
VALIDATION REPORT

AES Lal Pir (Pvt.) Limited

**Construction of Additional Cooling
Tower Cells At AES Lal Pir (Pvt.)
Ltd., Muzaffar Garh, Pakistan**

SGS Climate Change Programme

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Date of Issue:		Project Number:	
31/01/2009		CDM.VAL1690	
Project Title:			
Construction of additional cooling tower cells at AES Lal Pir (Pvt.) Ltd., Muzaffar Garh, Pakistan			
Organisation:		Client:	
SGS United Kingdom Limited		AES Lal Pir (Pvt.) Limited	
Publication of PDD for Stakeholders Consultation			
Commenting Period:		29/01/2008 to 27/02/2008	
First PDD Version and Date:		Version 01 dated January 2007	
Final PDD Version and Date:		Version 07 dated 15/12/2008	
Summary:			
<p>AES Lal Pir (Pvt.) Limited has commissioned SGS to perform the validation of the project: Construction of additional cooling tower cells at AES Lal Pir (Pvt.) Ltd., Muzaffar Garh, Pakistan</p> <p>Methodology used: AMS II B</p> <p>Version and Date: Version 9 dated 10th August 2007 onwards</p> <p>The scope of the validation is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. SGS has employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.</p> <p>The report is based on the findings of document reviews, the stakeholder consultation process and responses from the project participants to the findings raised in this report.</p> <p>The report and the annexed validation describes a total of 35 findings which include:</p> <ul style="list-style-type: none"> • 25 Corrective Action Requests; • 10 New Information Requests; and <p>All findings have been closed out satisfactorily and the project will be recommended to the CDM Executive Board with a request for registration.</p>			
Subject:			
CDM Validation			
Validation Team:			
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Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CO ₂	Carbon Dioxide
COP/MOP	Conference of Parties serving as the Meeting of Parties to Kyoto Protocol
CEMS	Continuous Emission Monitoring System
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EIA	Environment Impact Assessment
GHG	Greenhouse Gas(es)
GWh	Giga Watt hour
IPCC	Intergovernmental Panel on Climate Change
ISHC	International Stakeholder Consultation
MoV	Means of Verification
MP	Monitoring Plan
MT	Metric Tonne
MoM	Minutes of Meeting
NIR	New Information Request
PDD	Project Design Document
PP	Project Proponent
SI unit	International System of Units
UNFCCC	United Nations Framework Convention for Climate Change

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1. Validation Opinion

SGS United Kingdom Ltd has been contracted by AES Lal Pir (Pvt.) Limited to perform a validation of the project: Construction of additional cooling tower cells at AES Lal Pir (Pvt.) Ltd., Muzaffar Garh, Pakistan in Pakistan.

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

SGS reviewed the project design documentation, using a risk based approach and conducted follow-up interviews.

The purpose of the project activity is to utilize the latest technology to improve the performance of the power plants by constructing an additional cooling tower cell for each unit's cooling tower. This will improve the energy efficiency of the power plant by improving the heat rate. A better heat rate will lower CO2 emissions via a reduction in the quantity of fuel required to generate electricity.

The project activity will result in reductions of greenhouse gas emissions that are real, measurable and give long-term benefits to the mitigation of climate change.

In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project correctly applies methodology AMS II B version 9 dated 10th August 2007 onwards. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The total emission reductions from the project are estimated to be 78246 tCO₂e over a 7 year crediting period, averaging **11178** tCO₂e annually. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given the underlying assumptions do not change.

The project will hence be recommended by SGS for registration with the UNFCCC.

Signed on Behalf of the Validation Body by Authorized Signatory



Signature:

Name: Siddharth Yadav

Date: 12th February 2009

2. Introduction

2.1 Objective

AES Lal Pir (Pvt.) Limited has commissioned SGS to perform the validation of the project: Construction of additional cooling tower cells at AES Lal Pir (Pvt.) Ltd., Muzaffar Garh, Pakistan with regard to the relevant requirements for CDM project activities. The purpose of a validation is to have an independent third party assess the project design. In particular, the project's baseline, the monitoring plan (MP) and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Certified Emission Reduction (CER). UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities and related decisions by the COP/MOP and the CDM Executive Board.

2.2 Scope

The scope of the validation is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. SGS has employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

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.

2.3 GHG Project Description

Project activity primarily aims to achieve higher energy efficiency in the Cooling Tower. This project activity includes utilizing the newest available technology for cooling tower components such as the gear boxes, nozzles, fills, and fans. In specific, the nozzles are of a new design which improves the distribution system of the water and helps to reduce the temperature. Once the new technology is in place, the project activity will improve the plant heat rate by approximately 40 BTU/kWh and there by reduces the equivalent GHG emission reduction.

Baseline scenario:

Continuation of current practice – the use of existing cooling towers with a high heat rate indicates an inefficient use of fossil fuel which creates higher CO₂ emissions combustion.

Project Scenario:

The project activity utilizes the newest available technology for cooling tower components such as the gear boxes, nozzles, fills, and fans. In specific, the nozzles are of a new design which improves the distribution system of the water and helps to reduce the temperature and hence improves the heat rate of the power plant.

Leakage:

As per the methodology AMS II B version 9, No leakage is to be considered if the energy efficiency technology is not the equipment transferred from another activity or if the existing equipment is not transferred to another activity

Environmental & Social Impacts:

The project proponent has undertaken a basic environmental analysis for the project. Following are the environmental benefits derived from the project's energy efficiency measures:

- Reduction in GHG emission from combustion of fossil fuel
- Conservation of fossil fuel (natural resource for commercial energy) and sustainable development

- Reduction of environmental deterioration and procurement of fossil fuel (poor ambient air quality)
- Reduction emissions of solid and liquid pollutants

PP has received the letter of Consent from the Environmental Protection Agency (EPA) which was checked during the site visit and found satisfactory, hence no negative Environment impact is there due to the project activity.

2.4 The Names and Roles of the Validation Team Members

Name	Role	Affiliate
Nikunj Agarwal	Lead Assessor	SGS India
Mahboob Ali	Local Assessor (Trainee)	SGS Pakistan

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 is usually required to verify assumptions in the baseline.

A site visit was performed and where the results are summarized (eg separate checklist as Annex).

3.2 Use of the Validation Protocol

The validation protocol used for the assessment is partly based on the templates of the IETA / World Bank Validation and Verification Manual and partly on the experience of SGS with the validation of CDM projects. It serves the following purposes:

- 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), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). New Information Request (NIR) is used when the validation team has identified a need for further clarification.

The completed validation protocol for this project is attached as Annex A.1 to this report

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 **New Information Request (NIR)** 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:

- I. mistakes have been made with a direct influence on project results;
- II. validation protocol requirements have not been met; or
- III. there is a risk that the project would not be accepted as a CDM project or that emission reductions will not be verified.

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

Observations may be raised which are for the benefit of future projects and future verification or validation actors. These have no impact upon the completion of the validation or verification activity.

Corrective Action Requests and New Information Requests are raised in the draft validation protocol and detailed in a separate form (Annex A.2). In this form, the Project Developer is given the opportunity to "close" outstanding CARs and respond to NIRs and Observations.

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 Participation Requirements

The Pakistan is a host party and the project is bilateral and Pakistan has ratified the protocol on 11th January 2005 and is allowed to participate. The web link is <http://maindb.unfccc.int/public/country.pl?country=PK> .. Letter of approval from Host Country (Pakistan) Designated National Authority (DNA) was not enclosed with PDD by the project proponent so CAR 2 was raised to ask the same. The copy of HCA dated 10th May 2008, reference number F.No. 1(09)-CDM/2006 has been provided to DOE, which was checked for the title of the project activity and the voluntary participation. Hence CAR 2 was closed out satisfactorily.

Project Proponent has identified Netherlands as a Annexure I country and Netherlands has ratified the Kyoto protocol on 31st May 2002 and the letter of approval has not been submitted by the Netherlands DNA, CAR 3 was raised asking project proponent to submit the Letter of approval from DNA. The project proponent provided the letter dated 26th August 2008; issued by the Netherlands DNA (reference number 2008.SN.222/SB/RLA) has been provided by the client which was verified for the voluntary participation and the Kyoto protocol ratification. Hence CAR 3 was closed out.

4.2 Project Design

It is a small scale project and PDD follows the latest available template version 3 of CDM-SSC-PDD.

CAR 6 was raised as the project description given in section A.2 of PDD was not clear as the description was *such that the cooling tower has been designed to perform with low efficiency. Moreover any system has to be operated according to their design conditions. When a system is overloaded than its design then naturally the efficiency will go down. In this system load on the cooling tower is more than its design which is affecting its performance. Hence the problem is not in the system but in the operating condition.*

In the response of this CAR PP elaborate the discussion in section A.2 of the PDD which was further assessed and after the subsequent discussions the response of the PP described in the Annex 3 CAR 6 (of this report), the CAR 6 was closed out.

CAR 7 was raised as the latitude and longitude of the site was missing in the PDD, in response of this CAR PP incorporate the coordinates of the site in the PDD which was checked and found satisfactory, hence this CAR was closed out.

CAR 8 was raised because It was not clear from the PDD whether a new cooling tower is going to be constructed or new cells are being added to the existing cooling tower. In response of this CAR PP replies that In PDD section B.3, it has been clarified that PP is going to add new cooling tower cells in existing cooling tower and figure has also been replaced with more cleared one. In section A 4.2, The typographical error as “fails” has been corrected. The explanation given by PP was found satisfactory, hence this CAR was closed out.

CAR 9 was raised as the technology description given under section A.4.2 of PDD is not clear. Justify how the technology being employed in the project activity is superior to the conventional technology that is followed else where which would lead to higher energy efficiency and hence lesser energy consumption. The present description just gives the operation of a conventional cooling tower. In response of this CAR PP replies that the PDD has been revised to better clarify especially in section A 4.2 and justify the technology to be implemented and also third party letter is being provided as evidence for technology. This CAR was further reopen as the Attached document was a quote of equipment supplier and does not give any information to be superior from the installed one. Secondly it was not a third party report, its equipment supplier who is going to install new cell and how the supplier can itself certify that his technology is superior to the others can be the evident of the superior technology. In response of this CAR PP further replies that the PDD has been revised to better clarify especially in section A 4.2 and justify the technology to be implemented and also third party letter is being provided as evidence for technology.

PP has made the amendment in the revised PDD and had also submitted the letter from the Ministry of Pakistan regarding the new technology in the Pakistan (Ref. no. /7/), which was checked and found satisfactory, hence this CAR was closed out.

CAR 10 was raised such as to ask the PP the project technology is not likely to be substituted by the project participant by more efficient technology. Proof from the project participant needs to be submitted in this regard, in response of this CAR PP provides the letter of undertaking for the same, but as per the letter of undertaking submitted by the PP dated 29th May 2008 (Ref. no. /12/), it states that “Existing cooling Tower performance has been degraded which lead to higher emission, so AES has planned to construct new cooling tower cells”, which seems that any how PP has to change the cells and there is no extra efforts for the project activity due to CDM, hence this CAR was not closed, with further substantiation PP replies that all reference to degradation had been removed in the PDD to eliminate confusion. Third party letter is being provided to support that existing project is capable to operate as per power purchase agreement until 2030 project life and new project activity with latest technology will help to improve the performance of existing project and eventually reduction in emission. In response to CAR 10 the PP submitted the life time assessment for the existing cooling tower which states that the same can be operated till 2030. This was verified by the assessment team and found to be correct.

CAR 10 was closed out.

NIR 11 was raised as the PDD doesn't mention anything about the initial training and maintenance efforts needed to work as presumed during the project period and provisions for meeting training and maintenance needs. In response of this NIR PP incorporated the training details in the Annex 4 of this PDD which was checked and found satisfactory.

NIR11 was closed out.

NIR 13 was raised such as to ask the PP about no public funding involved in the project activity. Proof in this regard needs to be provided. In response of this NIR PP provided the letter of undertaking (Ref. no. /11/) that no ODA has been used for the project activity.

NIR 13 was closed out.

4.3 Eligibility as a Small Scale Project

It is a small scale project activity and the baseline methodology AMS IIB, version 9 is correctly applied. It is an energy efficiency project at a single industrial facility the fossil fuel consumption will be reduced by improving the heat rate by taking the measure to increase the cooling tower efficiency. The impacts of the measures implemented by the project activity will be clearly distinguished from changes in energy use due to other variable not influenced by the project activity. The total saving from the project activity is expected 40.12 GWh_{th} which is lesser than the limit of small scale project (180 GWh_{the}) and this is inline to the applied methodology AMS II B version 9. So the applied small scale methodology is correctly applied to this small scale project activity.

4.4 Baseline Selection and Additionality

The baseline for the project activity is determined as per “Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories” Type II – Energy Efficiency Improvement Projects, Category II.B. version 9. So in the absence of the project activity, the existing cooling tower will continue to operate for more than next ten years, the same was confirmed from the life time assessment report submitted by PP (Ref. no /13/). The emissions baseline is the energy baseline multiplied by an emission coefficient for the fuel used by the generating unit. In this project activity, new cooling tower cells will be added as a retrofit measure to existing cooling towers and these new cells will be comprised of the latest technology. New cell construction will help to improve the performance of existing cooling tower.

