48 Annex 66-67	DR	No. The revised monitoring plan only changes the sections of the monitoring plan and does not associate to any kind of change in the project registered design.	OK
<b>A.2. Data and Parameters Monitored</b>				
A.2.1. Does the revised monitoring plan in the PDD comply with the approved methodology provided for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period?	VVS para 132 Revised MP Section B.7 EB49, annex 2, para 9	DR	<p>Yes. A two-step process was applied to assesses compliance with this requirement, as follows:</p> <ul style="list-style-type: none"> <li>a) Compliance of the monitoring plan with the approved methodology. <ul style="list-style-type: none"> <li>(i) By means of document review, the assessment team identified that there is only one monitoring parameter required by ACM0002 version 12 for newly constructed wind power project, <math>EG_{facility,y}</math> (Quantity of net electricity generation supplied by the project plant/unit to the grid in year y).</li> <li>(ii) The assessment team confirm that the monitoring plan contains the above said parameter <math>EG_{facility,y}</math>. Please refer to section 4.1 for the detailed information. <math>EG_{facility,y}</math> is clearly described and that the means of monitoring described in the revised monitoring plan complies with the requirements of the methodology. The accuracy of the meters and calibration frequency comply with Chinese national standard. The frequency of measurements and the quality of monitoring equipment, including calibration requirements and QA/QC procedures, comply with the methodology. The revised monitoring plan complies with the monitoring methodology.</li> </ul> </li> <li>(b) Implementation of the plan. By means of review of the documented procedures, interviews with relevant personnel, it is confirmed that: <ul style="list-style-type: none"> <li>(i) The monitoring arrangements described in the revised monitoring plan are feasible within the project design;</li> <li>(ii) The means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, are sufficient to ensure that the emission reductions achieved by/resulting from the CDM project activity can be reported ex post and verified.</li> </ul> </li> </ul>	OK
A.2.2. Are the changes in the	ACM0002	DR	Yes, the proposed revision of monitoring plan complies with the monitoring methodology, i.e. ACM0002 version 12. The proposed revision of monitoring plan is not related to	OK



Checklist Question	Reference	MoV*	Comments	Conclusion/ CARs/CLs
monitoring plan inline to the applied methodology and tool?	version 12		the application of any tool. For the detailed revision points of the monitoring plan, please refer to Section 4.1.	
A.2.3. Are the changes affecting the ER calculation (directly/indirectly)?	Revised MP	DR	As per the proposed revision of monitoring plan, parameter $EG_{\text{facility},y}$ needs to be monitored, the Quantity of net electricity generation supplied by the project plant/unit to the grid in year y ( $EG_{\text{facility},y}$ ) is determined from the monitored data of electricity exported to the grid minus electricity imported from the grid. Both electricity exported to the grid and electricity imported from the grid will be monitored by the ten bi-directional meters installed at the 35kV side of 35kV/330kV substation instead of the meters mentioned in the original monitoring plan.  Such revision addressed in the monitoring plan leads to the improvement of the completeness and accuracy.	OK
A.2.4. Is the information given for each monitoring variable by the presented table sufficient to ensure the verification of a proper implementation of the monitoring plan?	PDD (VVM) Section-B.7 PDD (VVS) Section B.7	DR	Yes. The information given for each monitoring variable by the presented table is sufficient to ensure the verification of a proper implementation of the revised monitoring plan.  The revised monitoring plan contains the necessary parameter that is required by the methodology or is necessary for emission reduction calculations. The accuracy of the meters and calibration frequency comply with Chinese national standard. The frequency of measurements and the quality of monitoring equipment, including calibration requirements and QA/QC procedures, comply with the methodology.	OK
A.2.5. Has there been an issuance with the original monitoring plan of the registered PDD in the past?  A.2.6. if so how did the identified gaps effect the ER calculations for the monitoring periods in the past?	Project page on UNFCCC website	DR	Yes. There was one issuance using the original monitoring plan contained in the registered PDD.  The changes to the monitoring plan started during the 2 <sup>nd</sup> monitoring period. The actual monitoring during MP1 was in accordance with the original monitoring plan in the registered PDD.	OK
A.2.7. Is the information given for each monitoring variable by the presented table sufficient to ensure the delivery of high quality data free of potential for	PDD (VVM) Section-B.7 PDD (VVS) Section B.7	DR	Yes. The information given for each monitoring variable by the presented table is sufficient to ensure the delivery of high quality data free of potential for biases or intended or unintended changes in data records.  The type and accuracy of monitoring equipment, monitoring and recording frequencies, calibration requirements and QA/QC procedures are clearly described in the proposed	OK

