



UK CDM Revision of Monitoring Plan
Issue 2.1
Effective from: 27th June 2011
CDM.VER0941 RMP

VALIDATION OPINION FOR REVISION OF REGISTERED MONITORING PLAN

The World Bank

**Guangrun Hydropower Project in
Hubei Province, P.R. China**

UNFCCC Ref. No. 0904

SGS Climate Change Programme

SGS United Kingdom Ltd
SGS House
217-221 London Road
Camberley Surrey
GU15 3EY
United Kingdom

1/25



Date of Issue: 1008-0802-2011 2		Project Number: CDM.VER0941 RMP	
Project Title: Guangrun Hydropower Project in Hubei Province, P.R. China			
Organisation: SGS United Kingdom Limited		Client: The World Bank	
Subject: Validation Opinion for Revision of Registered Monitoring Plan:			
<input checked="" type="checkbox"/>	Proposed revision includes revisions proposed by the PP/DOE	Distribution/Document Control	
<input type="checkbox"/>	Proposed revision only includes the request by the CDM EB		
<input type="checkbox"/>	Proposed revision includes not only request by the CDM EB but also additional revisions proposed by the PP/DOE		
Validation Team: Michael Wu – Lead Assessor/Sectoral Expert (TA 1.2) Comin Lin – Assessor/Local Assessor		<input checked="" type="checkbox"/> No Distribution (without permission from the Client or responsible organisational unit)	
Technical Review: Date: 1210-0208-2012 1 Name: Linda Hu Mudan		<input type="checkbox"/> Limited Distribution	
Authorised Signatory: Name: Siddharth Yadav Date: 1622-0902-2011 2		<input type="checkbox"/> Unrestricted Distribution	
Revision Number:	Date:	Number of Pages:	
0	08-08-2011	25	
1	10-02-2012	25	

Formatted Table



Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Request
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
DOE	Designated Operational Entity
ERs	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
MP	Monitoring Plan
PDD	Project Design Document
PP	Project Participant
RMP	Revised Monitoring plan
SGS	SGS United Kingdom Ltd.
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual



Table of Content

1. Validation Opinion	5
2. Introduction.....	6
2.1 Objective.....	6
2.2 Scope.....	6
2.3 GHG Project Description	6
3. Methodology.....	7
3.1 Review of CDM-PDD and Additional Documentation	7
3.2 Use of the Validation Protocol	7
3.3 Findings	7
3.4 Internal Quality Control	8
4. Validation Findings	9
4.1 Application of Monitoring Methodology and Monitoring Plan	9
4.2 Findings of Previous Verification Reports.....	13 12
5. List of Persons Interviewed	13 12
6. Document References	14 13
Annex 1: Validation Protocols	15 14
Annex 2: Overview of Findings	21 2120
Annex 3: Statement of Competence.....	22 2221
Annexure 4: Revised Monitoring plan (TRK Change mode).....	---
Annexure 5: Revised Monitoring Plan (Clean version)	---



1. Validation Opinion

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 The World Bank 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 Guangrun Hydropower Project in Hubei Province, P.R. China and UNFCCC Ref. No.0904. 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, electricity imported from the grid by the project through 10kV backup lines is included in the revised Monitoring Plan and to be deducted in the calculation of electricity supplied to the grid by the project to reflect the actual monitoring system and improve the completeness of the monitoring plan. Also, a line diagram with clear monitoring position was included in the revised monitoring plan.

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) this is the first verification of the project and there is no finding of previous verification report to be taken into account.

Signed on Behalf of the Validation Body by Authorized Signatory

Signature: 

Name: Siddharth Yadav

Date: ~~1622-092~~-2011~~12~~

2. Introduction

2.1 Objective

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 The World Bank 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 Guangrun Hydropower Project in Hubei Province, P.R. China and UNFCCC Ref. No.0904. 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 or completeness in the proposed revision 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 project design documentation (revised 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/DNV-CUK1169846013.46/view>, the project web page. There is no change in the project activity description. The project was registered on 27/04/2007 under UNFCCC Ref. No. 0904.

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.

A site visit was carried out to verify assumptions in the baseline.

3.2 Use of the Validation Protocol

The validation protocol used for the assessment is partly based on the templates of the CDM Validation and Verification Manual version 01.2 (EB55 Annex 1):

- 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.