CAR 14 was raised as the description provided under section B.2 of PDD was not clear and please provide a clear description justifying the applicability of the chosen baseline and monitoring methodology to the project activity. In response to CAR 14 the PP has rephrased section B.2 of the PDD such as to make the applicability of the chosen baseline for the project activity clear. This information was checked by the assessment team and found to be sufficient.

CAR 14 CAR was closed out.

CAR 16 was raised as it was not clear from section B.4 of PDD whether the project activity is a new facility or a retrofit measure. Please provide a clear description of the baseline as per the applicable baseline and

monitoring methodology. In response to CAR 16 the PP amended section B.4 of the PDD such as to make clear about the project activity in the revised PDD. The revised PDD submitted by the PP clarified in section B.4 that the project activity was a retrofit measure. The revised information was verified by the assessment team and found to be sufficient.

CAR 16 was closed.

CAR 17 was raised because as per the applicable methodology, in the case of retrofit measures, the energy baseline is calculated as the monitored performance of the existing generating unit *i.e.* the energy content of the fuel used by the generating unit and the energy content of the electricity produced by the unit. Please justify. Also please use only SI units. In the PDD units other than SI units have been used. In response to CAR 17 the PP submitted a revised PDD. It was found that in section B.6 and also in the Spreadsheet, that proper methodology formulae have been applied as “the energy content of the fuel used by the generating unit and the energy content of the electricity produced by the unit should be calculated for project emissions”; CAR 17 remained open such as to ask the PP about the assumptions used in the calculation sheet.

In response to CAR 17 the PP further replied that as per the calculation spreadsheet:

Current efficiency = energy potential of baseline energy produced/energy potential of fuel oil consumed (from “baseline emission calculations” sheet)

Project Efficiency = same as baseline current efficiency with a 0.43% efficiency increase

Efficiency Increase (after project activity) is clearly shown on “baseline emissions calculations” sheet as expected heat rate improvement/baseline heat rate. Capacity Factor is from historical records.

The explanation given by PP in the revised documentation was found to be satisfactory.

CAR 17 was closed out.

The project additionality was determined as per Non-binding best practice examples to demonstrate additionality for SSC project activities (EB35, Annex 34) on the basis of prevailing practice barrier. In order to get all the related documentary evidences that prevailing practice barriers are associated with project activity CAR 20 was raised.

In response to CAR 20 the PP provided the letter from the Ministry of Environment, Government of Pakistan, F.No. 1(09)-CDM/ 2006 dated 25th July 2008 (Ref. no. /7/), which confirmed that the technology used in the project activity was a new technology in Pakistan. The DOE also received a letter from Mr. Saadullah Ayaz, Head, Clean Development Mechanism Cell, Ministry of Environment, Government of Pakistan on 25th July 2008 (Ref. No. /14/) confirming that the project was the first of its kind in Pakistan. The evidence provided was verified by the assessment team and found to satisfy the requirement of EB35, Annex 34.

CAR 20 was closed.

NIR 19 was raised such as to ask the PP to demonstrate the Serious CDM Consideration with regards of EB 41 Annex 46. In response NIR 19 the PP provided the chronology as below, which was checked along with the supporting documentation by the assessment team and it was concluded that the project activity is additional...

NIR 19 was closed.

Date	Activity	Reference Documents
18/01/2007	CDM was considered	Board Meeting
25/01/2007	PDD Preparation	Web hosted PDD
12/07/2007	Cooling Tower Feasibility Report	Feasibility Report
18/08/2007	Geothermal Investigation Report by Berkely Associates	Invoice raised by Berkeley Associates and the Geothermal Investigation Report
8/11/2007	PIN approval by Ministry of Environment, Pakistan	PIN Approval letter
24/11/2007	EPA Approval	EPA approval by Environmental Protection Department
23/01/2008	Start date of the CDM project activity	Construction Contract with METCO

22/01/2008	Contract with SGS	SGS signed Contract
29/01/2008 to 27/02/2008	PDD upload for ISHC comments on UN site	UNFCCC web site

4.5 Application of Baseline Methodology and Calculation of Emission Factors

The baseline methodology IIB version 9 was applied correctly since it is an energy efficiency project. The baseline selected is to continue with the existing practice. In the project activity the heat rate will be lesser as compared to pre project scenario and the fossil fuel consumption will be lesser.

CAR 32 was raised such as to ask the PP to please provide the documentary proof for the baseline values used in Annex 3 of PDD. In response to CAR 32 the PP submitted the baseline data, which was cross verified during the site visit by the assessment team and found to be correct.

CAR 32 was closed.

IPCC default values will be used for the baseline emission factor.

4.6 Application of Monitoring Methodology and Monitoring Plan

The monitoring methodology IIB version 9 is correctly followed and the required parameters are included in the monitoring plan. The QA/QC procedures are also mentioned corresponding to all monitoring parameters.

CAR 26 was raised as the information given for each parameter in the table under the section B.7.1 of PDD was not complete and was insufficient to determine the specified project GHG indicators such as:

- Monitoring plan was not accurate, such as Fuel CV reported to be calculated from meter, but the CV is either calculated by lab or by supplier and also the description of measurement is the generalised statement for all the parameters.
- Similarly the calibration plans are not address in QA/QC in the monitoring plan.
- Please provide the specific details for the parameters, and also clearly mention that which parameter will be measured/calculated/estimated and what be the source of the measurement.

In response to CAR 26 the PP submitted a revised PDD which included the above mentioned points in section B.7.1. The revised PDD was verified by the assessment team and deemed it satisfactory.

CAR 26 was closed.

NIR 27 and NIR 29 were raised as the uncertainty associated with each parameter monitored and the information on monitoring equipment and respective positioning was not discussed in PDD. The QA/QC procedures were not sufficiently described to ensure the delivery of high quality data in response of these NIR's the PP explained the data uncertainty in the monitoring plan of the revised PDD and the information on the details of the fuel oil flow meters and energy meters location in the revised PDD as:

Net electricity Generation Metering system - It is installed on the outgoing power transmission lines in the switch yard area. Also online reading could be retrieved in the control room through computerized system.

Fossil Fuel Consumption: Fossil Fuel consumption will be recorded by the flow meters, which is located on the suction line & discharge line of fuel on third floor of boiler. Its online consumption will be monitored in the control room through DCS.

Hence NIR 27 and NIR 29 were closed out.

CAR 28 was raised as the PDD did not discuss anything about the procedures identified for training of monitoring personnel. In response to CAR 28 the PP incorporated the training plan for the monitoring personnel for this new technology into Annex 4 of the revised PDD along with the training schedule for monitoring personnel. The information was verified by the assessment team and found to be sufficient.

CAR 28 was closed.

NIR 30 was raised as the PDD did not discuss about the procedures identified for dealing with possible monitoring data adjustments and missing data allowing redundant reconstruction of data in case of monitoring problems. In response to NIR 30 the PP submitted a revised PDD to elaborate on the information

that had been missed regarding the procedures and missing data. The revised PDD was verified by the assessment team and found to be satisfactory.

NIR 30 was closed out.

NIR 31 was raised as the PDD did not discuss the procedures identified for project performance reviews before data is submitted for verification, internally or externally. In response to NIR 31 the PP submitted a revised PDD which incorporated the review and internal audit procedures. The revised documentation was reviewed by the assessment team and found to be satisfactory.

NIR 31 was closed out.

4.7 Choice of the Crediting Period

The project start date is 23/01/2008 was validated and found correct. CAR 18 was raised for the proof of the start date, in response to CAR 18 the PP submitted the Contract agreement for Construction dated 23rd January 2008, hence the same can be accepted as the start date of the project activity as per the guidelines of EB 41 para 67. The agreement was verified by the assessment team as being correct.

CAR 18 was closed.

The life time of the project activity was estimated as 21 years. The crediting period will start after the registration of the project activity and it will claim the renewable crediting period for 7years and will be renewed for 3 years.

4.8 Environmental Impacts

It is an energy efficiency project and implementation of the project activity will reduce the consumption of fossil fuel. Hence no environmental effects are envisaged. NIR 33 was raised because as per the PDD, there is no requirement for conducting EIA study under Host Country requirements. Please provide the documentary evidence for the same. In response to NIR 33 the PP has submitted the letter of approval from national EPA for the project activity, which was checked by the assessment team and it was concluded that an EIA is not required for the project activity and found to be satisfactory.

NIR 33 was closed out.

4.9 Local Stakeholder Comments

The local stakeholders' consultation was carried out for the project activity since it is not required by any law or regulations by the host country.

NIR 34 was raised because as per PDD, stake holders have been consulted for which a meeting has been organized on 19/10/2007 at the conference hall of AES LAL PIR. In response to NIR 34 the PP submitted the MoM for the stake holder consultation which was rearranged from the 19th October to the 22nd October 2007. This rescheduling for the local stake holder consultation was verified by the assessment team and found to be correct.

NIR 34 was closed out.

NIR 35 was raised because as per PDD a notice was issued on 2nd October 2007 and also invitation was sent to all stake holders. Please provide the copy of the same. In response to NIR 35 the PP has submitted the copy of both the invitation letter (initial and the revised letter as the meeting was postponed on the predefined date) as a media for the stake holder consultation which was checked and verified by the assessment team during the local stake holder consultation and site visit and was found to be satisfactory. NIR 35 was closed out.

5. Comments by Parties, Stakeholders and NGOs

In accordance with sub-paragraphs 40 (b) and (c) of the CDM modalities and procedures, the project design document of a proposed CDM project activity shall be made publicly available and the DOE shall invite comments on the validation requirements from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available. This chapter describes this process for this project.

5.1 Description of How and When the PDD was Made Publicly Available

The Project Design Document for this project was made available on the SGS website <http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=440> and was open for comments from 29/01/2008 until 27/02/2008 on

Comments were invited through the UNFCCC CDM homepage <http://cdm.unfccc.int/Projects/Validation/DB/HARKQAUNPRTMOY7134IYUEMFPQUEBL/view.html>

5.2 Compilation of all Comments Received

No comments received.

Comment Number	Date Received	Submitter	Comment
NA			

5.3 Explanation of How Comments Have Been Taken into Account

No negative comments were received.

6. List of Persons Interviewed

Date	Name	Position	Short Description of Subject Discussed
30/05/2008	Mr. Muhammad Saqib Khan	Manager Performance & Engineering	CDM consideration
30/05/2008	Mr. Anhad Iqbal Khan	Project Manager	About the data Achieving, QA/QC and Monitoring Plan
30/05/2008	Mr. Rashid Bukhari	Performance Engineer	Monitoring methodology
30/05/2008	Mr. Muhammad Ismail	Control Room Engineer	QA/QC and monitoring plan
30/05/2008	Mr. Hammad Rabbani	B.D. Manager	About the Project Description and Stake holder Consultation
30/05/2008	Mr. Farhan Javed	CDM Manager	Additionality & baseline of the project

7. 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/ Version 01 web hosted for ISHC
- /2/ Version 07 request for registration (confidential and Public version)
- /3/ HCA issued by Pakistan DNA dated 10th May 2008
- /4/ LOA by Netherlands 26th August 2008
- /5/ Modalities of Communication dated 1st August 2008
- /6/ Emission Reduction calculation Sheet
- /7/ First of its kind letter by Ministry of Environment, Government of Pakistan dated 25th July 2008 (copy attached with confidential PDD)

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):

- /8/ Media for Stakeholder Consultation
- /9/ Proof for Starting date – Contract agreement dated 23rd January 2008
- /10/ MoM for Stake Holder Consultation - Copy of invitation
- /11/ Letter for No ODA
- /12/ Letter for no Technology substitution
- /13/ Life Time Assessment Report of existing cooling Towers
- /14/ Email communication received from Pakistan DNA, dated 25 July 2008 (Cross check against first of its kind letter from Ministry)
- /15/ Board Meeting dated 18th January 2007
- /16/ Feasibility Report dated 12th July 2007
- /17/ Invoice raised by Berkeley Associates and the Geothermal Investigation Report dated 18th August 2007
- /18/ PIN approval letter by Ministry of Environment, Pakistan dated 8th November 2007
- /19/ EPA approval by Environmental Protection Department dated 24th November 2007

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A.1 Annex 1: Local Assessment

This checklist is designed to provide confirmation of in-country data and information provided in the Project Design Document for Construction of additional cooling tower cells at AES Lal Pir (Pvt.) Ltd., Muzaffar Garh, Pakistan.