Checklist Question	Reference	MoV*	Comments	Conclusion/ CARs/CLs
biases or intended or unintended changes in data records?			revision of monitoring plan.	
A.2.8. Is the monitoring approach in line with current good practice, i.e. will it deliver data in a reliable and reasonably acceptable accuracy?	PDD (VVM) Section-B.7 PDD (VVS) Section B.7	DR	Yes. The monitoring approach in the proposed revision of monitoring plan is in line with current good practice. And it will deliver data in a reliable and reasonably acceptable accuracy.	OK
A.2.9. Are all formulae used to determine project emission clearly indicated and in compliance with the monitoring methodology.	PDD (VVM) Section-B.7 PDD (VVS) Section B.7	DR	Yes. All formulas used to determine emission reductions are clearly indicated and are in compliance with the applied methodology.	OK
<b>A.3. Quality Control (QC) and Quality Assurance (QA) Procedures</b>				
A.3.1. Is the selection of data undergoing quality control and quality assurance procedures complete?	VVS para 94/132	DR	Yes. The selection of data undergoing quality control and quality assurance procedures is complete.	OK
A.3.2. in case, a deviation/revision is proposed, the impact of the revision/deviation should be assessed and it not result in reduced level of accuracy and completeness in the monitoring and verification process	EB49, annex 2, para 9		In compliance with EB49, annex 2 and paragraphs 262-268 of the VVS version 02.0, it has been validated that the proposed revision of the monitoring plan ensures that the level of accuracy and completeness in the monitoring and verification process is not reduced as a result of the revisions.	OK

Checklist Question	Reference	MoV*	Comments	Conclusion/ CARs/CLs
A.3.3. Are quality control procedures and quality assurance procedures sufficiently described to ensure the delivery of high quality data?	VVS para 132	DR	Yes. In compliance with paragraphs 132 of the VVS version 02.0, it has been validated that the quality control procedures and quality assurance procedures are sufficiently described to ensure the delivery of high quality data.	OK
A.3.4. Is it ensured that data will be bound to national or internal reference standards?	VVS para 94	DR	Yes, it is ensured that data will be bound to national standard.	OK
<b>A.4. Operational and Management Structure</b>				
A.4.1. Is the authority and responsibility of project management clearly described?	PDD (VVM) Section B.7.2/Annex 4 PDD (VVS) Section B.7 and Annex 5	DR	Yes, the authority and responsibility of project management are clearly described.	OK
A.4.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	PDD (VVM) Section B.7.2/Annex 4 PDD (VVS) Section B.7 and Annex 5	DR	Yes. The authority and responsibility for registration, monitoring, measurement and reporting clearly described.	OK
<b>A.5. Monitoring Plan (Annex 4) (Annex 5 (VVS))</b>				
A.5.1. Does the monitoring plan completely describe all measures to be implemented for monitoring all parameter required, including measures to be implemented for ensuring	VVS para 133 b	DR	The monitoring related content are all written in Section B.7 and no specific content is written in Annex 4 of the registered PDD and of the proposed revision of monitoring plan.  Yes. The proposed revision of monitoring plan completely describes all measures to be implemented for monitoring the parameter required, including measures to be implemented for ensuring data quality in Section B.7.	OK