4. Validation Findings

4.1 Application of Monitoring Methodology and Monitoring Plan

4.1.1 Type of Revision

The revision of the monitoring plan is a result of

- Revision proposed by the PP/DOE as mentioned in the following section.

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).

In the original registered monitoring plan (/2/), no information regarding electricity imported from the grid by the project through 10kV backup lines was discussed. It was spotted by SGS assessment team during onsite visit that the project also imports electricity from the grid through 10kV backup lines. There exists 10kV backup line for each of the three hydro power plants, and each backup line has its own corresponding meter to measure the electricity imported from the grid. By applying the proposed revision of monitoring plan, 10kV backup lines are included and the monitoring system of the project is specified in detail.

The below revision points to the registered monitoring plan have been proposed:

1. In the revised monitoring plan (/1/), three 10kV backup lines were included in the monitoring system. Electricity imported from the grid via backup lines is specified to be monitored and deducted from electricity supplied to the grid by the project (EG_y). A line diagram of the monitoring system was also provided in the revised monitoring plan.

It was identified during onsite visit by the assessment team that there exists a 10kV backup line for each hydro power plant. The 10kV backup line is used to import electricity from the grid in case of emergency when the main power line fails to supply electricity. Each 10kV backup line has its own corresponding meter to measure the electricity imported from the grid via 10kV backup lines. Accuracy and calibration of meters at 10kV backup lines are to be in compliance with relevant national standards. As the backup line meters are owned, maintained and operated by the local power company and the project owner has no access to the meters, the data from the sale receipts issued to the project owner by the power company will be applied in the calculation of emission reduction. Considering the power company is responsible for collecting the payment for the amount of electricity imported from the grid via the backup lines, it is deemed unlikely that the data in the sale receipts will be under estimated. The electricity supplied to the grid by the project (EG_y) is calculated as electricity exported to the grid by the project minus electricity imported from the grid via main line and electricity imported from the grid via backup lines. The calculation of EG_y is deemed correct and conservative. The line diagram in the RMP was verified to be in compliance with actual practice (/11/). The proposed revision to the monitoring plan improves the level of accuracy and completeness in the monitoring and verification process.

2. The position of monitoring meters is also specified in the revised monitoring plan. Meter M1 with the accuracy of 0.2s is installed at 110kV Jianshi Substation to measure electricity exported to the grid by the project and electricity imported from the grid via main line by the project. Meter M2 and M3 are installed to measure electricity generation by the project and used for internal reference only. Meter M4, M5 and M6 are installed on the 10kV backup lines to measure electricity imported from the grid via backup lines. Accuracy and calibration of meter M2, M3, M4, M5 and M6 is to be in compliance with relevant national standard (/8/).

It was verified by the assessment team that the installation of meters are in compliance with the actual practice. Accuracy and calibration are verified to be in compliance with registered PDD and relevant national standards (/8/) and can ensure the accurate monitoring of electricity exports and imports. 110kV Jianshi Substation is the monitoring point jointly identified by the project company and grid company. However it is indicated in the registered PDD that the project will connect to the existing Huangtuping 110kV substation. It was clarified by PP that 'Huangtuping 110kV substation' in the registered PDD was renamed to '110kV Jianshi substation' by the grid company. 'Huangtuping 110kV substation' and '110kV Jianshi substation' refer to the same substation. This was confirmed by the assessment through onsite visit and interviewing staff of the grid company. It was also confirmed by the assessment team that Meters M4, M5 and M6 are owned,



maintained, read and recorded by the grid company. Only the grid company has access to these meters. Sales receipts of electricity imported from the grid via backup lines will be issued to the project company by grid company accordingly in an approach which is agreed by both parties and used for ER calculation.

The inclusion of meter installation in the RMP is only to make a clear presentation of the monitoring system and is deemed to be no change to the monitoring system.

3. In the revised monitoring plan, the electrical wiring system has been detailed according to the actual situation. The project consists of three small-sized hydropower plants (Hongwawu I, Hongwawu II and Zhamushui hydropower plant). Hongwawu II hydropower plant directly connects to [110kV](#) Zhamushui substation through 110kV transmission line, while Hongwawu I hydropower plant connects to Zhamushui substation through Hongwawu II substation, the transmission line between Hongwawu I station and Hongwawu II station is 35kV transmission line. [110kV](#) Zhamushui substation then connects to 110kV Jianshi Substation of the grid through 110kV transmission line. Please refer to the following line diagram of the electrical wiring system of the project.

