



VALIDATION REPORT

VALIDATION OF THE REVISED MONITORING PLAN

Gimcheon PV Power Plant Site 2 CDM Project

UNFCCC Ref. No. 2684

REPORT No. 2011-05

VERSION No. 1



VALIDATION REPORT

Date of first issue: 27 June 2011	Date of this revision 28 June 2011	Project No.: COP-102	Korean Foundation for Quality 13F, Woolim Lion's Valley B Bldg. 371-28 Gasan-dong, Geumcheon-gu, Seoul, Korea Tel. +82 2 2025 9061 Fax. +82 2 2025 9069 http://www.kfq.or.kr
Approved by: Byung Yong LEE Director of Sustainable Management Institute		Organisational unit: Korean Foundation for Quality (KFQ)	
Client: Samsung Everland Inc.		Client ref.: Joo Hyun CHOI	

Summary:

Project Title: Gimcheon PV Power Plant Site 2 CDM Project

Investor Country : Republic of Korea

Host Country : Republic of Korea

Project Participants: Samsung Everland Inc.

Applied Methodology(Ver.) : AMS-I.D Version 13

Technology/Measure to be employed : 9.3MW Photovoltaic Power

Crediting Period : 10 years of fixed crediting period Starting from 28 September 2009

Estimated ER : 7,896 ton CO₂/year

Project Size : Small Scale

As the result of the validation of revised monitoring plan of the project, it can be confirmed that ***Gimcheon PV Power Plant Site 2 CDM Project*** as described in the revised monitoring plan, meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria and correctly applies the baselines and monitoring methodology AMS-I.D, Version 13. KFQ thus requests the revision of MP of the registered project.

Work carried out by : Mi Jung LEE (Audit team Leader, GHG auditor) Sung Han YOON (Audit team member, GHG auditor)	Work Verified by : Technical Reviwer Nam Hoon KIM
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VALIDATION REPORT

Abbreviations

CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CO ₂	Carbon dioxide
CO _{2e}	Carbon dioxide Equivalent
DOE	Designated Operational Entity
ER	Emission Reduction
GHG	Greenhouse gas(es)
KFQ	Korean Foundation for Quality
MP	Monitoring Plan
PDD	Project Design Document
UNFCCC	United Nations Framework Convention for Climate Change

 VALIDATION REPORT

<i>Table of Contents</i>	<i>Page</i>
1 INTRODUCTION	4
1.1 Objective	4
1.2 Scope	4
1.3 GHG project description	4
1.4 Validation Team	4
2 METHODOLOGY	5
2.1 Desk Review of the Documents	5
2.2 Follow-up Interviews with Project Stakeholders	5
2.3 Internal Quality Control	5
3 VALIDATION FINDINGS	6
3.1 Participation Requirements	6
3.2 Project Design	6
3.3 Additionality	6
3.4 The revision of Monitoring Plan	6
3.5 Environmental Impacts	8
3.6 Comments by Local Stakeholders	8
4 VALIDATION OPINION	9
5 REFERENCES	10

Appendix A: Qualification of Validation Team

Appendix B: Qualification of Technical Reviewer

1 INTRODUCTION

Korean Foundation for Quality (KFQ) has been engaged by Samsung Everland Lnc. to perform a validation of revised monitoring plan of the ‘Gimcheon PV Power Plant Site 2 CDM Project (UNFCCC Ref. No. 2684) in Republic of Korea. This validation report summarizes the findings and/or opinion for the revised monitoring plan validation, performed on the basis of applied methodology (AMS-I.D Version 13) and “Procedures for revising monitoring plans in accordance with paragraph 57 of the modalities and procedures for the CDM(version 02)” in annex 28 of EB49 meeting report.

1.1 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 DOE. The purpose of a validation of revised monitoring plan is to have an independent third party assessment of the project's monitoring plan revision. In particular, the level of accuracy or completeness in the proposed revision of the monitoring plan, and the conformity with approved monitoring methodology applicable to the project activity.

1.2 Scope

The validation scope is defined as an independent and objective review of the revised MP and other relevant documents. The information in these documents is reviewed against the approved methodology (AMS-I.D version 13) and relevant decisions by the CDM Executive Board.

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 project design.

1.3 GHG Project Description

As per URL of <http://cdm.unfccc.int/Projects/DB/KFQ1244695891.98/view>, there is no change in the project activity description. The project was registered on 28 September 2009 under UNFCCC Ref. No. 2684.

1.4 Validation Team

The validation team consisted as follows:

Mi Jung LEE (Audit team Leader, GHG auditor)

Sung Han YOON (Audit team member, GHG auditor)

Technical review was undertaken by a technical reviewer, Nam Hoon KIM.

The qualification of each individual verification team member and a technical reviewer are detailed in Appendix A and Appendix B to this report.

2 METHODOLOGY

2.1 Desk review of the Documents

The revised monitoring plan submitted by the client and additional background documents related to further monitoring aspects were reviewed as initial step of the validation process.

