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Validation Report

INTERNATIONAL POWER CORPORATION LIMITED

VALIDATION OF THE REVISED MONITORING PLAN OF
THE REGISTERED CDM-PROJECT No. 0312

18 MW KEMPHOLE MINI HYDEL SCHEME (KMHS) BY
INTERNATIONAL POWER CORPORATION LIMITED

REPORT No. 1001741-RM

10 December 2007

TÜV SÜD Industrie Service GmbH

Carbon Management Service

Westendstr. 199 - 80686 Munich – GERMANY

Report No.	Date of first issue	Revision No.	Date of this revision	Certificate No.
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Subject: Validation of a Revised Monitoring Plan	
Accredited TÜV SÜD Unit: TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199 - 80686 Munich Federal Republic of Germany	TÜV SÜD Contract Partner: TÜV SÜD South Asia C-153/1, Okhla Industrial Estate Phase- 1 New Delhi – 110020 India
Client: International Power Corporation Ltd. Defense Colony, HAL, 2nd Stage, Radhakrishna Building, No.38, Bangalore, Karnataka 560038 India	Project Site(s): Village Heggadde, Taluk Sakaleshpura, District Hassan, Karnataka, India
Project Title: 18 MW Kempohle Mini Hydel Scheme (KMHS) by International Power Corporation Limited	
Applied Methodology / Version: ACM0002 version 4	Scope(s): 1
Registered PDD Version: Registration Date: 2006-05-25 Starting Date of Crediting Period: 2003-10-20	Revised Monitoring Plan: Date of issuance: 2007-10-29
Assessment Team Leader: Abhishek Goyal	Further Assessment Team Members: Bratin Roy
Summary of the Validation Opinion:	
<input checked="" type="checkbox"/> The review of the revised monitoring plan and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. In our opinion, the revised monitoring plan meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD will recommend the replacement of the monitoring plan of the registered PDD by the submitted revision.	
<input type="checkbox"/> The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. Hence TÜV SÜD will not recommend the replacement of the monitoring plan of registered PDD.	



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1 INTRODUCTION

1.1 Objective

The validation objective is an independent assessment by a Third Party (Designated Operational Entity = DOE) of a proposed revision of a monitoring plan against all defined criteria set for the registration under the Clean Development Mechanism (CDM). Validation is required in the context of proposed revisions of a registered CDM activity and will finally result in a conclusion by the executing DOE whether a revised monitoring plan is valid and should be submitted for replacing the previous version. The ultimate decision on the registration of a proposed revision rests at the CDM Executive Board.

The project activity discussed by this validation report is registered as CDM activity No. 0312 with the project title:

18 MW Kemphole Mini Hydel Scheme (KMHS) by International Power Corporation Limited

1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. The core requirements on revised monitoring plans are given by annex 12 of the report of EB-31 as referred below:

15. *The request for revising monitoring plan is made in cases where:*
- a. *the monitoring plan in the registered CDM project activity document is found not to be consistent with the approved monitoring methodology applied to the registered project activity; or*
 - 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 revision;*

The validation is not meant to provide any consulting towards the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the revised monitoring plan.

2 METHODOLOGY

The project assessment aims at being a risk based approach and is based on the methodology developed in the Validation and Verification Manual, an initiative of Designated and Applicant Entities, which aims to harmonize the approach and quality of all such assessments.

2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national business environment TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV SÜD certification body “climate and energy”. The composition of an assessment team has to be approved by the Certification Body ensuring that the required skills are covered by the team. The Certification Body TÜV SÜD operates four qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL)
- Greenhouse Gas Auditor (GHG-A)
- Greenhouse Gas Auditor Trainee (T)
- Experts (E)

It is required that the sectoral scope linked to the methodology has to be covered by the assessment team.

The validation team was consisting of the following experts (the responsible Assessment Team Leader in written in bold letters):

Name	Qualification	Coverage of technical scope	Coverage of sectoral expertise	Host country experience
Abhishek Goyal	ATL	☑	☑	☑
Bratin Roy	GHG-A	☑	☑	☑

Abhishek Goyal is an Assessment Team Leader for CDM/JI projects and environment/energy expert at TÜV SÜD Industrie Service GmbH. Before joining the TÜV SÜD Industrie Service GmbH he has worked on development of PDDs and methodologies for several energy efficiency, renewable energy, and waste to energy projects. He has extensive experience in CDM.

Bratin Roy is a lead auditor for quality, environment and occupational health and safety management system (according to ISO 9001, ISO 14001 and OHSAS 18001) and an auditor for CDM/JI projects at TÜV SÜD South Asia. He holds a master degree in environmental science. He is based in Pune, India. He has received extensive training in the CDM validation and verification processes and has already participated in several CDM project assessments.