It serves as a “**reality check**” on the project that is completed by a local assessor from SGS Pakistan

Issue	Findings	Source/Mean of Verification	Further Action / Clarification / Information Required?
Please submit the modalities of communication.	The modalities of communication letter stating the focal point has been provided and found in order.	MoC	NO
The historical baseline data has been considered for emission reduction calculations. The credibility of data and assumptions used will be checked during the site visit by local assessor.	The one year historical data of steam consumption was checked from the available plant records and the data used for emission reduction calculation was found correct.	Plant records for steam consumption in the process.	NO
The project planning will be checked during the site visit.	The project activity was under construction during site visit.	Site visit observations	NO
The planning execution and commissioning sequencing will be discussed at the site visit.	The project activity was under construction during site visit.	Site visit observations	NO

Issue	Findings	Source/Mean of Verification	Further Action / Clarification / Information Required?
With reference to the methodology AMS IIB the historical monitored data should be considered as a baseline. PDD mentioned that the one year historical data has been used to establish the baseline. The same will be checked and verified during the site visit.	The three year historical data of fuel consumption available in plant has been used for emission reduction calculation. The used data was cross verified from the plant records and found correct. The data was collected from the calibrated meters. The calibration certificates of meters was also checked and found in order.	Plant records for steam consumption and calibration certificates	NO
Please justify that the baseline and project emissions has been considered in a conservative manner.	For estimating the baseline the historical monitored data was used and the approach taken looks conservative.	Spread sheet of ER, PDD	NO
Stake holder Consultation	Has due account been taken of any stakeholder comments received?	PP has organised the local stake holder consultation meeting and the same was verified during the stake holder meeting during site visit.	NO
The date of baseline will be checked during site visit.	The three year data for the baseline estimation was checked and found that data has been used correctly for baseline estimation.	Plant records	NO
Debundling of large Projects	The small scale project activity is not a debundled component of a larger project activity	Site Observations and discussions	NO
ODA	The project shall not make use of Official Development Assistance (ODA), nor result in the diversion of such ODA	A letter from the PP has been submitted to the DOE stating that no ODA fund has been used for the project activity.	NO

Issue	Findings	Source/Mean of Verification	Further Action / Clarification / Information Required?
Substitution of Technology with more efficient technology	It is required to be checked whether the project technology used is likely to be substituted by other or more efficient technologies within the project period.	The project developer has submitted the letter of undertaking that the technology will not be substituted during the crediting period.	NO

A.2 Annex 2: Validation Protocol

Table 1 Participation Requirements for Clean Development Mechanism (CDM) Project Activities (Ref PDD, Letters of Approval and UNFCCC website)

Requirement	Reference	Comments	Conclusion
1. All Parties (listed in Section A3 of the PDD) have ratified the Kyoto protocol and are allowed to participate in CDM projects	Marrakech Accords, CDM Modalities §30	Section A3 of PDD has been tampered with and is not as per the CDM SSC PDD guidelines.	CAR-1 CAR 01 was closed out
2. The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3 and be entered into voluntarily.	Marrakech Accords, CDM Modalities §29 and §30	The project is likely to assist the Annex-1 country in achieving compliance with the part of emission reduction commitment. However no Annex-1 party has been identified so far.	Y
3. The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof, and be entered into voluntarily	Marrakech Accords, CDM Modalities §29 and §30 Kyoto Protocol Art. 12.2, Marrakech Accords, CDM Modalities §40a	Section A3 of PDD has been tampered with and is not as per the CDM SSC PDD guidelines. Non Annex-1 party involved is not mentioned in PDD. The project is likely to contribute to the sustainable development of the non-Annex I party. The letter of approval from the DNA of the non-Annex I party has to be submitted by the PP	Pending CAR-1 CAR-2 CAR 3 CAR 02 & CAR 03 was closed out

Requirement	Reference	Comments	Conclusion
4. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days, and the project design document and comments have been made publicly available	Marrakech Accords, CDM Modalities, §40	The project was listed on UNFCCC website from 29 Jan 2008 to 27 Feb 2008 at http://cdm.unfccc.int/Projects/Validation/D/B/HARKQAUNPRTMOY7I34IYUEMFPQ/UEBL/view.html and also in the SGS Climate Change website from 29 Jan 2008 to 28 Feb 2008 at http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=440 . No Comments were received during this period.	Y
5. The project design document shall be in conformance with the UNFCCC SSC PDD format		The PDD has correctly used the latest version but it has been tampered and is not as per the CDM SSC PDD guidelines.	Pending CAR-1 CAR 01 was closed out
6. The project participants shall submit a letter on the modalities of communication (MoC) before submitting a request for registration	EB-09 F_CDM_REG form	Section A.3 of PDD does not mention the project participant correctly. Similarly in Annex 1 of PDD, there is a statement which says “There is no participant of AES Lal Pir in this project activity”. It is not clear what this statement means. Modalities of Communication needs to be submitted by PP.	CAR-4 CAR 04 was closed out
7. For AR projects, the host country shall have issued a communication providing a single definition of minimum tree cover, minimum land area value and minimum tree height. Has such a letter been issued and are the definitions consistently applied throughout the PDD?		Not Applicable	Not Applicable

Table 2 PDD

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A. General Description of Project Activity					
A.1. Project Title					
A.1.1. Does the used project title clearly enable to identify the unique CDM activity?	1	DR	The title of the project activity is “Construction of additional cooling tower cells at AES Lal Pir (Pvt.) Ltd. Muzaffar Garh, Pakistan”. It is able to identify the unique CDM activity.	Y	Y
A.1.2. Are there an indication of a revision number and the date of the revision?	1	DR	The present PDD is version 01 dated January 2007.	Y	Y
A.1.3. Is this in consistency with the time line of the project’s history?	1	DR	The PDD version 01 is dated January 2007 and the date of completion of baseline and monitoring methodology as per section B.8 of PDD is 21/01/2008. There is a huge gap between the dates. Justify the time line.	CAR-5	Y
A.2. Description of the Project Activity					
A.2.1. Is the description delivering a transparent overview of the project activities?	1	DR	The description is not clear. The description is such that the cooling tower has been designed to perform with low efficiency. Moreover any system has to be operated according to their design conditions. When a system is overloaded than its design then naturally the efficiency will go down. In this system load on the cooling tower is more than its design which is affecting its performance. Hence the problem is not in the system but in the operating condition. Please justify.	CAR-6	Y