2.2 Follow-up Interviews with Project Stakeholders

According and as a result of desk review, KFQ discussed with the project participants the revised monitoring plan at the project site on 15 June 2011.

Interviewed organisation	Interview topics
Samsung Everland Inc. (Project Participant) <ul style="list-style-type: none">- Ms. A Ra CHO- Mr. Jin Hwan KIM- Mr. Hee Kwan GI- Mr. Jae Woo HYUN	<ul style="list-style-type: none">➤ Revised Monitoring plan➤ Monitoring parameters listed in the PDD and revised MP➤ Installed equipment specification➤ Responsibility and authority

2.3 Internal Quality Control

According to KFQ's Procedure for deciding whether proceeded a request for revising monitoring plan, the validation report and validation findings underwent a technical review before being submitted a request for revising monitoring plan. The technical review was performed by a technical reviewer qualified in accordance with KFQ's qualification scheme for CDM validation and verification.

3 VALIDATION FINDINGS

3.1 Participation Requirements

As per the validation report by Korean Foundation for Quality (KFQ), dated 9 June 2009 available on UNFCCC webpage:

<http://cdm.unfccc.int/Projects/DB/KFQ1244695891.98/view>. No changes have been made.

3.2 Project Design

As per the validation report by Korean Foundation for Quality (KFQ), dated 9 June 2009 available on UNFCCC webpage:

<http://cdm.unfccc.int/Projects/DB/KFQ1244695891.98/view>. No changes have been made.

3.3 Additionality

As per the validation report by Korean Foundation for Quality (KFQ), dated 9 June 2009 available on UNFCCC webpage:

<http://cdm.unfccc.int/Projects/DB/KFQ1244695891.98/view>.. No changes have been made.

3.4 The revision of Monitoring Plan

The validation team confirmed that the revised monitoring plan is in line with the monitoring methodology (AMS-I.D version 13) and paragraph 57 of the modalities and procedures for the CDM. And the revised MP is not reduced the level of accuracy and completeness in the monitoring and verification process and there will be no impact in the emission reduction calculations.

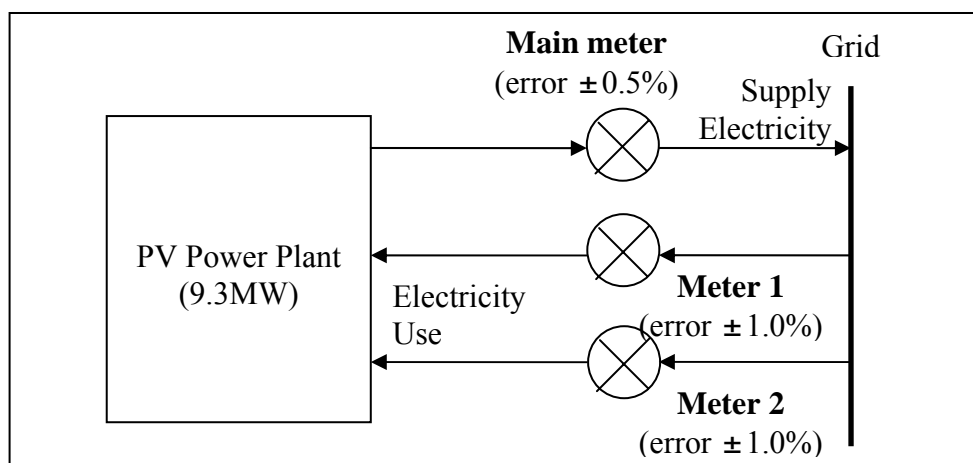
The validation for the revised monitoring plan is as follow:

Meter to measure electricity from the Grid is added as requested by Korea Electric Power Corporation (KEPCO)

EGy, net electricity generation by the project activity is only parameter to be monitored to calculate emission reduction by this project activity during the crediting period. To monitor EGy, measurement of electricity supplied to the Grid and electricity supplied from the Grid need to monitor. According to the registered PDD Version 5 (5 June 2009), there are total 2 meters: 1 meter to measure electricity supplied to the Grid and 1 meter to measure electricity from the Grid respectively. However, as per 'Electricity Enterprises Act', additional meter to measure electricity from the Grid is required to be installed and it measures general electricity consumption for street lights, security system within the project boundary which is not directly

related to power generation by this project activity. And, at the same time, existed meter for measuring electricity supplied from the Grid was replaced to new meter as per KEPCO request.

In conclusion, there are total 3 meters to monitor EGy: 1 meter to measure electricity supplied to the Grid (main meter) and 2 meters to measure electricity delivered from the Grid to the Project (One for the industrial electricity use and other one is to measure general electricity use).