Checklist Question	Reference	MoV*	Comments	Conclusion/ CARs/CLs
data quality?				
A.5.2. Does the monitoring plan provide information on monitoring equipment and respective positioning in order to safeguard a proper installation?	VVS para 133 b	DR	<p>The monitoring related content are all written in Section B.7 and no specific content is written in Annex 4 of the registered PDD and of the proposed revision of monitoring plan.</p> <p>Yes. The proposed revision of monitoring plan provides information on monitoring equipment and respective positioning. The uncertainty level of the meters is clearly described and the meter positioning is shown in the metering diagram in Section B.7.</p>	OK
A.5.3. Is there any change proposed in the specifications of the monitoring equipment or their positioning or installation then the impact of the change due to revision should be assessed and it not result in reduced level of accuracy and completeness in the monitoring and verification process	EB49, annex 2, para 9		<p>The monitoring related content are all written in Section B.7 and no specific content is written in Annex 4 of the registered PDD and of the proposed revision of monitoring plan.</p> <p>In the original monitoring plan, <math>EG_{facility,y}</math> will be monitored by the monitoring meters with accuracy no less than 0.5S installed at the 330kV side of the 35kV/330kV substation. In the proposed revision of monitoring plan, <math>EG_{facility,y}</math> is revised to be monitored by the ten bi-directional meters with accuracy no less than 0.5S installed at the 35kV side of the 35kV/330kV substation.</p> <p>Although the monitoring positioning are downgraded from 330kV side to 35kV side of the 35kV/330kV substation, considering the following two reasons the assessment team confirmed the level of accuracy and completeness in the monitoring and verification process are not reduced as a result of the proposed revision of monitoring plan.</p> <ol style="list-style-type: none"> <li>1. Values from the meter readings will be cross-checked with the values from the receipt of electricity sales and the conservative ones will be adopted for emission reductions calculation.</li> <li>2. The values from receipts of electricity sales are determined basing on the approach defined in the PPA agreed by the project company and grid company, in which the transmission and line loss have already been taken into account.</li> </ol>	OK
A.5.4. Are procedures identified for calibration of monitoring equipment?	VVS para 133 a-c	DR	<p>The monitoring related content are all written in Section B.7 and no specific content is written in Annex 4 of the registered PDD and of the proposed revision of monitoring plan.</p> <p>Yes. Procedures are identified for the calibration of monitoring equipments in section B.7 of the proposed revision of monitoring plan. All the meters involved in the monitoring plan will be calibrated annually.</p>	OK

Checklist Question	Reference	MoV*	Comments	Conclusion/ CARs/CLs
A.5.5. Is there any change proposed in the calibration procedures, if yes then the impact of the change due to revision/deviation should not result in reduced level of accuracy and completeness in the monitoring and verification process	EB49, annex 2, para 9		The monitoring related content are all written in Section B.7 and no specific content is written in Annex 4 of the registered PDD and of the proposed revision of monitoring plan.  No. There is no change in the calibration procedures. The level of accuracy and completeness in the monitoring and verification process are not reduced as a result of the proposed revision of monitoring plan.	OK
A.5.6. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	VVS para 133 a-c	DR	The monitoring related content are all written in Section B.7 and no specific content is written in Annex 4 of the registered PDD and of the proposed revision of monitoring plan.  Yes. Procedures are identified for the recording of data, cross check and storage.	OK
A.5.7. Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?	VVS para 133 a-c	DR	The monitoring related content are all written in Section B.7 and no specific content is written in Annex 4 of the registered PDD and of the proposed revision of monitoring plan.  Yes, procedures are identified for the project performance reviews before data is submitted for verification.  The O&M Department and Financial Department of the project company will be responsible for collecting data and internal auditing.	OK

## Annex 2: Overview of Findings

### Findings Overview Summary

	CARs	CLs	FARs
Total Number raised	0	0	0

## Annex 3: Statement of Competence

### Statement of Competence

Name: Tracy Zheng

#### Status

- Lead Assessor	x	- Expert	x
- Assessor	x	- Financial Expert	
- Local Assessor	China	- Technical Reviewer	