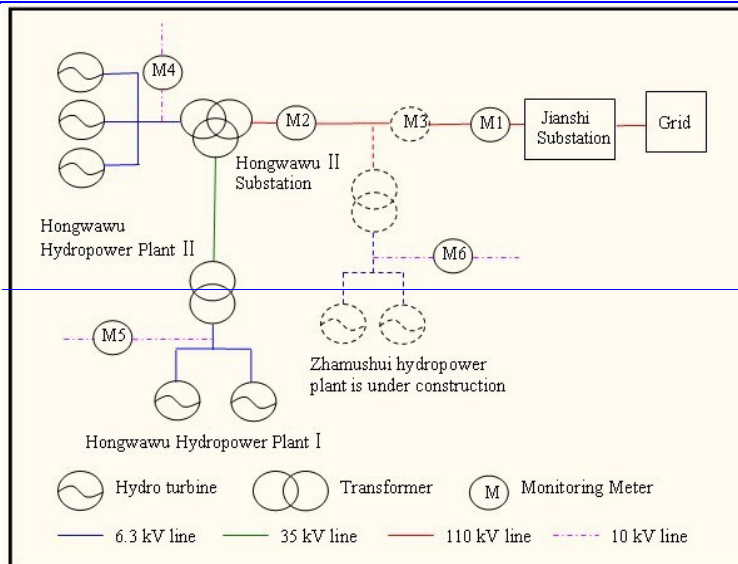
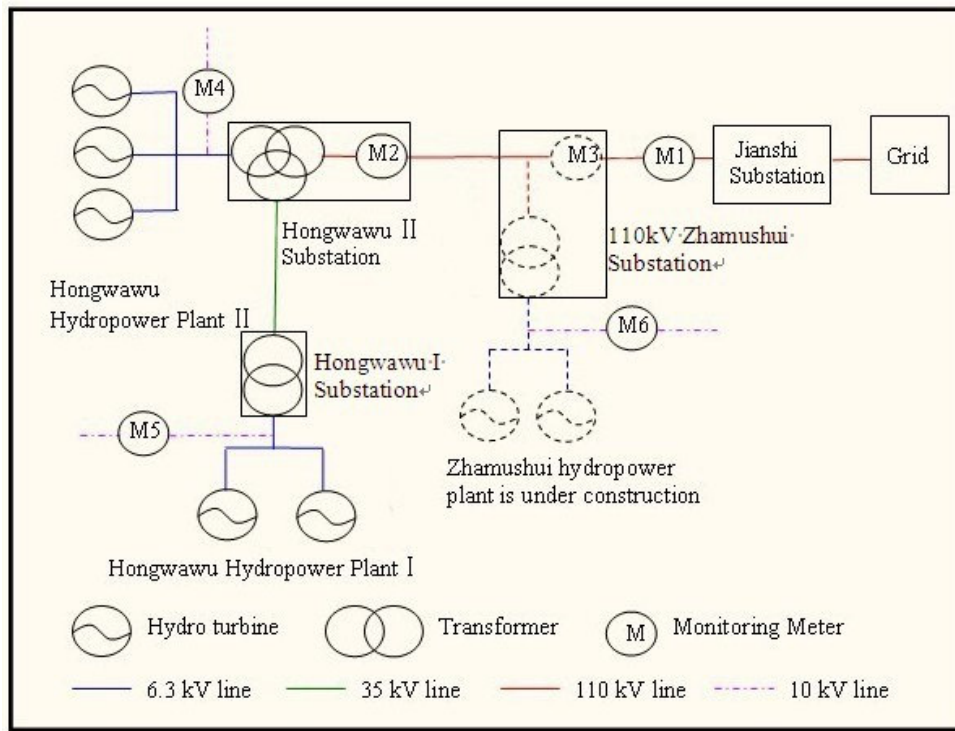


Figure 1 Line diagram of the electrical wiring system of the project

The electrical wiring system in the revised monitoring plan was verified to be in compliance with the actual implementation (/11/) but deviates from the description in the registered PDD. On page 5 of the registered

PDD section A.4.3, it was described that “Hongwawu hydropower plant includes two powerhouses (powerhouse I in 8MW and Powerhouse II in 10MW) and a 4.6 km long 35 kV transmission line to Zhamushui substation” whereas the transmission line is 110kV transmission line which had been verified during site visit.