* MoV = Means of Verification, DR= Document Review, I= Interview

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.2.2. Is all information provided in compliance with actual situation or planning?	1	DR/SV	To be verified during site visit.	Pending SV	Y
A.2.3. Is all information provided consistent with details provided in further chapters of the PDD?	1	DR	Pending closure of CARs / NIRs	Pending	Y
A.3. Project Participants					
A.3.1. Is the table required for the indication of project participants correctly applied?	1	DR	The table in the section A.3 of PDD is not correctly applied.	Pending CAR-1	Y
A.3.2. Is all information provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	1	DR	In the Annex 1 of PDD, there is a statement which says "There is no participant of AES Lal Pir in this project activity". It is not clear what this statement means.	Pending CAR-4	Y
A.4. Technical Description of the Project Activity					
A.4.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	1	DR	Provide the latitude and longitude of the site	CAR-7	Y
A.4.2. Do the project participants possess ownership or licenses which will allow the implementation of the project at that site / those sites?	1	DR	The PP has obtained clearance from the Environmental Protection Agency, Government of Punjab for the construction of additional cooling tower.	Y	Y
A.4.3. Does the description of the technology to be applied provide sufficient and transparent input to evaluate its impact on the greenhouse gas balance and is the explanation how the project will reduce greenhouse gas emission transparent and suitable?	1	DR	It is not clear from the PDD whether a new cooling tower is going to be constructed or new cells are being added to the existing cooling tower.	CAR-8	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.4.4. Does the project design engineering reflect current good practices?	1	DR	The technology description given under section A.4.2 of PDD is not clear. Justify how the technology being employed in the project activity is superior than the conventional technology that is followed else where which would lead to higher energy efficiency and hence lesser energy consumption. The present description just gives the operation of a conventional cooling tower.	CAR-9	Y
A.4.5. Is all information provided in compliance with actual situation or planning as available by the project participants?	1	DR/SV	Need to check during site visit	Pending SV	Y
A.4.6. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	1	DR	Pending CAR-8	Pending	Y
A.4.7. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1	DR	The project technology is not likely to be substituted by other or more efficient technology within the project period. Provide proof for the same.	CAR-10	Y
A.4.8. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	1	DR	The PDD doesn't mention anything about the initial training and maintenance efforts needed to work as presumed during the project period.	NIR-11	Y
A.4.9. Does the project make provisions for meeting training and maintenance needs?	1	DR	The PDD doesn't mention anything about the provisions for meeting training and maintenance needs.	Pending NIR-11	Y
A.4.10. Is a schedule available on the implementation of the project and are there any risks for delays?	1	DR	As per the PDD the expected date of commissioning the project activity is September 2008.	Y	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.4.11. Is the table required for the indication of projected emission reductions correctly applied?	1	DR	With reference to section A.4.3 of PDD, the table for the indication of projected emission reductions is not correctly applied as per the CDM-SSC-PDD guidelines.	CAR-12	Y
A.5. Public Funding					
A.5.1. Does the information on public funding provided conform with the actual situation or planning as presented by the project participants?	1	DR	As per the PDD, there is no public funding involved in the project activity. Proof in this regard needs to be provided.	NIR-13	Y
A.5.2. Is all information provided consistent with details provided by further chapters of the PDD (in particular annex 2)?	1	DR	Yes the information is consistent with annex 2	Y	Y
A.5.3. In case of public funding from Annex I Parties is it confirmed that such funding does not result in a diversion of official development assistance	1	DR	Not Applicable.	Y	Y
A.6. Debundling					
A.6.1. Is the small-scale project activity a debundled component of a large scale project activity	1	DR/SV	As per PDD the project activity is not a de-bundled component of a large scale project activity as none of the conditions to be considered for de bundling is applicable to this project activity. The same will be checked during the site Visit.	Pending Site visit	Y
A.6.2. If the project is a debundled component of a larger project, does the larger project fall within the limits for small-scale CDM project activities	1	DR	Not Applicable	Not Applicable	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B. Baseline and Monitoring Methodology					
B.1. Choice and Applicability					
B.1.1. Is the project using an approved simplified methodology?	1	DR	Yes the project uses an approved simplified methodology AMS IIB "Supply side energy efficiency improvements-generation", version 09. The version is still valid.	Y	Y
B.1.2. Does the project activity qualify as small scale project?	1	DR	For Type II: the annual energy savings on account of efficiency improvements should not exceed 60 GWh (or an appropriate equivalent) in any year of the crediting period. As per the PDD for this project activity annual energy savings will be a maximum of 12.702 GWh per year. Hence it qualifies as a small scale project.	Y	Y
B.1.3. Is the category(ies) of the project activity correctly identified in accordance with Appendix B to the simplified modalities and procedures for small-scale CDM project activities?	1	DR	The description provided under section B.2 of PDD is not clear. Provide a clear description justifying the applicability of the chosen baseline and monitoring methodology to the project activity.	CAR-14	Y
B.1.4. Is the project activity a bundle of several small scale activities and if so does it contain any sub-bundles	1	DR	The project activity is not a bundle of small scale activities.	Y	Y
B.1.5. If the project activity is a bundle of several small scale activities, does the sum of the total bundle (including any subbundles) fall within the limits for small scale projects	1	DR	Not Applicable	Y	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.1.6. If the project activity is a bundle of several small scale activities, has the form with information related to the bundle been submitted and is it correctly used	1	DR	Not Applicable	Y	Y
B.2. Project Boundary					
B.2.1. Has the project boundary of the project activity been based on the guidance of the applicable project category?	1	DR	<p>The project boundary is not as per the guidance of the applicable project category. Moreover the description of the project boundary as given in section B.3 of PDD is not clear.</p> <p>As per the PDD the project activity leads to increase in the energy efficiency of the cooling tower which in turn leads to reduced fuel consumption. But it is not clear from PDD how the reduction in fuel consumption after the implementation of the project activity can be attributed only to the improvement of energy efficiency of cooling tower and not because of any other changes or modification in other parts of the system needs to be explained.</p>	CAR-15	Y
B.2.2. In case of grid connected electricity projects: Is the relevant grid correctly identified in accordance with EB guidance and the underlying methodology?	1	DR	Not Applicable	N/A	Y
B.2.3. Are the project's spatial boundaries (geographical) and the project's system boundaries (components and facilities used to mitigate GHGs) clearly defined?	1	DR	Pending CAR-15	Pending	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.3. Identification of the Baseline					
B.3.1. Does the PDD discuss the identification of the most likely baseline?	1	DR	It is not clear from the section B.4 of PDD whether the project activity is a new facility or a retrofit measure. Provide a clear description of the baseline as per the applicable baseline and monitoring methodology.	CAR-16	Y
B.3.2. Is the discussion and determination of the chosen baseline transparent and supported by the available data?	1	DR	As per the applicable methodology, in the case of retrofit measures, the energy baseline is calculated as the monitored performance of the existing generating unit. i.e. the energy content of the fuel used by the generating unit and the energy content of the electricity produced by the unit.	CAR-17	Y
B.3.3. Is conservativeness addressed in the way of identifying the baseline?	1	DR/SV	Need to verify during site visit	Pending SV	Y
B.4. Additionality					
B.4.1. Is the discussion on additionality and the evidence provided consistent with the starting date of the project	1	DR	As per section C.1.1 of PDD the start date of the project activity is August 20, 2008. Provide proof for the start date. It is consistent with the start date of the project.	CAR-18	Y
B.4.2. Is the discussion on additionality based on a comparison with realistic and credible alternatives?	1	DR	Additionality should be discussed by comparing the project scenario with credible alternatives. These alternatives should have a comparable output as the project. But PDD has not discussed the alternatives to the project activity. Please provide the Serious CDM Consideration as per EB 41 Annex 46.	NIR-19	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.4.3. Does the discussion on additionality take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations??	1	DR	As per the PDD there are no regulatory requirements for power plants to reduce GHG emission.	Y	Y
B.4.4. Has it been shown that the proposed project activity faces barriers that prevent the implementation of this type of proposed project activity but would not have prevented the implementation of at least one of the alternatives?	1	DR	Section B.5 of PDD mentions that the technology being adopted in the project activity is a common technology. Hence technology cannot be considered as a barrier. Please justify. Similarly the investment barrier is also not specific. Please provide what was the financial analysis carried out and what was the return obtained and what your benchmark return is. How CDM has helped to overcome the barrier.	CAR-20	Y
B.4.5. Is it demonstrated/justified that the project activity itself is not a likely baseline scenario	1	DR	Pending CAR-19	Pending	Y
B.5. Application of the Simplified Methodology					
B.5.1. Has the simplified methodology been applied correctly for determining baseline emissions ?	1	DR	The PDD doesn't discuss about how the baseline emission is going to be calculated and which equations will be used for calculation.	CAR-21	Y
B.5.2. Has the simplified methodology been applied correctly for determining project emissions ?	1	DR	As per the applicable methodology for project emissions the energy content of the fuel used by the generating unit and the energy content of the electricity produced by the unit should be calculated.	CAR-22	Y
B.5.3. Has the simplified methodology been applied correctly for determining leakage ?	1	DR/SV	As per the PDD there are no leakages associated with the project activity. The same will be verified during site visit.	Pending SV	Y
B.5.4. Have all the methodological choices been explained, have they been properly justified and are they correct	1	DR	Pending CAR-21	Pending	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.5.5. Are uncertainties in the GHG emissions estimates properly addressed in the documentation?	1	DR	Uncertainties in the GHG emissions estimates have not been discussed in PDD.	CAR-23	Y
B.6. Ex-ante Data and Parameters Used					
B.6.1. Are the data provided in compliance with the simplified methodology?	1	DR	The data available under section B.6.2 of PDD is incomplete.	CAR-24	Y
B.6.2. Is all the data derived from official data sources or replicable records and have these been correctly quoted?	1	DR	None of the data is publicly available. Documentary proof for the ex-ante data used needs to be provided.	Pending CAR-24	Y
B.6.3. Is the vintage of the baseline data correct?	1	DR	Pending CAR-24	Pending	Y
B.7. Calculation of Emissions Reductions					
B.7.1. Has the approved methodology been applied correctly for determining emission reductions ?	1	DR	The emission reduction calculation used is not as per the approved methodology. The equation used for the calculation of emission reduction is wrong.	CAR-25	Y
B.7.2. Are the emission reduction calculations documented in a complete and transparent manner?	1	DR	Pending CAR-25	Pending	Y
B.7.3. Have conservative assumptions been used to calculate emission reductions?	1	DR/SV	Need to verify during site visit	Pending SV	Y
B.7.4. Is the projection based on provable input parameter?	1	DR	Pending CAR-24	Pending	Y
B.7.5. Is the projection based on same procedures as used for later monitoring or acceptable alternative models?	1	DR	Pending CAR-25	Pending	Y
B.7.6. Is the calculation of the emission reduction correct?	1	DR	Pending CAR-25	Pending	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.8. Emission Reductions					
B.8.1. Will the project result in fewer GHG emissions than the baseline scenario?	1	DR	Yes, project result in fewer GHG emissions than the baseline scenario.	Y	Y
B.8.2. Is the form/table required for the indication of projected emission reductions correctly applied?	1	DR	Yes the table required for the indication of projected emission reductions has been correctly applied	Y	Y
B.8.3. Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	1	DR	Yes the projection is in line with the envisioned time schedule for the project's implementation and the indicated crediting period	Y	Y
B.9. Monitoring Methodology					
B.9.1. Does the monitoring methodology provide a consistent approach in the context of all parameter to be monitored and further information provided by the PDD?	1	DR	No the monitoring methodology is not mentioning all the parameters to be monitored as per the applicable methodology.	Pending CAR-22	Y
B.9.2. Does the monitoring methodology consistently apply the choice of the option selected for monitoring both of project and baseline emissions?	1	DR	Pending CAR-22	Pending	Y
B.10. Data and Parameters Monitored					
B.10.1. Does the monitoring plan provide 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?	1	DR	Pending CAR-22	Pending	Y
B.10.2. Are the choices of project GHG indicators reasonable and in conformance with the requirements set by the simplified methodology applied?	1	DR/SV	Need to verify during site visit.	SV	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.10.3. Will it be possible to determine the specified project GHG indicators?	1	DR	The information given for each parameter in the table under the section B.7.1 of PDD is not complete and is insufficient to determine the specified project GHG indicators.	CAR-26	Y
B.10.4. Will the indicators enable comparison of project data and performance over time?	1	DR	Pending CAR-26	Pending	Y
B.10.5. 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?	1	DR	The information given for each monitoring variable by the presented table is not sufficient to ensure the verification of a proper implementation of the monitoring plan	Pending CAR-26	Y
B.10.6. 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?	1	DR	Pending CAR-26	Pending	Y
B.10.7. Is the monitoring approach in line with current good practice, i.e. will it deliver data in a reliable and reasonably acceptable accuracy?	1	DR	Pending CAR-26	Pending	Y
B.10.8. Are all formulae used to determine project emission clearly indicated and in compliance with the monitoring methodology.	1	DR	Pending CAR-22	Pending	Y
B.11. Quality Control (QC) and Quality Assurance (QA) Procedures					
B.11.1. Is the selection of data undergoing quality control and quality assurance procedures complete?	1	DR	As per PDD, the data is undergoing quality control and quality assurance procedures.	Y	Y
B.11.2. Is the belonging determination of uncertainty levels done correctly for each ID in a correct and reliable manner?	1	DR	The uncertainty associated with each parameter monitored is not discussed in PDD.	NIR-27	Y
B.11.3. Are quality control procedures and quality assurance procedures sufficiently described to ensure the delivery of high quality data?	1	DR	The QA/QC procedures are not sufficiently described to ensure the delivery of high quality data	Pending NIR-27	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.11.4. Is it ensured that data will be bound to national or internal reference standards?	1	DR/SV	Need to verify during site visit	Pending SV	Y
B.11.5. Is it ensured that data provisions will be free of potential conflicts of interests resulting in a tendency of overestimating emission reductions?	1	DR/SV	Need to verify during site visit	Pending SV	Y
B.12. Operational and Management Structure					
B.12.1. Is the authority and responsibility of project management clearly described?	1	DR	As per PDD the responsibility of the project management is with the Climate Change Group of AES LAL Pir Ltd.	Y	Y
B.12.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	1	DR/SV	As per PDD the authority and responsibility for registration, monitoring, measurement has been vested with the Climate Change Group of AES LAL Pir. The same needs to be verified during SV.	Pending SV	Y
B.12.3. Are procedures identified for training of monitoring personnel?	1	DR	The PDD doesn't discuss anything about the procedures identified for training of monitoring personnel	CAR-28	Y
B.13. Monitoring Plan (Annex 4)					
B.13.1. Is the monitoring plan developed in a project specific manner clearly addressing the unique features of the CDM activity?	1	DR	The monitoring plan has been developed specifically for this project activity and is reflecting in section B.7.2 of PDD.	Y	Y
B.13.2. Does the monitoring plan completely describes all measures to be implemented for monitoring all parameter required, including measures to be implemented for ensuring data quality?	1	DR	Pending CAR-22	Pending	Y
B.13.3. Does the monitoring plan provide information on monitoring equipment and respective positioning in order to safeguard a proper installation?	1	DR	The monitoring plan doesn't provide information on monitoring equipment and respective positioning	NIR-29	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.13.4. Are procedures identified for calibration of monitoring equipment?	1	DR	As per the PDD the maintenance team will take care of the calibration of the monitoring equipments.	Y	Y
B.13.5. Are procedures identified for maintenance of monitoring equipment and installations?	1	DR/SV	As per the PDD the maintenance team will take care of the maintenance of the monitoring equipments. The same needs to be verified during site visit.	SV	Y
B.13.6. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	1	DR/SV	As per PDD the data will be monitored and recorded by qualified persons in accordance with the monitoring plan. The same needs to be verified during site visit.	SV	Y
B.13.7. Are procedures identified for dealing with possible monitoring data adjustments and missing data allowing redundant reconstruction of data in case of monitoring problems??	1	DR	The PDD doesn't discuss about the procedures identified for dealing with possible monitoring data adjustments and missing data allowing redundant reconstruction of data in case of monitoring problems	NIR-30	Y
B.13.8. Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?	1	DR/SV	As per PDD proper management process and procedures are available to ensure quality of data. The same needs to be verified during site visit.	SV	Y
B.13.9. Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?	1	DR	No procedure have been identified for project performance reviews before data is submitted for verification, internally or externally	NIR-31	Y
B.14. Baseline Details					
B.14.1. Is there any indication of a date when determine the baseline?	1	DR	As per PDD the date of determination of baseline is 21/01/2008.	Y	Y
B.14.2. Is this in consistency with the time line of the PDD history?	1	DR	The PDD Version 01 is dated January 2007 and the date of determination of the baseline is 21/01/2008. Justify the time gap.	Pending CAR05	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.14.3. Is all data required provided in a complete manner by annex 3 of the PDD?	1	DR	Provide documentary proof for the baseline values used in Annex 3 of PDD.	CAR-32	Y
C. Duration of the Project / Crediting Period					
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	1	DR	As per section C.1.1 of PDD the project start date is August 20, 2008 and the operational life time is 10 years. Pending CAR 17	Pending	Y
C.1.2. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed crediting period of max. 10 years)?	1	DR	The project has chosen fixed crediting period of 10 years.	Y	Y
C.1.3. Does the project's operational lifetime exceed the crediting period	1	DR	As per PDD the project operational life time is equal to the crediting period.	Pending	Y
D. Environmental Impacts					
D.1.1. Does the project comply with environmental legislation in the host country?	1	DR	Yes the project complies with the environmental legislation in the host country. The letter of intent given for the project activity given by the Environmental Protection Agency, Government of Punjab dated 24th Nov 2007 is enclosed in the PDD.	Y	Y
D.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	1	DR	As per the PDD, there is no requirement for conducting EIA study under Host Country requirements. Please provide the documentary evidence for the same.	NIR 33	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
E. Stakeholder Comments					
E.1.1. Have relevant stakeholders been consulted?	1	DR/SV	As per PDD, stake holders have been consulted for which a meeting has been organized on 19/10/2007 at the conference hall of AES LAL PIR. This will be verified during site visit. Please provide the MoM of the same.	NIR 34	Y
E.1.2. Have appropriate media been used to invite comments by local stakeholders?	1	DR	As per PDD a notice was issued on Oct 02, 2007 and also invitation was sent to all stake holders. Please provide the copy o the same.	NIR 35	Y
E.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	1	DR	Stakeholder consultation process is not required as per regulation/laws in host country. However the project participant has consulted the local stakeholders for CDM project.	Y	Y
E.1.4. Is the undertaken stakeholder process described in a complete and transparent manner?	1	DR	The process has been described in a transparent manner in PDD	Y	Y
E.1.5. Is a summary of the stakeholder comments received provided?	1	DR	Yes the summary of comments is provided in PDD.	Y	Y
E.1.6. Has due account been taken of any stakeholder comments received?	1	DR	There are no negative comments from local stake holders. The same will be verified during site visit.	Site visit.	Y

A.3 Annex 3: Overview of Findings

Findings Overview

Findings from validation of “Construction of additional cooling tower cells at AES Lal Pir (Pvt.) Ltd. Muzaffar Garh, Pakistan”

Each Table below represents a finding from the validation assessment. The findings are numbered consecutively, approximately in the order that they have been identified.

Description of Table:

Type	Findings are either New Information Requests (NIR) or Corrective Action Requests (CAR). CARs are items that must be addressed before a project can receive a recommendation for registration. NIRs may lead to the raising of CARs. Observations are included at the end and may or may not be addressed. They are primarily to act as signposts for the verifying DOE.
Issue	Details the content of the finding
Ref	Refers to the item number in the Validation Protocol
Response	Please insert response to finding, starting with the date of entry.

Rows for comments and further response will be appended to the table until the Findings has been addressed to the satisfaction of the Lead Assessor.

Please Note: This is an open list and more findings may be added as validation progresses.