#### Scopes of Expertise

<b>1. Energy Industries (renewable / non-renewable)</b>	x
Technical Area(s): TA 1.2 Energy generation from renewable energy sources	
<b>2. Energy Distribution</b>	
Technical Area(s):	
<b>3. Energy Demand</b>	
Technical Area(s):	
<b>4. Manufacturing</b>	
Technical Area(s):	
<b>5. Chemical Industry</b>	
Technical Area(s):	
<b>6. Construction</b>	
Technical Area(s):	
<b>7. Transport</b>	
Technical Area(s):	
<b>8. Mining/Mineral Production</b>	
Technical Area(s):	
<b>9. Metal Production</b>	
Technical Area(s):	
<b>10. Fugitive Emissions from Fuels (solid, oil and gas)</b>	
Technical Area(s):	
<b>11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride</b>	
Technical Area(s):	
<b>12. Solvent Use</b>	
Technical Area(s):	
<b>13. Waste Handling and Disposal</b>	
Technical Area(s):	
<b>14. Afforestation and Reforestation</b>	
Technical Area(s):	
<b>15. Agriculture</b>	
Technical Area(s):	

Approved Member of Staff by: Siddharth Yadav Date: 25/04/2012

## Statement of Competence

Name: Amanda Zhang

### Status

- Lead Assessor	x	- Expert	
- Assessor	x	- Financial Expert	
- Local Assessor	China	- Technical Reviewer	

### Scopes of Expertise

#### 1. Energy Industries (renewable / non-renewable)

Technical Area(s):

#### 2. Energy Distribution

Technical Area(s):

#### 3. Energy Demand

Technical Area(s):

#### 4. Manufacturing

Technical Area(s):

#### 5. Chemical Industry

Technical Area(s):

#### 6. Construction

Technical Area(s):

#### 7. Transport

Technical Area(s):

#### 8. Mining/Mineral Production

Technical Area(s):

#### 9. Metal Production

Technical Area(s):

#### 10. Fugitive Emissions from Fuels (solid, oil and gas)

Technical Area(s):

#### 11. Fugitive Emissions from Production and

Consumption of Halocarbons and Sulphur Hexafluoride

Technical Area(s):

#### 12. Solvent Use

Technical Area(s):

#### 13. Waste Handling and Disposal

Technical Area(s):

#### 14. Afforestation and Reforestation

Technical Area(s):

#### 15. Agriculture

Technical Area(s):

Approved Member of Staff by: Siddharth Yadav Date: 06/07/2012



## Statement of Competence

Name: Simon Zhao

### Status

- Lead Assessor	x	- Expert	x
- Assessor	x	- Financial Expert	
- Local Assessor	China	- Technical Reviewer	x

### Scopes of Expertise

#### 1. Energy Industries (renewable / non-renewable)

x

Technical Area(s): TA 1.2 Energy generation from renewable energy sources

#### 2. Energy Distribution

Technical Area(s):

#### 3. Energy Demand

Technical Area(s):

#### 4. Manufacturing

Technical Area(s):

#### 5. Chemical Industry

Technical Area(s):

#### 6. Construction

Technical Area(s):

#### 7. Transport

Technical Area(s):

#### 8. Mining/Mineral Production

Technical Area(s):

#### 9. Metal Production

Technical Area(s):

#### 10. Fugitive Emissions from Fuels (solid, oil and gas)

Technical Area(s):

#### 11. Fugitive Emissions from Production and

Consumption of Halocarbons and Sulphur Hexafluoride

Technical Area(s):

#### 12. Solvent Use

Technical Area(s):

#### 13. Waste Handling and Disposal

Technical Area(s):

#### 14. Afforestation and Reforestation

Technical Area(s):

#### 15. Agriculture

Technical Area(s):

Approved Member of Staff by: Siddharth Yadav

Date: 04/07/2012

## History

Version	EB Requirement	Nature of revision	Validity
Issue 3	EB65 Annex 4 VVS Version 02.0	Update to include VVS procedures Inclusion of Request for Deviation into the combined (Request for Approval of Changes) document.	25 <sup>th</sup> May 2012
Issue 2.1	SGS UK Ltd Internal procedure	Annex 3 "Statement of Competence" added to Validation Opinion report.	27 <sup>th</sup> June 2011
Issue 2	EB 55 Annex 1 VVM 1.2 30 July 2010	Update	30 <sup>th</sup> September 2009