2.2 Review of Documents

The monitoring report for the period 1 May 2006 to 30 April 2007 (<http://cdm.unfccc.int/Projects/DB/SGS-UKL1142326439.29/iProcess/TUEV-SUED1179853808.34/view>), the revised monitoring plan submitted and additional background documents related to further monitoring aspects were reviewed as initial step of the validation process.

2.3 Follow-up Interviews

In the period of 25-26 May, 2007, TÜV SÜD performed interviews on-site with project stakeholders to confirm selected information and to resolve issues identified in the first review of monitoring report for period 1 May 2006 to 30 April 2007. According to the CRs, CARs expressed during the verification process, client decided to make a request for revision of the monitoring plan of the registered PDD. Further, telephone conferences have been held with the responsible person of International Power Corporation Ltd. in India discussing the revision of the monitoring plan.

2.4 Internal Quality Control

As final step of a validation the validation report has to undergo an internal quality control procedure by the Certification Body "climate and energy", i.e. each report has to be approved either by the head of the certification body or his deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one.

It rests at the decision of TÜV SÜD's Certification Body whether a revised monitoring plan will be submitted for approval by the EB or not.

3 FINDINGS

Based on review of the registered PDD, audit team is of the opinion that monitoring plan in the registered PDD is not consistent within itself and with other sections of the PDD. Table D.2.1.3 states following:

- EFy: CO₂ emission factor of grid is recorded **yearly**
- EFOMy: CO₂ operating margin emission factor of grid is recorded **once at the beginning of crediting period**
- EFOMy: CO₂ operating margin emission factor of grid is recorded **once at the beginning of crediting period**

Further, some parameters used for calculation of grid emission factor are stated to be recorded **yearly** whereas some are stated to be recorded **once at the beginning of crediting period**. Section D.2.1.4 of the PDD states that simple operating margin is calculated based on average of most recent three years which means it is ex-ante and build margin will be updated annually ex-post.

Section B.2 of the PDD states that operating margin and build margin have been calculated ex-ante, which means that they are not required to be monitored for the first crediting period as per the option provided by methodology ACM0002, version 4.

Hence the information in section D.2.1.3 is inconsistent with information in section D.2.1.4., which further is inconsistent with information in section B.2. In this scenario it is difficult to decide whether ex-ante or ex-post grid emission factor should be used for calculation of emission reductions during the verification process. To remove the inconsistencies, revised monitoring plan has been prepared by International Power Corporation Limited. TÜV SÜD issued the following clarification request and corrective action request for improvement of the revised monitoring plan:

Corrective action request #1:

Please include correct version and date of registered PDD in the revised monitoring plan.

Response by project participant

The correct version and date of the registered PDD are as given below:

Version: 1.3

Date: 25th January 2006

The same has been included in the Revised Monitoring Plan also.

Corrective action request #2:

QA/QC procedures described in revised monitoring plan should include following information on metering system used for the project activity:

- *Whether energy meter is bi-directional to measure export and import or are these parameters measured by separate meters*
- *What is the accuracy level of energy meters*
- *Reference to procedure for calibration of energy meters*

Response by project participant

- *The installed meters are two-way meters and both export and import of electricity is measured.*
- *The accuracy of the meter is 0.2%*
- *The document for calibration of energy meters has been already provided to the DOE*

More details are discussed in the Annex 2 of the Revised Monitoring Plan.

The revised monitoring plan now clarifies that for the first crediting period, simple operating margin emission factor and build margin emission factor will be used ex-ante as determined in registered PDD. Hence the combined margin grid emission factor for Southern Regional Grid will be used ex-ante as determined in registered PDD i.e 0.814 ton CO₂/MWh. This approach is consistent with information in section B.2 of the registered PDD where it was clearly stated that operating margin and build margin have been calculated ex-ante, which means that they are not required to be monitored/updated for the first crediting period.

TÜV SÜD considers the revised monitoring plan as acceptable and reasonable. It can be confirmed that the level of accuracy or completeness in the monitoring and verification process is not reduced as a result of the revision.

4 VALIDATION OPINION

TÜV SÜD has performed a validation of the revised Monitoring Plan of CDM Project 0312:
18 MW Kempohle Mini Hydel Scheme (KMHS) by International Power Corporation Limited


The review of the revised monitoring plan and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. In our opinion, the revised monitoring plan meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD recommends the replacement of the monitoring plan of the registered PDD by the submitted revision.

Munich, 2007-12-10



Certification Body "climate and energy"
TÜV SÜD Industrie Service GmbH

Munich, 2007-12-10



Assessment Team Leader