Date:	15/05/2008			Raised by:	Nikunj Agarwal		
No.:	1.	Type:	CAR	Issue :	CDM SSC PDD Guidelines	Ref.:	Table 1, Item 1
Lead Assessor Comment					Date: 15/05/2008		
Section A3 of PDD has been tampered with and is not as per the CDM SSC PDD guidelines. Please justify.							
Project Participant Response:					Date: 22/06/2008		
The PDD has been revised to correctly apply the template.							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		
Information Provided: The required changes in the PDD ahs been corrected in the revised PDD. Information Verified: The PDD has been revised as per the guidelines.					Verified Document Reference: Revised PDD		
Reasoning for acceptance and close out: In the revised PDD template is improved and apparently according to the guidelines, which was checked and found satisfactory, hence this CAR was closed out.							

Date:	15/05/2008			Raised by:	Nikunj Agarwal		
No.:	2.	Type:	CAR	Issue :	Party Involved	Ref.:	Table 1, Item 3
Lead Assessor Comment					Date: 15/05/2008		
Non Annex-1 party involved is not mentioned in PDD. The letter of approval from the DNA of the non-Annex I party has to be submitted by the PP.							
Project Participant Response:					Date: 22/06/2008		

(Host) has been added to Pakistan to indicate host/non-annex 1 country and to correctly identify the annex 1. Host country (Pakistan) letter of approval presented to validator at the time of validation and also attached i.e. LOA – Pakistan.	
Acceptance and Close out by Lead Assessor:	Date: DD/MM/YYYY
Information Provided: The detail of Non annex 1 party is amended in the revised PDD. Information Verified: The details of Non annex 1 party has been provided in the PDD and also the HCA from Pakistan has been submitted to the DOE.	Verified Document Reference: Revised PDD, Host Country Approval from Pakistan
Reasoning for not acceptance or acceptance and close out: In new PDD the Non-Annex country is incorporated, and the letter of approval from the host country has been submitted to the DOE, which was checked and found satisfactory, hence this CAR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	3.	Type:	CAR	Issue :	Party Involved	Ref.:	CAR 2
Lead Assessor Comment				Date: 15/05/2008			
As per the PDD, AES Carbon Exchange Limited is acting as project participant from Netherlands. Please provide Letter of Approval.							
Project Participant Response:				Date: 17/08/2008			
LOA from Netherlands has been received and submitted with revised PDD to DOE.							
Acceptance and Close out by Lead Assessor:				Date: 15/09/2008			
Information Provided: LOA provided to validator. Information Verified: LoA submit by the client is satisfactory.				Verified Document Reference: LOA is attached			
Reasoning for acceptance and close out: PP has submit the letter of approval from Netherlands having Reference Number 2008SN.222 dated 26 th August 2008, which was checked and found satisfactory, hence this CAR was closed out.							

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	4.	Type:	CAR	Issue :	Modalities of Communication	Ref.:	Table 1, Item 6
Lead Assessor Comment				Date: 15/05/2008			
<ul style="list-style-type: none"> Section A.3 of PDD does not mention the project participant correctly. Similarly in Annex 1 of PDD, there is a statement which says "There is no participant of AES Lal Pir in this project activity". It is not clear what this statement means. Modalities of Communication needs to be submitted by PP. 							
Project Participant Response:				Date: 22/06/2008			
Section A.3 has been revised to correctly identify the PP. The statement has been removed from Annex 1 to eliminate confusion. Modalities of communication have been incorporated in section B 7.2 Monitoring plan.							
Acceptance and Close out by Lead Assessor:				Date: 15/07/2008			

Information Provided: Section A.3 of the PDD has been amended accordingly. Information Verified: Section A.3 has been revised to correctly identify the PP. The statement has been removed from Annex 1 to eliminate confusion.	Verified Document Reference: Revised PDD, modalities of communication letter is attached.
Reasoning for not acceptance and close out: In the revised PDD the Section A3 has corrected by client, but the modalities of communication is still not submitted by the PP. please provide the same.	
Project Participant Response:	Date: 17/08/2008
Modalities of communication have been submitted with the revised PDD.	
Acceptance and Close out by Lead Assessor:	Date: 15/09/2008
Information Provided: Modalities of communication letter provided to validator. Information Verified: Modalities of communication is not satisfactory.	Verified Document Reference: modalities of communication letter is attached
Reasoning for not acceptance and close out: Please provide the contact details of both the parties signing the modalities of communication; also the email of Ms. Reynolds is not the same as mentioned in the PDD. Please justify.	
Project Participant Response:	Date: 22/09/2008
In the PDD Annex 1, contact details of both parties signing the modalities of communication has been given and same email addresses are mentioned there.	
Acceptance and Close out by Lead Assessor:	Date: 30/09/2008
Information Provided: contact details of both the parties has been updated Information Verified: Only e-mail id of Ms. Reynolds is updated in the revised PDD.	Verified Document Reference: PDD Annex 1
Reasoning for not acceptance and close out: Contact details of both the parties signing the Modalities of Communication should also be mentioned in the Modalities of communication.	
Project Participant Response:	Date: 06/10/2008
The MoC is a standard format we have used for all projects to-date. Detailed contact information for project participants is located in annex 1 of the PDD. Detailed contact information included in the MoC should and is the contact focal point ONLY- adding contact information for the other participants would only add confusion and the possibility of the EB contacting the wrong focal point.	
Acceptance and Close out by Lead Assessor:	Date: 11/10/2008
Information Provided: MoC provided and contact details has been incorporated in the PDD Annex-1. Information Verified: The explanation given by PP is not satisfactory.	Verified Document Reference: NA
Reasoning for not acceptance and close out: There should be the contact details of both the parties signing the MoC, please provide the same.	
Project Participant Response:	Date: 15/10/2008
This is a standard template that we have used. There is a "Standard MoC format" being debated at the UNFCCC EB which required as per the guidelines is "a letter that is SIGNED by all PP's" stating who will be the focal point for communicating with the EB and that address is already stated on it, So, the stated party address would be our focal person for this project activity. Kindly, Consider it.	
Acceptance and Close out by Lead Assessor:	Date: 01/11/2008

Information Provided: MoC Letter Information Verified: MoC letter	Verified Document Reference: NA
Reasoning for acceptance and close out: Explanation given by PP is found satisfactory; hence this CAR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	5.	Type:	CAR	Issue	Timeline	Ref.:	A.1.3
Lead Assessor Comment					Date: 15/05/2008		
The PDD version 01 is dated January 2007 and the date of completion of baseline and monitoring methodology as per section B.8 of PDD is 21/01/2008. There is a huge gap between the dates. Justify the time line.							
Project Participant Response:					Date: 22/06/2008		
The date listed was a typographical error, has been revised, and is now in-line with B.8.							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		
Information Provided: The typo error has been corrected. Information Verified: That was not the typo error; please provide the justification of time gap.					Verified Document Reference: Revised PDD,		
Reasoning for not acceptance or acceptance and close out: The explanation given by the PP is not satisfactory, Please provide the time chronology from the conceptualisation of the project till the PDD submitted to the Validator for International Stake holder consultation.							
Project Participant Response:					Date: 17/08/2008		
The date listed was a typographical error and has been revised and Project timeline is being provided along with PDD in the MS project format.							
Acceptance and Close out by Lead Assessor:					Date: 15/09/2008		
Information Provided: Project time line provided in MS project format separately to Validator. Information Verified: The project time line document is not opening.					Verified Document Reference: MS project is attached for project timeline.		
Reasoning for not acceptance and close out: Document for the project time line submitted by the PP is not opening, please justify.							
Project Participant Response:					Date: 22/09/2008		
Document CDM Project time line, is attached and open it in MS Project 2003 professional format. In addition to this, MoM is also attached for project follow-ups & updates to the leadership.							
Acceptance and Close out by Lead Assessor:					Date: 30/09/2008		
Information Provided: Document "CDM Project timeline", Meetings MoM Information Verified: "CDM project time line" document is not opening.					Verified Document Reference: Document "CDM Project timeline", Meetings MoM		

Reasoning for not acceptance and close out:	
<ul style="list-style-type: none"> Document for the project time line submitted by the PP is not opening. Meetings MoM is the excel sheet, not signed by the authorised signatory, please justify. 	
Project Participant Response:	Date: 06/10/2008
<p>The project timeline has been converted and submitted in a PDF format. The MoM has been signed by a representative and submitted to the validator. Further, the project activity start date has been revised to January 23, 2008 the date of contract signing with the contractor which more accurately reflects the start date of real activity of the project.</p>	
Acceptance and Close out by Lead Assessor:	Date: 13/10/2008
Information Provided: Project timeline is attached, Third party Contract, PDD section C.1.1	Verified Document Reference: Project Time Line, MoM
Information Verified:	
Reasoning for not acceptance and close out: Please provide the supporting documents for the activities mentioned in the "project activity timeline"	
Project Participant Response:	Date: 15/10/1008
Supporting documents like PIN endorsement letter, CDM consideration, LOA, Project contracts, MoM etc. are attached as an evidence for the project timeline.	
Acceptance and Close out by Lead Assessor:	Date: 23/10/2008
Information Provided: Supporting documents for project timeline	Verified Document Reference:
Information Verified: Supporting documents for the delay justifications are ok	
Reasoning for acceptance and close out: PP has submitted the delay justification for the CDM project activity and the supporting of the delay is found satisfactory, hence this CAR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal
No.:	6.	Type:	CAR
Issue :	Project Description		Ref.: A.2.1
Lead Assessor Comment	Date: 15/05/2008		
<p>The project description as given in section A.2 of PDD is not clear. The description is such that the cooling tower has been designed to perform with low efficiency. Moreover any system has to be operated according to their design conditions. When a system is overloaded than its design then naturally the efficiency will go down. In this system load on the cooling tower is more than its design which is affecting its performance. Hence the problem is not in the system but in the operating condition. Please justify.</p>			
Project Participant Response:	Date: 22/06/2008		
The PDD section A.2 has been revised to better clarify the problem as being performance and older/less efficient design than what is currently available (more modern technology).			
Acceptance and Close out by Lead Assessor:	Date: 15/07/2008		
Information Provided: The PDD section A.2 has been amended in the revised PDD.	Verified Document Reference: Revised PDD.		
Information Verified: The PDD section A.2 has been amended in the revised PDD, but the same is still not clear.			

Reasoning for not acceptance and close out: In the revised version, the situation still seems the same, the performance of cooling tower is degraded with time, and new cell is to rectify the performance loss. Please justify.	
Project Participant Response:	Date: 17/08/2008
Section A.2 has been revised to clarify the statement and third party letter to support the technology is being provided to validator.	
Acceptance and Close out by Lead Assessor:	Date: 15/09/2008
Information Provided: Revised PDD & Technology Letter from third party. Information Verified: Technology is new in the Pakistan	Verified Document Reference: Technology support letter is attached.
Reasoning for not acceptance and close out: Letter from third party regarding the technology evident that the technology is new in Pakistan but it is still not proved about the intention of PP for implement the project activity "that the performance of cooling tower is degraded with time, and new cell is to rectify the performance loss", please justify.	
Project Participant Response:	Date: 22/09/2008
In the PDD section A.2 under the heading of Purpose, it is clearly elaborated that the intention of project activity is to replace the existing technology with the latest technology to reduce the CO2 emission from its existing scenario.	
Acceptance and Close out by Lead Assessor:	Date: 30/09/2008
Information Provided: PDD section A.2 revised. Information Verified: The explanation given by PP is still not clear.	Verified Document Reference: PDD Section A.2
Reasoning for not acceptance and close out: Please justify the earlier statement below along with the supporting evidence: <i>'that the performance of cooling tower is degraded with time, and new cell is to rectify the performance loss'</i>	
Project Participant Response:	Date: 06/10/2008
The PDD version 2 was completely re-written in this section to eliminate the confusion. It now clearly states that the new technology will help to improve the existing level of performance, which is directly linked with the reduction in the emissions. In addition to this, third party letter is also attached which is stated that the existing cooling tower cells can operate till the project life (i.e.2030 as per power purchase agreement) and new project activity will help to reduce the emission level. Please disregard the previous statement regarding degradation, as this was not an accurate statement.	
Acceptance and Close out by Lead Assessor:	Date: 06/10/2008
Information Provided: Revised PDD, Third party letter Information Verified: Existing Cooling tower has the operational lifetime till 2030.	Verified Document Reference: Letter from SPIG
Reasoning for acceptance and close out: PP has submitted the life time assessment from the SPIG stating the existing cooling towers can be operate till 2030, hence this CAR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal
No.:	7.	Type:	CAR
Issue :	Project Location	Ref.:	A.4.1
Lead Assessor Comment	Date: 15/05/2008		
The latitude and longitude of the site is missing in the PDD, please justify,			
Project Participant Response:	Date: 22/06/2008		

A detailed description of the site has been added to the PDD in section A 4.1.4.	
Acceptance and Close out by Lead Assessor:	Date: 15/07/2008
Information Provided: The latitude and longitude has been added in the revised PDD. Information Verified: The latitude and longitude has been added in the revised PDD.	Verified Document Reference: Revised PDD
Reasoning for not acceptance or acceptance and close out: The coordinates of the site has been added in the revised PDD, which was checked and found satisfactory hence this CAR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	8.	Type:	CAR	Issue :	Project Description	Ref.:	A.4.3
Lead Assessor Comment					Date: 15/05/2008		
It is not clear from the PDD whether a new cooling tower is going to be constructed or new cells are being added to the existing cooling tower. In the Section A.4.2 of PDD there is a statement which says "the project fails in the category of Small scale". Please clarify the statement.							
Project Participant Response:					Date: 22/06/2008		
In PDD section B.3, project boundary it has been clarified that PP is going to add new cooling tower cells in existing cooling tower and figure has also been replaced with more cleared one. In section A 4.2, The typographical error as "fails" has been corrected.							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		
Information Provided: The revised PDD has been amended accordingly. Information Verified: The required amendments have been made in the revised PDD.					Verified Document Reference: Revised PDD		
Reasoning for acceptance and close out: In revised PDD, it is clear that new cell is going to add. Also the typo error is corrected in the revised PDD, which was checked and found satisfactory, hence this CAR was closed out.							