On page 154-155 of the Feasibility Study Report (FSR, /12/) dated August 2005 which has been validated by the validator, two plans (Proposal A: an onsite 6.3/35kV substation at Hongwawu II and 35kV transmission line to Zhamushui substation where a 35/110 kV substation will increase the voltage to be 110kv; and Proposal B: an onsite 110kV substation at Hongwawu II which will be connected to Zhamushui substation through 110kV transmission line) were proposed for the electrical wiring system between Hongwawu II substation and Zhamushui substation. 110kV transmission line of Proposal B was chosen by the project company due to its much lower line loss.

Via document review of the FSR, registered PDD, IRR spreadsheet (/13/) which has been validated by the validator, it is confirmed by the assessment team that the investment decision was made on the basis of proposal B, the same was applied in the IRR spreadsheet. It is sufficient to conclude that the description of the 35kV transmission line to Zhamushui substation (Proposal A) in PDD section A.4.3 was actually wrongly quoted by PP when finalizing the PDD at validation stage. Considering the description of 35kV transmission line to Zhamushui substation under registered PDD section A.4.3 was just a typo, it is assessment team's opinion that the project activity has been implemented and operated as per the project design.

The detailed electrical wiring system in the revised monitoring plan is only to make a clear presentation of the monitoring system and is not deemed to be a change to the monitoring system.

The proposed revision of monitoring plan (/1/) is to revise Annex 4 of the registered PDD, so that monitoring methodology ACM0002 version 06 (/5/) can be better observed under the actual situation reflected in the revised monitoring plan. Any other part in the registered PDD remains unchanged. Consistency of information provided in the PDD and quality of the monitoring plan is improved through this revision of monitoring plan. 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.

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

The proposed revision of monitoring plan is to revise Sections D.2 and Annex 4 of the registered PDD of Guangrun Hydropower Project in Hubei Province, P.R. China (UNFCCC Ref. No.0904) so that monitoring methodology ACM0002 can be better observed under the actual situation reflected in the monitoring plan. In compliance with the methodology applied, i.e. ACM0002 version 06, electricity exported to the grid by the project, electricity imported from the grid via main line and electricity imported from the grid via backup lines are to be directly measured (hourly measurement and monthly recording) to determine electricity supplied to the grid by the project (EG_y). Sales receipts will be used to double check with monitored value (meter readings). Monitoring procedures have been incorporated in the revised monitoring plan. QA/QC procedures have also been included in the revised monitoring plan.

In compliance with Annex 28 to EB 49 meeting report (/6/) and relevant sections in the VVM (/7/), it has been validated that this revision of monitoring plan improves the accuracy and completeness of information needed, consistency in the registered PDD and quality/readability of the monitoring plan. The revision of monitoring plan is in accordance with the approved monitoring methodology applied by the project activity, i.e. ACM0002 version 06 dated 19/05/2006.

4.1.2 Meter replacement of the project

During the onsite visit, it was found by the assessment team that meter M1 has been changed since 31/03/2010. The accuracy of original meter M1 was 0.5S, while the registered monitoring plan states the accuracy of meter at the monitoring point will be 0.2S, in order to be in compliance with registered PDD, a new meter M1 with accuracy of 0.2S was installed to replace the original one.

Since the accuracy of original meter M1 covering the period from the starting date of crediting period (30/06/2009) to 31/03/2010 didn't meet the stipulation of the registered PDD, PP proposed the following measure to ensure the conservativeness of emission reduction calculation for the same corresponding period. The maximum permissible error of 0.5% is adjusted to the electricity exported to the grid and imported from the grid by the project during the period from 30/06/2009 to 31/03/2010, i.e. 0.5% of electricity exported to the

grid is to be deducted and 0.5% of electricity imported by the project via the main line is to be added for the calculation of EG_y for this period from 30/06/2009 to 31/03/2010.

The replacement of meter M1 was carried out by the grid company and witnessed by the project company. The end reading of original meter and starting reading of new meter have been confirmed by both parties. Meter reading record and meter replacement record (/10/) have been verified by the assessment team. The new meter M1 is confirmed to be correctly installed.