[Table 1: Meter information]

Type	Serial Number	Installation Date	Accuracy Level
Main meter: Measure electricity supplied to the Grid	95246745	11 September 2009	±0.5 %
Meter to measure electricity from the Grid			
1. industrial electricity use	05353627020	23 September 2009	±1.0 %
2. general electricity use	09350007462	23 September 2009	±1.0 %

The validation team checked notice issued by KEPCO to trail changes in number of meters at the project site. The registrar of newly added meters are also checked to confirm accuracy level of meter ($\pm 1.0\%$), serial number and date of installation of the meter (23 September 2009) as well as physical site visit.

And it is also confirmed that PP have well described monitoring plan for the meter added including calibration frequency in the revised monitoring plan and the revised monitoring plan have implemented properly.

The rest of the monitoring plan remains the same as mentioned in the registered PDD available at UNFCCC website <http://cdm.unfccc.int/Projects/DB/KFQ1244695891.98/view>.

3.4.1 Calculation of GHG Emissions

The emission reduction calculation does not change

3.4.2 Responsibility and Authority

The responsibilities and authorities of monitoring parameters and maintenance do not change in the revised MP.

3.5 Environmental Impacts

As per the validation report by Korean Foundation for Quality (KFQ), dated 9 June 2009 available on UNFCCC webpage:

<http://cdm.unfccc.int/Projects/DB/KFQ1244695891.98/view>. No changes have been made.

3.6 Comments by Local stakeholders

As per the validation report by Korean Foundation for Quality (KFQ), dated 9 June 2009 available on UNFCCC webpage:

<http://cdm.unfccc.int/Projects/DB/KFQ1244695891.98/view>. No changes have been made.

4 VALIDATION OPINION

Korean Foundation for Quality (KFQ) has performed a validation of the revised Monitoring Plan of CDM project Ref. No. 2684: Gimcheon PV Power Plant Site 2 CDM Project.

The validation is based on the information made available to us and the engagement conditions. And the review of the revised monitoring plan, related documents, and the subsequent follow-up interviews has conducted with sufficient evidence to determine the fulfillment of all stated criteria.

In our opinion, the revised monitoring plan meets all relevant UNFCCC requirements for the CDM.

Hence, it can be confirmed that:

- a) The level of accuracy or completeness in the monitoring and verification process is not reduced as a result of the revision, also can be confirmed that the proposed revision is in accordance to the project activity.
- b) The proposed revision of the monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity.

Therefore, KFQ recommends the replacement of the monitoring plan of the registered PDD as the submitted revision.

Signed on behalf of the Korean Foundation for Quality

Signature:



Name: Byung Yong LEE

Date: 28 June 2011

5. REFERENCES

Reference No.	Documentation and/or website	Remarks
1	Project Design Document for CDM project 'Gimcheon PV Power Plant Site 2 CDM Project' - Version 05: 5 June 2009	
2	Validation Report: KFQ, Version 01, 9 June 2009	
3	Revised monitoring plan (B.7 section of PDD)	
4	AMS-I.D: Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories (Version 13)	
5	Meter registrar for newly added - industrial electricity use (SN: 05353627020, 23 September 2009) - general electricity use (SN:09350007462, 23 September 2009)	

Appendix
Qualification of Validation Team



CERTIFICATE OF COMPETENCE

Name: Mi Jung LEE

Qualification:

	Validation	Verification
- Lead auditor	■	■
- Auditor	<input type="checkbox"/>	<input type="checkbox"/>
- Technical Expert	<input type="checkbox"/>	<input type="checkbox"/>
- Local Expert	<input type="checkbox"/>	<input type="checkbox"/>

Scopes of Expertise:

Technical Area (TA)

1.2 Energy generation from renewable energy sources

Approved by Qualification Committee of KFQ on 28 February 2011

Sustainability Management Institute
Byung Yong LEE

A handwritten signature in black ink, appearing to read 'B Y Lee', is written over the printed name.



CERTIFICATE OF COMPETENCE

Name: Sung Han YOON

Qualification:

	Validation	Verification
-Lead auditor		
-Auditor		
-Technical Expert		
-Local Expert		

Scopes of Expertise:

Technical Area (TA)

- 1.1 Thermal energy generation from fossil fuels and biomass including thermal electricity from sol
- 1.2 Energy generation from renewable energy sources
- 11.2 GHG capture and destruction.
- 13.1 Waste handling and disposal

Approved by Qualification Committee of KFQ on 28 February 2011

Sustainability Management Institute
Byung Yong LEE

A handwritten signature in black ink, appearing to read 'B Y Lee', is written over the printed name.

Appendix
Qualification of Technical Reviewer



CERTIFICATE OF COMPETENCE

Name: Nam Hoon KIM

Qualification:

	Validation	Verification
- Lead auditor	■	■
- Auditor	<input type="checkbox"/>	<input type="checkbox"/>
- Technical Expert	<input type="checkbox"/>	<input type="checkbox"/>
- Local Expert	<input type="checkbox"/>	<input type="checkbox"/>

Scopes of Expertise:

Technical Area (TA)

1.2 Energy generation from renewable energy sources

Approved by Qualification Committee of KFQ on 28 February 2011

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