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	9.	Type:	CAR	Issue :	Project Design	Ref.:	A.4.4
Lead Assessor Comment					Date: 15/05/2008		
The technology description given under section A.4.2 of PDD is not clear. Justify how the technology being employed in the project activity is superior than the conventional technology that is followed else where which would lead to higher energy efficiency and hence lesser energy consumption. The present description just gives the operation of a conventional cooling tower.							
Project Participant Response:					Date: 22/06/2008		
The PDD has been revised to better clarify especially in section A 4.2 and justify the technology to be implemented and also third party letter is being provided as evidence for technology.							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		

Information Provided: Description has been rephrased in the revised PDD. Information Verified: The PDD has been revised to clarify especially in section A 4.2 and PP has justify about the technology to be implemented	Verified Document Reference: Revised PDD, letter from Technology Supplier.
Reasoning for not acceptance and close out: Attached document is a quote of equipment supplier and does not give any information to be superior from the installed one. Secondly it is not a third party report, its equipment supplier who is going to install new cell and how the supplier certification that his technology is superior to the others can be the evident of the superior technology. Please justify.	
Project Participant Response:	Date: 17/08/2008
The PDD has been revised to better clarify especially in section A 4.2 and justify the technology to be implemented and also third party letter is being provided as evidence for technology.	
Acceptance and Close out by Lead Assessor:	Date: 15/09/2008
Information Provided: Description has been rephrased in the revised PDD and letter has been provided to DOE. Information Verified: Letter from third party that the technology is first in Pakistan.	Verified Document Reference: Letter from third party is attached to support the technology barrier.
Reasoning for acceptance and close out: PP has made the amendment in the revised PDD and had also submit the letter from the Ministry of Pakistan regarding the new technology in the Pakistan, which was checked and found satisfactory, hence this CAR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	10.	Type:	CAR	Issue :	Project Technology	Ref.:	A.4.7
Lead Assessor Comment					Date: 15/05/2008		
The project technology is not likely to be substituted by the project participant by more efficient technology. Proof from the project participant needs to be provided.							
Project Participant Response:					Date: 22/06/2008		
Same as CAR # 8, technology evidence has been provided in the form of undertaking by PP to prove that technology is more efficient than existing one.							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		
Information Provided: The technology will not be substituted by the more efficient technology throughout the crediting period. Information Verified: The technology will not be substituted by the more efficient technology throughout the crediting period.					Verified Document Reference: Letter of undertaking from the PP.		
Reasoning for not acceptance and close out: As per the letter of undertaking submitted by the PP dated 29 th May 2008, it states that "Existing cooling Tower performance has been degraded which lead to higher emission, so AES has planned to construct new cooling tower cells", which seems that any how PP has to change the cells and there is no extra efforts for the project activity due to CDM, please justify.							
Project Participant Response:					Date: 17/08/2008		
The technology will not be substituted by the more efficient technology throughout the crediting period. Undertaking from the PP is being attached with the PDD to support the technology.							
Acceptance and Close out by Lead Assessor:					Date: 15/09/2008		

Information Provided: Revised letter of undertaking from PP is attached. Information Verified: Revised letter of undertaking from PP is not found satisfactory.	Verified Document Reference: Revised Letter of undertaking from the PP is attached.
Reasoning for not acceptance and close out: Revised letter from the PP is not sufficient, please justify the PP earlier statement as "Existing cooling Tower performance has been degraded which lead to higher emission, so AES has planned to construct new cooling tower cells",, which shows that any how project activity was to be implemented as the existing cooling tower was degraded.	
Project Participant Response:	Date: 22/09/2008
In the PDD section A.2 under the heading of Purpose, it is clearly elaborated that the intention of project activity is to replace the existing technology with the latest technology to reduce the CO2 emission from its existing scenario. In PP earlier statement, the intention was the existing technology have led to higher emission as compared to available latest technology, PP worked out that to avoid the existing scenario of emission, it is better to construct the new cooling tower cells with latest technology to improve the heat rate and fewer CO2 emission.	
Acceptance and Close out by Lead Assessor:	Date: 30/09/2008
Information Provided: PDD Section A.2, PP Undertaking letter Information Verified: The intention to implement the project activity is still not clear from the above explanation.	Verified Document Reference: PDD Section A.2, PP Undertaking letter
Reasoning for not acceptance and close out: Please provide the life time assessment of the existing cooling tower so as to justify the below statements: <ul style="list-style-type: none"> • "Existing cooling Tower performance has been degraded which lead to higher emission, so AES has planned to construct new cooling tower cells", • "The performance of cooling tower is degraded with time, and new cell is to rectify the performance loss" 	
Project Participant Response:	Date: 06/10/2008
Please see CAR6. All reference to degradation had been removed in the PDD to eliminate confusion. Third party letter is being provided to support that existing project is capable to operate as per power purchase agreement until 2030 project life and new project activity with latest technology will help to improve the performance of existing project and eventually reduction in emission.	
Acceptance and Close out by Lead Assessor:	Date: 23/10/2008
Information Provided: Revised PDD, Third party letter Information Verified: Existing cooling towers can be operated till 2030.	Verified Document Reference: Third party letter from SPIG
Reasoning for acceptance and close out: PP has submitted the life time assessment for the existing cooling tower stating that the same can be operated till 2030, which was accepted and hence this CAR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal
No.:	11.	Type:	NIR
Issue :	Initial Training	Ref.:	A.4.8 / A.4.9
Lead Assessor Comment	Date: 15/05/2008		
The PDD doesn't mention anything about the initial training and maintenance efforts needed to work as presumed during the project period and provisions for meeting training and maintenance needs.			
Project Participant Response:	Date: 22/06/2008		
See CAR27, and also in PDD Annex 4, training program has been incorporated			

Acceptance and Close out by Lead Assessor:	Date: 15/07/2008
Information Provided: Training details has been incorporated in the revised PDD. Information Verified: Confirmed the training details during site visit.	Verified Document Reference: Revised PDD
Reasoning for acceptance and close out: PP has incorporated the training details in the revised PDD which was checked and verified during the site visit, hence this NIR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	12.	Type:	CAR	Issue :	Projected Emission Reductions	Ref.:	A.4.11
Lead Assessor Comment					Date: 15/05/2008		
With reference to section A.4.3 of PDD, the table for the indication of projected emission reductions is not correctly applied as per the CDM-SSC-PDD guidelines. Why the Approx. Price per tCO ₂ (unit CER price) has been included. Please justify.							
Project Participant Response:					Date: 22/06/2008		
The table has been revised to be in-line with the guidelines. Price information has been deleted from the PDD							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		
Information Provided: The able o emission reduction has been corrected in the revised PDD; CER price has been deleted from the PDD. Information Verified: PP has amended the PDD accordingly.					Verified Document Reference: Revised PDD		
Reasoning for acceptance and close out: PP has amended the emission reduction table in the revised PDD as well as the CER price which has been checked and found satisfactory, hence this CAR was closed out.							

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	13.	Type:	NIR	Issue :	Public Funding	Ref.:	A.5.1
Lead Assessor Comment					Date: 15/05/2008		
As per the PDD, there is no public funding involved in the project activity. Proof in this regard needs to be provided.							
Project Participant Response:					Date: 22/06/2008		
Letter to support "No public funding is involved in the this project" is attached as a evidence by PP.							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		
Information Provided: No ODA fund has been used for the project activity. Information Verified: No ODA fund has been used for the project activity.					Verified Document Reference: Letter of Undertaking for No ODA		
Reasoning for acceptance and close out: PP has submitted the letter of no ODA for the project activity and the same was discussed during the site visit also, hence this NIR was closed out.							

Date:	15/05/2008			Raised by:	Nikunj Agarwal		
No.:	14.	Type:	CAR	Issue :	Baseline	Ref.:	B.1.3
Lead Assessor Comment					Date: 15/05/2008		
The description provided under section B.2 of PDD is not clear. Provide a clear description justifying the applicability of the chosen baseline and monitoring methodology to the project activity.							
Project Participant Response:					Date: 22/06/2008		
The description in of section B.2 in PDD has been revised to clear the project methodology.							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		
Information Provided: Section B.2 of the PDD has been revised					Verified Document Reference: Revised PDD		
Information Verified: The PDD has been revised accordingly.							
Reasoning for acceptance and close out: PP has incorporated the missing details in the revised PDD, which was checked and found satisfactory, hence this CAR was closed out.							

Date:	15/05/2008			Raised by:	Nikunj Agarwal		
No.:	15.	Type:	CAR	Issue :	Project Boundary	Ref.:	B.2.1
Lead Assessor Comment					Date: 15/05/2008		
The project boundary is not as per the guidance of the applicable project category. Moreover the description of the project boundary as given in section B.3 of PDD is not clear.							
As per the PDD the project activity leads to increase in the energy efficiency of the cooling tower which in turn leads to reduced fuel consumption. But it is not clear from PDD how the reduction in fuel consumption after the implementation of the project activity can be attributed only to the improvement of energy efficiency of cooling tower and not because of any other changes or modification in other parts of the system needs to be explained.							
Project Participant Response:					Date: 22/06/2008		
Section B.3 of PDD has been changed and energy efficiency improvement associated with the project activity is addressed accordingly.							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		
Information Provided: The project boundary has been elaborated in the revised PDD.					Verified Document Reference: Revised PDD		
Information Verified: The project boundary has been elaborated in the revised PDD.							
Reasoning for acceptance and close out: Project boundary has been defined more clearly in the revised PDD which has been checked and found satisfactory, hence this CAR was closed out.							

Date:	15/05/2008			Raised by:	Nikunj Agarwal		
No.:	16.	Type:	CAR	Issue :	Baseline	Ref.:	B.3.1
Lead Assessor Comment					Date: 15/05/2008		
It is not clear from the section B.4 of PDD whether the project activity is a new facility or a retrofit measure. Provide a clear description of the baseline as per the applicable baseline and monitoring methodology.							
Project Participant Response:					Date: 22/06/2008		

Section B.4 of PDD has been modified & clearly described about the project activity.	
Acceptance and Close out by Lead Assessor:	Date: 15/07/2008
Information Provided: Section B.4 has been amended in the Revised PDD. Information Verified: Information about the project activity has been corrected in the Revised PDD	Verified Document Reference: Revised PDD
Reasoning for acceptance and close out: PP has amended the section B.4 of the PDD such as to make clear about the project activity, in the revised PDD it is clear from the PDD that the project activity is the retrofit; hence this CAR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	17.	Type:	CAR	Issue	Baseline	Ref.:	B.3.2
Lead Assessor Comment		Date: 15/05/2008					
As per the applicable methodology, in the case of retrofit measures, the energy baseline is calculated as the monitored performance of the existing generating unit. i.e. the energy content of the fuel used by the generating unit and the energy content of the electricity produced by the unit. Please justify. Please Use only SI units. In PDD other than SI units have been used.							
Project Participant Response:		Date: 22/06/2008					
At the time of validation data provided to the validator to verify the baseline & monitoring performances. Units have been changed in to SI units and now PDD contains SI units only.							
Acceptance and Close out by Lead Assessor:		Date: 15/07/2007					
Information Provided: Baseline data has been submitted to DOE during site visit as well as SI units has been changed in the revised PDD Information Verified: SI units have been changed in the revised PDD, but the comments about the energy baseline are still not replied.		Verified Document Reference: Revised PDD					
Reasoning for not acceptance and close out: As per the applicable methodology, in the case of retrofit measures, the energy baseline is calculated as the monitored performance of the existing generating unit. i.e. the energy content of the fuel used by the generating unit and the energy content of the electricity produced by the unit. Please justify.							
Project Participant Response:		Date: 17/08/2008					
The emission baseline calculations revised to address the same as stated in the energy efficiency methodology.							
Acceptance and Close out by Lead Assessor:		Date: 15/09/2008					
Information Provided: Revised PDD, Calculations spread Sheet Information Verified: The explanation given by PP is not satisfactory.		Verified Document Reference: Revised PDD, Calculations spread Sheet					
Reasoning for not acceptance and close out: The explanation given by PP is not found satisfactory, also the emission reduction values has been increased in the revised PDD and excel sheet, please justify.							
Project Participant Response:		Date: 22/09/2008					
In the revised PDD section B.6 & Spread sheet, proper methodology formulae have been applied as "the energy content of the fuel used by the generating unit and the energy content of the electricity produced by the unit should be calculated for project emissions"; by using the right parameters emission reduction has been slightly increased in it.							