Calibration reports for both original and new meter M1 (/9/) have been provided to the assessment team for validation. The calibration reports show that the uncertainty of both original and new meter M1 is within the maximum permissible error set by the manufacture specification. Thus maximum permissible error of 0.5% from the specification of original meter M1 is taken into account while determining the electricity exported to the grid and imported from the grid by the project during the period from 30/06/2009 to 31/03/2010. It is deemed to be conservative.

The proposed revised monitoring plan includes the deviation request of using lower accuracy class meter for the period from 30/06/2009 to 31/03/2010. In the proposed monitoring plan, the detailed conservative calculation measurement of the project has been clearly stated. It has been validated that during the specific period, the monitoring parameters can be monitored strictly according to the proposed monitoring plan and emission reductions are calculated in a conservative way. It is accepted by SGS assessment team not to propose another deviation separately.

4.2 Findings of Previous Verification Reports

There is no verification report issued for the project yet, so there are no findings from previous verification to take into account.

5. List of Persons Interviewed

Date of site visit	Name	Position	Short description of subject discussed
07/06/2011-08/06/2011	Mr. Zhang Jun,	Deputy general manager, Guangrun Hydropower Development Company Ltd.	The implementation of the project activity
07/06/2011-08/06/2011	Mr. Zou Dunyi	Project Manager, Guangrun Hydropower Development Company Ltd.	The specific detail on implementation of the project activity including the metering system, data management system
07/06/2011-08/06/2011	Ms. Ma Ruijuan	Project Manager, Easy Carbon Consultancy Co., Ltd.	data-Data management system

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 Monitoring Plan (clean version and track change version)

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 version 2.0 dated 12/11/2006
- /3/ Validation Report for the project issued by DNV dated 25/01/2007 Rev. No. 01 Report 2006-2133
- /4/ <http://cdm.unfccc.int/Projects/DB/DNV-CUK1169846013.46/view>
- /5/ ACM0002 version 06 dated 19/05/2006
- /6/ Annex 28 to EB 49 meeting report
- /7/ Validation and Verification Manual version 01.2 dated 30/07/2010
- /8/ Chinese national standard of electric industry DL/T448-2000
- /9/ Calibration reports of meters for the project
- /10/ Meter readings record and Meter replacement record issued by the grid company
- /11/ System layout and line diagram of electricity wiring system
- /12/ Electrical wiring system of the project in Feasibility Study Report dated August 2005
- /13/ IRR spreadsheet of the project

MP Version	Date of Revision	Main changes reason for Revision
PDD version 2.0	12/11/2006	Registered PDD of the project
Revised Monitoring plan version 01	15/07/2011	1. Electricity imported from the Grid via backup lines is included in the revised Monitoring Plan 2. The deviation of accuracy of main meter for the period from 30/06/2009 to 31/03/2010 3. Detailed electric wiring system included.
Revised Monitoring plan version 01.1	09/02/2012	Revised to include the name of substations in the diagram in Annex 4 of the monitoring plan.

Formatted Table

Formatted: No bullets or numbering



Annex 1: Validation Protocols

Checklist Question	Reference	MoV*	Comments	Conclusion/ CARs/CLs
--------------------	-----------	------	----------	-------------------------

A.1. General Requirements				
A.1.1. Is the 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 based on a recommendation by PP/DOE.	OK
A.1.2. Is the 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 based on a recommendation by PP/DOE.	OK
A.1.3. Is the need for revision in monitoring plan spotted during the first monitoring period?	EB49, Annex 29 Project page on UNFCCC website	DR	Yes, the assessment team observed the reasons leading to revision of monitoring plan during site visit of first 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 a complete document and follows the same template used for registered PDD.	OK
A.1.5. Has the revised monitoring plan submitted in track change mode for each of the revision point (issue)?	Revised monitoring plan	DR	PP has submitted the revised monitoring plan in track change mode for each of the revision point to the SGS assessment team. A clean version of the revised monitoring plan has been also submitted to the assessment team.	OK
A.1.6. is there an objective evidence for each of the proposed revision point (issue)?		DR	Yes. Each of the proposed revision point is evidenced.	OK
A.1.7. Does the revised monitoring plan also include the Annex 4?	Registered PDD	DR	Yes. The revised monitoring plan includes the Annex 4 (monitoring information) in line with the registered PDD.	OK
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 revision of the monitoring plan improves the completeness of information in the PDD. The revised monitoring plan does not lead to any kind of changes in the registered PDD.	OK

A.2. Data and Parameters Monitored				
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?	VVM Para. 92a/92d/123 Revised MP Section D.2 Annex 4 EB49, annex 2, para 9	DR	Yes. By means of document review, the applied monitoring methodology requires electricity supplied to the grid to be monitored. The required monitoring parameters are identified in the revised monitoring plan. The monitoring plan contains all necessary parameters required by the applied monitoring methodology. These parameters are clearly described in the plan and in line with the requirements of the methodology. Through document review of the documented procedures and interview with the site operators, the monitoring arrangement in the revised monitoring plan are feasible within the project design. The means of implementation of the revised monitoring plan, including the data management and QA/QC procedures, are sufficient to ensure that the emission reductions achieved by the project can be reported ex post and verified.	OK
A.2.2. Are the changes in the monitoring plan inline to the applied methodology and tool?	ACM0002 version 06 dated 19/05/2006	DR	Yes. The changes in the monitoring plan are in line with the applied methodology and tool	OK
A.2.3. Are the changes affecting the ER calculation (directly/indirectly)?	Revised MP	DR	As per the revised monitoring plan, electricity imported from the grid via backup lines was monitored and deducted from electricity supplied to the grid by the project (EGy). Such revision addressed in the revised monitoring plan leads to the improvement of completeness. The changes have no effect on the ER calculation.	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?	RMP Section D.2	DR	In the revised monitoring plan, the metering system and analyzing methods are clearly defined. The information presented in the table is sufficient to ensure the verification of a proper implementation of the monitoring plan.	OK
A.2.5. Has there been an issuance with the original monitoring plan of the registered PDD in the past?	Project page on UNFCCC website	DR	No. There is no request for issuance with the original monitoring plan of the registered PDD in the past.	OK
A.2.6. if so how did the identified gaps effect the ER calculations for the				

monitoring periods in the past?				
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 biases or intended or unintended changes in data records?	RMP Section – D.2	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 in the revised monitoring plan.	OK
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?	RMP Section- D.2	DR	Yes. The monitoring approach is in line with current good practice. The definition of the parameters, the metering system and data management system are clearly defined in the revised monitoring plan.	OK
A.2.9. Are all formulae used to determine project emission clearly indicated and in compliance with the monitoring methodology.	Revised MP Section - D.2	DR	Yes. All formulae used to determine emission reductions are clearly indicated and in compliance with the monitoring methodology ACM0002 version 06.	OK
A.3. Quality Control (QC) and Quality Assurance (QA) Procedures				
A.3.1. Is the selection of data undergoing quality control and quality assurance procedures complete?	VVM Para. 123	DR	Yes. The selection of data undergoing quality control and quality assurance procedures are complete.	OK
A.3.2. in case, a revision is proposed, the impact of the 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	DR	<p>The proposed revision of monitoring plan is to revise Sections D.2 and Annex 4 in the registered PDD in order to improve the completeness of information provided in the PDD and the quality of the monitoring plan so that monitoring methodology ACM0002 can be better observed under the actual situation reflected in the monitoring plan.</p> <p>In compliance with Annex 28 to EB 49 meeting report and relevant sections in the VVM, it has been validated that this revision of monitoring plan improves the completeness of information needed, consistency in the registered PDD and quality/readability of the monitoring plan.</p>	OK