Acceptance and Close out by Lead Assessor:	Date: 30/09/2008
Information Provided: PDD section B.6 & Spread Sheet Information Verified: Revised spread sheet for calculation is not clear, please provide the supporting for the assumptions used in the calculation.	Verified Document Reference: PDD section B.6 & Spread Sheet
Reasoning for not acceptance and close out: Current efficiency = 36.56% Project Efficiency = 36.72% Efficiency Increase (after project activity) = 0.43% Capacity factor = 65%	
Project Participant Response:	Date: 06/10/2008
As per the calculation spreadsheet: Current efficiency = energy potential of baseline energy produced/energy potential of fuel oil consumed (from "baseline emission calculations" sheet) Project Efficiency = same as baseline current efficiency with a 0.43% efficiency increase Efficiency Increase (after project activity) is clearly shown on "baseline emissions calculations" sheet as expected heat rate improvement/baseline heat rate. Capacity Factor is from historical records.	
Acceptance and Close out by Lead Assessor:	Date: 13/10/2008
Information Provided: Revised PDD, Calculations Spread Sheet Information Verified: Assumptions used for the calculation	Verified Document Reference: Calculation spread sheet
Reasoning for acceptance and close out: Explanation given by PP is found satisfactory, hence this CAR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	18.	Type:	CAR	Issue	Start Date	Ref.:	B.4.1
Lead Assessor Comment		Date: 15/05/2008					
As per section C.1.1 of PDD the start date of the project activity is August 20, 2008. Please Provide the proof for the start date.							
Project Participant Response:		Date: 22/06/2008					
During the validation, proof of project activity has been provided. In addition to this, as an evidence site Geographical survey work order/Purchase order along with the management MoM is attached.							
Acceptance and Close out by Lead Assessor:		Date: 15/07/2008					
Information Provided: The proof of start date has been provided. Information Verified: The proof of start date is not consistent.		Verified Document Reference: No Documents					
Reasoning for not acceptance or acceptance and close out: PP replies that During the validation, proof of project activity has been provided, while the same has not been provided, also PP replies that Geographical survey work order/Purchase order is attached while the same was not attached. Please justify.							
Project Participant Response:		Date: 17/08/2008					
During the validation, proof of project activity has been provided. In addition to this, as an evidence site Geotechnical Investigation contract & work order/Purchase order along with the management MoM is attached.							

Acceptance and Close out by Lead Assessor:	Date: 15/09/2008
Information Provided: The proof of start date in the form of project contract/PO has been provided.	Verified Document Reference: Geotechnical investigation contract & PO is attached.
Information Verified: The proof of start date is not consistent.	
Reasoning for not acceptance and close out: Please mention the name of the document provided as the evidence for the start date of the project activity. Start date of the project activity mentioned in the section C.1.1 of the PDD, as 8 th January 2008 is not supported by any document submitted, please justify.	
Project Participant Response:	Date: 22/09/2008
Permits obtained are attached, which issued to start the civil work of the project activity on Feb.14, 2008. Moreover, before these permits all necessary documents/contracts were prepared, which are already been submitted i.e. purchase orders/contracts etc.	
Acceptance and Close out by Lead Assessor:	Date: 30/09/2008
Information Provided: Document "Permits-1/2" & "CDM Project time line" is attached.	Verified Document Reference: Permits, Contracts
Information Verified: Explanation about the start date of the project activity is still not clear	
Reasoning for not acceptance and close out: Please substantiate the start date of project activity as per EB 41 para 67 and define the start date of project activity along with the supporting document.	
Project Participant Response:	Date: 06/10/2008
The project timeline has been converted and submitted in a PDF format. The MoM has been signed by a representative and submitted to the validator. Further, the project activity start date has been revised to January 23, 2008 the date of contract signing with the contractor, which more accurately reflects the start date of real activity of the project.	
Acceptance and Close out by Lead Assessor:	Date: 13/10/2008
Information Provided: Revised PDD, Third Party Contract Copy, Project timeline	Verified Document Reference: Construction Contract agreement
Information Verified: Project activity start date is 23 rd January 2008	
Reasoning for acceptance and close out: PP has submitted the Contract agreement for Construction dated 23 rd January 2008, hence the same can be accepted as the start date of the project activity, this CAR was closed out.	

Date:	15/09/2008	Raised by:	Nikunj Agarwal
No.:	19.	Type:	NIR
Issue	EB 41 Annex 46	Ref.:	B.4.2
Lead Assessor Comment	Date: 15/09/2008		
Please discuss the Serious CDM Consideration with regards of EB 41 Annex 46 in Section B.5 of the PDD along with the supporting documents.			
Project Participant Response:	Date: 22/09/2008		
In PDD section B.5, CDM Consideration has been incorporated and Business Performance meetings MoM have been provided to the DOE during the validation of the project at site.			
Acceptance and Close out by Lead Assessor:	Date: 30/09/2008		

Information Provided: Revised PDD, Performance meetings MoM Information Verified: The explanation given by PP is not sufficient and explanation regarding serious CDM consideration is still not clear.	Verified Document Reference: Revised PDD, Performance meetings MoM
Reasoning for not acceptance and close out: Please go through the EB 41 Annex 46 thoroughly and define serious CDM consideration accordingly.	
Project Participant Response:	Date: 06/10/2008
As per the guideline, additional evidence is the PIN submitted 26 September 2007, LOE received 8 November 2007, LOA received 10 May 2008 and PDD completion January 2008 and the project activity start date is 23 January 2008. Moreover, Complete project timeline has also been provided in the PDF format.	
Acceptance and Close out by Lead Assessor:	Date: 14/10/2008
Information Provided: Revised Project timeline in PDF format is attached. Information Verified:	Verified Document Reference:
Reasoning for not acceptance and close out: <ul style="list-style-type: none"> Please provide the date along with the supporting document when CDM was considered for the project activity. Please provide the supporting documents for the activities mentioned in the document "Project Time line" 	
Project Participant Response:	Date: 15/10/2008
CDM Project consideration for the project activity was started in January 2007 after the performance test of cooling tower and from the CEO Naveed Ismail, its initiative started, as an evidence correspondence is attached as pdf file "AES CDM Project Consideration activity". Supporting documents like PIN endorsement letter, CDM consideration, LOA, Project contracts, MoM etc. are attached as an evidence for the project timeline.	
Acceptance and Close out by Lead Assessor:	Date: 12/11/2008
Information Provided: Supporting documents for project timeline & CDM Consideration Information Verified: CDM was seriously considered	Verified Document Reference: CDM board Resolution, P.O. etc.
Reasoning for acceptance and close out: PP has submitted the date chronology for the CDM consideration and the supporting of which has been verified and found satisfactory, hence this NIR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	20.	Type:	CAR	Issue :	Additionality	Ref.:	B.4.4
Lead Assessor Comment		Date: 15/05/2008					
<ul style="list-style-type: none"> Section B.5 of PDD mentions that the technology being adopted in the project activity is a common technology. Hence technology cannot be considered as a barrier. Please justify. Similarly the investment barrier is also not specific. Please provide what was the financial analysis carried out and what was the return obtained and what your benchmark return is. How CDM has helped to overcome the barrier. 							
Project Participant Response:		Date: 22/06/2008					
In section B.5 of PDD, it is clearly described that the new technology is state of the art, and considered it as a technological barrier. Other unnecessarily information has been deleted from the section.							

Acceptance and Close out by Lead Assessor:	Date: 15/07/2008
Information Provided: The project activity faces technological barriers as well as Prevailing practise barriers and hence is additional Information Verified: The project activity fails to prove the Additionality.	Verified Document Reference: Revised PDD
Reasoning for not acceptance and close out: <ul style="list-style-type: none"> Section B.5 of PDD version 01 mentions that the technology being adopted in the project activity is a common technology. Hence technology cannot be considered as a barrier. Please justify the statement. PDD version 02 states about the technological barriers as well as prevailing practice barriers please provide the documentary evidence for both the barriers. 	
Project Participant Response:	Date: 17/08/2008
The project activity faces technological barriers, and as an evidence letter from third party "Ministry of Environment" is attached with the PDD to support the technical barrier.	
Acceptance and Close out by Lead Assessor:	Date: 15/09/2008
Information Provided: Revised PDD, third party letter (i.e. Ministry of Environment) to support the technology barrier is attached. Information Verified:	Verified Document Reference: Revised PDD, third party letter (i.e. Ministry of Environment) to support the technology barrier is attached.
Reasoning for not acceptance and close out: The letter submitted by the PP regarding first of its kind is the supporting for the prevailing practise barriers, however the PDD mentions about the technological barriers and investment barriers too, please provide the supporting documents for the same.	
Project Participant Response:	Date: 22/09/2008
In the Project activity, the most relevant barriers is prevailing practices barrier, which is clearly supported by the letter. As far as, technology barrier is concerned, it is discussed to show that the latest technology that is being applied in this project activity is new and being used in the host country and required more resources to execute it i.e. training etc. It is also supported by the third party letter. Investment barrier has been removed from revised PDD.	
Acceptance and Close out by Lead Assessor:	Date: 30/09/2008
Information Provided: PDD section B.5 Information Verified: The explanation is still not convincing, the technological barriers needs to be substantiated with the supporting documents.	Verified Document Reference: PDD section B.5
Reasoning for not acceptance and close out: The technological barriers need to be substantiated with the documentary evidences, please justify.	
Project Participant Response:	Date: 06/10/2008
As it is stated in the letter by third party regarding barriers analysis, it is clear that project activity have prevailing practices barrier which is most significant and to eliminate the any confusion other barriers discussion has been deleted from the revised PDD version.	
Acceptance and Close out by Lead Assessor:	Date: 13/10/2008
Information Provided: Revised PDD Version. Information Verified: Project is additional based on prevailing practise barrier.	Verified Document Reference: Revised PDD

Reasoning for acceptance and close out:
PP has now removed the technological barriers and the Additionality has now been demonstrated based on the prevailing practise barriers supported by the letter from Ministry of Environment stating that the project activity is first of its kind, hence this CAR was closed out.

Date:	15/05/2008			Raised by:	Nikunj Agarwal		
No.:	21.	Type:	CAR	Issue :	Baseline Emission	Ref.:	B.5.1
Lead Assessor Comment					Date: 15/05/2008		
The PDD doesn't discuss about how the baseline emission is going to be calculated and which equations will be used for calculation. Please justify.							
Project Participant Response:					Date: 22/06/2008		
The PDD has been revised accordingly to better clarify.							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		
Information Provided: Baseline calculations have been clearly explained in the revised PDD.					Verified Document Reference: Revised PDD		
Information Verified: The baseline calculation is clearer in the revised PDD.							
Reasoning for acceptance and close out: PP has described the baseline calculations more elaborately in the revised PDD, hence this CAR was closed out.							

Date:	15/05/2008			Raised by:	Nikunj Agarwal		
No.:	22.	Type:	CAR	Issue :	Project Emissions	Ref.:	B.5.2
Lead Assessor Comment					Date: 15/05/2008		
As per the applicable methodology, the energy content of the fuel used by the generating unit and the energy content of the electricity produced by the unit should be calculated for project emissions. Please justify.							
Project Participant Response:					Date: 22/06/2008		
The PDD has been revised accordingly.							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		
Information Provided: Project emissions have been described more elaborately in the revised PDD.					Verified Document Reference: Revised PDD.		
Information Verified: Project emission calculation is still not clear in the revised PDD.							
Reasoning for not acceptance and close out: Project emissions calculation are still not clear in the revised PDD, please justify.							
Project Participant Response:					Date: 17/08/2008		
Proper application of the methodology has been considered and the PDD adjusted to reflect correct calculations and ERs.							
Acceptance and Close out by Lead Assessor:					Date: 15/09/2008		

Information Provided: Revised PDD, calculations spread sheet is attached Information Verified: Calculation excel sheet is still not clear, how the final ER values has been increased than the previous version of the PDD.	Verified Document Reference: Revised PDD, calculations spread sheet is attached
Reasoning for not acceptance and close out: Revised Emission reduction sheet is not clear, please justify how the emission reduction values has been increased in the revised PDD as well as excel sheet.	
Project Participant Response:	Date: 22/09/2008
In the revised PDD & Spread sheet, proper methodology formulae have been applied as “the energy content of the fuel used by the generating unit and the energy content of the electricity produced by the unit should be calculated for project emissions”; by using the right parameters emission reduction has been slightly increased in it.	
Acceptance and Close out by Lead Assessor:	Date: 30/09/2008
Information Provided: Revised PDD section B.6 & Spread Sheet Information Verified:	Verified Document Reference: Revised PDD section B.6 & Spread Sheet
Reasoning for acceptance and close out: Ok, Closed Out	

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	23.	Type:	CAR	Issue :	Uncertainty in GHG Estimate	Ref.:	B.5.5
Lead Assessor Comment					Date: 15/05/2008		
Uncertainties in the GHG emissions estimates have not been discussed in PDD. Please justify.							
Project Participant Response:					Date: 22/06/2008		
In section B.7.2 and annex 4 of PDD, it is clearly described that quality assurance of the data through proper monitoring will be done and uncertainties in the GHG emission estimates will be covered under this plan.							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		
Information Provided: PDD has been amended according to the CAR and uncertainty has been discussed in the revised PDD. Information Verified: Uncertainty of GHG emission has been discussed in section B.7.2 and Annex 4 of the revised PDD.					Verified Document Reference: Revised PDD		
Reasoning for acceptance and close out: PP has explained the uncertainty in Annex 4 of the PDD, which was checked and found satisfactory hence this CAR was closed out.							