A.3.3. Are quality control procedures and quality assurance procedures sufficiently described to ensure the delivery of high quality data?	VVM Para 123	DR	Yes. The quality control procedures and quality assurance procedures (QA/QC) are validated to be 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?	VVM Para. 87d	DR	The metering instrument are installed and calibrated according to the national standards. The data management system presented in the revised monitoring plan is able to ensure the data will be bound to internal procedures.	OK
A.4. Operational and Management Structure				
A.4.1. Is the authority and responsibility of project management clearly described?	PDD Section D.2/Annex 4	DR	Yes. The authority and responsibility of project management is clearly described in the revised monitoring plan.	OK
A.4.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	PDD Section D.2/Annex 4	DR	Yes. The authority and responsibility for monitoring, measurement and reporting is clearly stated in the revised monitoring plan.	OK
A.5. Monitoring Plan (Annex 4)				
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 data quality?	VVM Para. 124b	DR	Yes. The parameters involved in ERs calculation is described clearly in the revised monitoring plan. And the data management system are presented in the section D.2 and annex 4 of the revised monitoring plan to ensure the data quality.	OK
A.5.2. Does the monitoring plan provide information on monitoring equipment and respective positioning in order to safeguard a proper installation?	VVM Para. 124b	DR	Yes. The information of the monitoring equipments and the respective positioning is provided in the revised monitoring plan in order to safeguard a proper installation.	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	DR	No. there is no change in the specifications of the monitoring equipment or the positioning or installation. It is confirmed by the assessment team that such revision to the monitoring plan does not result in reduced level of accuracy and completeness in the monitoring and verification.	OK
A.5.4. Are procedures identified for calibration of monitoring equipment?	VVM Para. 124a-c	DR	Yes. The procedures for calibration of monitoring equipment are identified in section D.2 and Annex 4 of the revised monitoring plan.	OK
A.5.5. Is there any change proposed in the calibration procedures, if yes then the impact of the change due to revision should not result in reduced level of accuracy and completeness in the monitoring and verification process	EB49, annex 2, para 9	DR	No. There is no change proposed in the calibration procedures.	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)	VVM Para. 124a-c	DR	Yes. The procedures are identified for data records in the revised monitoring plan including what records to keep, storage area of records and how to process performance documentation.	OK
A.5.7. Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?	VVM Para. 124a-c	DR	Yes. The procedures are identified in the revised monitoring plan for project performance reviews internally before data is submitted for verification.	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: Michael Wu

Status

- Lead Assessor	<input checked="" type="checkbox"/>	- Expert	<input checked="" type="checkbox"/>
- Assessor	<input checked="" type="checkbox"/>	- Financial Expert	<input type="checkbox"/>
- Local Assessor	China	- Technical Reviewer	<input checked="" type="checkbox"/>

Scopes of Expertise

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

Approved Member of Staff by: Siddharth Yadav Date: 14/04/2011 06/02/2012

Formatted Table



Statement of Competence

Name: **Comin Lin**

Status

- Lead Assessor	<input checked="" type="checkbox"/>	- Expert	<input checked="" type="checkbox"/>
- Assessor	<input checked="" type="checkbox"/>	- Financial Expert	<input type="checkbox"/>
- Local Assessor	China	- Technical Reviewer	<input type="checkbox"/>

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)	<input checked="" type="checkbox"/>
Technical Area(s): TA 1.2 Energy generation from renewable energy sources	
2. Energy Distribution	<input type="checkbox"/>
Technical Area(s):	
3. Energy Demand	<input type="checkbox"/>
Technical Area(s):	
4. Manufacturing	<input type="checkbox"/>
Technical Area(s):	
5. Chemical Industry	<input type="checkbox"/>
Technical Area(s):	
6. Construction	<input type="checkbox"/>
Technical Area(s):	
7. Transport	<input type="checkbox"/>
Technical Area(s):	
8. Mining/Mineral Production	<input type="checkbox"/>
Technical Area(s):	
9. Metal Production	<input type="checkbox"/>
Technical Area(s):	
10. Fugitive Emissions from Fuels (solid, oil and gas)	<input type="checkbox"/>
Technical Area(s):	
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride	<input checked="" type="checkbox"/>
Technical Area(s): TA 11.2 GHG capture and destruction	
12. Solvent Use	<input type="checkbox"/>
Technical Area(s):	
13. Waste Handling and Disposal	<input type="checkbox"/>
Technical Area(s):	
14. Afforestation and Reforestation	<input type="checkbox"/>
Technical Area(s):	
15. Agriculture	<input type="checkbox"/>
Technical Area(s):	

Approved Member of Staff by: **Siddharth Yadav** Date: **22/07/2011** ~~06/02/2012~~



Statement of Competence

Name: Linda Hu

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	x
Technical Area(s): TA5.1 Petrochemical/Ammonia-urea, Adipic acid production/Nitric Acid or Caprolactam Production	
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	x
Technical Area(s): TA 11.2 GHG capture and destruction	
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):	



UK CDM Revision of Monitoring Plan
Issue 2.1
Effective from: 27th June 2011
CDM.VER0941 RMP

| Approved Member of Staff by: Siddharth
Yadav Date: ~~02/08/2011~~[06/02/2012](#)