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	24.	Type:	CAR	Issue :	Ex-ante Data	Ref.:	B.6.1 / B.6.2
Lead Assessor Comment					Date: 15/05/2008		
The data available under section B.6.2 of PDD is incomplete. Documentary proof for the ex-ante data used needs to be provided. Use only SI Units.							

Project Participant Response:	Date: 22/06/2008
Section B.6.2 of PDD has been updated accordingly and documentary proof provided at the time of validation and also attached here.	
Acceptance and Close out by Lead Assessor:	Date: 15/07/2008
Information Provided: The details about the ex ante data has been incorporated in the revised DD.	Verified Document Reference: Revised PDD. Calculations Spread sheet is attached.
Information Verified: Please mention in detail about the ex ante data discussed in section B.6.2, Discussion is not satisfactory.	
Reasoning for not acceptance and close out: Please provide the details of the ex ante data discussed in section B.6.4	
Project Participant Response:	Date: 17/08/2008
Proper calculations as per energy efficiency methodology has been incorporated in the PDD to clarify the ex ante data	
Acceptance and Close out by Lead Assessor:	Date: DD/MM/YYYY
Information Provided: Revised PDD. Calculations Spread sheet is attached.	Verified Document Reference: Revised PDD. Calculations Spread sheet is attached.
Information Verified: Not satisfactory	
Reasoning for not acceptance and close out: Please mention the reference of the revised PDD where this information was provided.	
Project Participant Response:	Date: 22/09/2008
PDD Section B 6.3 addresses the Ex ante data in detail and calculations have been made as per the section B.6.1 in detail.	
Acceptance and Close out by Lead Assessor:	Date: 30/09/2009
Information Provided: PDD Section B.6.3 along with Section B.6.1	Verified Document Reference: PDD Section B.6.3
Information Verified: The explanation is not clear.	
Reasoning for not acceptance and close out: Please state clearly, which version of the IPCC values has been used.	
Project Participant Response:	Date: 06/10/2008
The IPCC version number has already been identified at the bottom of page "Baseline emission calculations" in the spreadsheet, identified as "Table 2.3, page 18 in Chapter 2 Stationary Combustion IPCC 2006".	
Acceptance and Close out by Lead Assessor:	Date: 13/10/2008
Information Provided: Calculations Spread Sheet	Verified Document Reference: Calculation sheet
Information Verified: Explanation given by PP is ok	
Reasoning for acceptance and close out: PP is using the IPCC 2006 values and the same is reflecting in the excel sheet as well as PDD, hence this CAR was closed out.	

Date:	15/05/2008			Raised by:	Nikunj Agarwal		
No.:	25.	Type:	CAR	Issue :	Emission Reduction Calculation	Ref.:	B.7.1
Lead Assessor Comment					Date: 15/05/2008		
The emission reduction calculation as in B.6.3 of PDD is not as per the approved methodology. The equation used for the calculation of emission reduction is wrong. Please justify.							
Project Participant Response:					Date: 22/06/2008		
All calculations, tables and parameters have been revised accordingly in the PDD.							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		
Information Provided: Emission reduction calculation is defined clearly in the revised PDD.					Verified Document Reference: Revised PDD		
Information Verified: Emission reduction calculation is not clear in the revised PDD.							
Reasoning for not acceptance and close out: Please explain the equation along with the source and define the calculation and the assumptions.							
Project Participant Response:					Date: 17/08/2008		
All calculations, tables and parameters have been revised as per proper application of approved methodology to calculate the emission reduction accordingly in the PDD.							
Acceptance and Close out by Lead Assessor:					Date: DD/MM/YYYY		
Information Provided: Revised PDD, Emission reduction calculation sheet is attached.					Verified Document Reference: Revised PDD		
Information Verified:							
Reasoning for not acceptance and close out: Please justify how the emission reductions have been increased in the revised PDD.							
Project Participant Response:					Date: 22/09/2008		
In the revised PDD & Spread sheet, proper methodology formulae have been applied as "the energy content of the fuel used by the generating unit and the energy content of the electricity produced by the unit should be calculated for project emissions"; by using the right parameters emission reduction has been slightly increased in it.							
Acceptance and Close out by Lead Assessor:					Date: 30/09/2008		
Information Provided: PDD Section B.6.1					Verified Document Reference: PDD Section B.6.1		
Information Verified: It needs to be clarify further.							
Reasoning for not acceptance or acceptance and close out: The calculation given in the PDD is ok but please provides the assumptions used for the calculation.							
Project Participant Response:					Date: 06/10/2008		

<p>In the revised PDD & Spread sheet, proper methodology formulae have been applied as “the energy content of the fuel used by the generating unit and the energy content of the electricity produced by the unit should be calculated for project emissions”; by using the right parameters emission reduction has been slightly increased in it. As per the calculation spreadsheet: Current efficiency = energy potential of baseline energy produced/energy potential of fuel oil consumed (from “baseline emission calculations” sheet) Project Efficiency = same as baseline current efficiency with a 0.43% efficiency increase Efficiency Increase (after project activity) is clearly shown on “baseline emissions calculations” sheet as expected heat rate improvement/baseline heat rate.</p>	
Acceptance and Close out by Lead Assessor:	Date: 14/10/2008
Information Provided: Revised PDD Section B.6, Spread Sheet Calculations Information Verified: Explanation given by PP is found ok.	Verified Document Reference: Calculation spread sheet
Reasoning for acceptance and close out: Explanation given by PP is found satisfactory and the calculation sheet has been checked, hence this CAR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	26.	Type:	CAR	Issue :	Monitoring Plan	Ref.:	B.10.3
Lead Assessor Comment		Date: 15/05/2008					
The information given for each parameter in the table under the section B.7.1 of PDD is not complete and is insufficient to determine the specified project GHG indicators.							
Project Participant Response:		Date: 22/06/2008					
All calculations, tables and parameters have been revised accordingly in the PDD.							
Acceptance and Close out by Lead Assessor:		Date: 15/07/2008					
Information Provided: Monitoring plan has been amended in the revised PDD. Information Verified: Monitoring plan is still not clear and not having all the information.		Verified Document Reference: Revised PDD					
Reasoning for not acceptance and close out: <ul style="list-style-type: none"> Monitoring plan is still not accurate, such as Fuel CV reported to be calculated from meter, but the CV is either calculated by lab or by supplier and also the description of measurement is the generalised statement for all the parameters. Similarly the calibration plans are not address in QA/QC in the monitoring plan. Please provide the specific details for the parameters, and also clearly mention that which parameter will be measured/calculated/estimated and what be the source of the measurement. 							
Project Participant Response:		Date: 17/08/2008					
Monitoring plan has been amended in the revised PDD and QA/QC procedure revised to address the calibration plan of the equipments etc.							
Acceptance and Close out by Lead Assessor:		Date: 15/09/2008					
Information Provided: Revised PDD Information Verified: Explanation given by PP is not satisfactory.		Verified Document Reference: Revised PDD					

Reasoning for not acceptance and close out:	
<ul style="list-style-type: none"> The calibration plans are still not address in QA/QC in the monitoring plan. Please provide the specific details for the parameters, and also clearly mention that which parameter will be measured/calculated/estimated and what be the source of the measurement. 	
Project Participant Response:	Date: 22/09/2008
Calibration Plan has been incorporated in the PDD Annex 4, QA/QC in the monitoring plan under the heading of reliability and specific details has been provided in the QA/QC procedure for monitoring in the same section.	
Acceptance and Close out by Lead Assessor:	Date: 30/09/2008
Information Provided: PDD Section Annex 4 Information Verified: Not convincing	Verified Document Reference: PDD Section Annex-4
Reasoning for not acceptance and close out: The table for the parameters EG_y and $CV_{fuel\ oil}$ in then monitoring plan section B.7.1 are merged and needs to be separate.	
Project Participant Response:	Date: 06/10/2008
The tables have been corrected in the revised PDD.	
Acceptance and Close out by Lead Assessor:	Date: 14/10/2008
Information Provided: Revised PDD Section B.7.1 Information Verified: PDD has been amended accordingly.	Verified Document Reference: Revised PDD
Reasoning for acceptance and close out: PP has amended the PDD accordingly, hence this CAR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal
No.:	27.	Type:	NIR
Issue	:	Data Uncertainty	Ref.: B.11.2
Lead Assessor Comment	Date: 15/05/2008		
The uncertainty associated with each parameter monitored is not discussed in PDD. The QA/QC procedures are not sufficiently described to ensure the delivery of high quality data			
Project Participant Response:	Date: 22/06/2008		
QA/QC procedures have been expanded in the revised PDD in section B.7.1 and annex 4 monitoring parameters.			
Acceptance and Close out by Lead Assessor:	Date: 15/07/2008		
Information Provided: Monitoring plan has been revised. Information Verified: Monitoring plan has not been amended as per the requirement.	Verified Document Reference: Revised PDD		
Reasoning for not acceptance and close out: Please discuss the uncertainty analysis under each parameter in the monitoring plan.			
Project Participant Response:	Date: 17/08/2008		

Monitoring plan and QA/QC procedure has been revised after incorporating the uncertainty associated with each parameters.	
Acceptance and Close out by Lead Assessor:	Date: 15/09/2008
Information Provided: Revised PDD. Information Verified: Explanation given by PP in revised PDD is found satisfactory.	Verified Document Reference: Revised PDD
Reasoning for acceptance and close out: PP has explained the data uncertainty in the monitoring plan of the revised PDD; hence this NIR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal		
No.:	28.	Type:	CAR	Issue	Training
Ref.:	B.12.3				
Lead Assessor Comment		Date: 15/05/2008			
The PDD doesn't discuss anything about the procedures identified for training of monitoring personnel					
Project Participant Response:		Date: 22/06/2008			
The monitoring plan in annex 4 has been revised to include a summary of the training activities.					
Acceptance and Close out by Lead Assessor:		Date: 15/07/2008			
Information Provided: Training information has been provided in the revised PDD Information Verified: Training information has not been described properly.		Verified Document Reference: Revised PDD			
Reasoning for not acceptance and close out: The training plan do not identified any specific training for the monitoring personnel for this new technology. Please provide the information whether the monitoring personnel will be provide the training time to time or what is the schedule for the training of the monitoring personnel.					
Project Participant Response:		Date: 17/08/2008			
Training information has been provided in the revised PDD.					
Acceptance and Close out by Lead Assessor:		Date: 15/09/2008			
Information Provided: Revised PDD Information Verified: Details not found in the revised PDD.		Verified Document Reference: Revised PDD			
Reasoning for not acceptance and close out: Please mention the specific section or page of the revised PDD in which the details has been incorporated.					
Project Participant Response:		Date: 22/09/2008			
In PDD Annex 4, in monitoring plan under the heading of Training plan/topics has been discussed it more in detail.					
Acceptance and Close out by Lead Assessor:		Date: 30/09/2008			
Information Provided: PDD Annex 4 Training Information Verified: Explanation given by PP is found staisfcatory.		Verified Document Reference: PDD Annex 4 Training			

Reasoning for acceptance and close out:
PP has incorporated the training information in the Annex 4 of the revised PDD, which were checked and found consistent; hence this CAR was closed out.

Date:	15/05/2008	Raised by:	Nikunj Agarwal		
No.:	29.	Type:	NIR	Issue	Monitoring Plan
Lead Assessor Comment					Date: 15/05/2008
The monitoring plan doesn't provide information on flow meters and the energy meters and their respective positioning					
Project Participant Response:					Date: 22/06/2008
The monitoring parameters have been revised to better clarify the monitoring activities.					
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008
Information Provided: The monitoring parameters have been revised to better clarify the monitoring activities				Verified Document Reference: Revised PDD	
Information Verified: The explanation given by the PP is ok.					
Reasoning for not acceptance or acceptance and close out: PP has provided the details of the flow meters and energy meters location in the revised PDD as : Net electricity Generation Metering system - It is installed on the outgoing power transmission lines in the switch yard area. Also online reading could be retrieved in the control room through computerized system.					
Fossil Fuel Consumption: Fossil Fuel consumption will be recorded by the flow meters, which is located on the suction line & discharge line of fuel on third floor of boiler. Its online consumption will be monitored in the control room through DCS.					
hence this NIR was closed out.					

Date:	15/05/2008	Raised by:	Nikunj Agarwal		
No.:	30.	Type:	NIR	Issue	Monitoring Plan
Lead Assessor Comment					Date: 15/05/2008
The PDD doesn't discuss about the procedures identified for dealing with possible monitoring data adjustments and missing data allowing redundant reconstruction of data in case of monitoring problems					
Project Participant Response:					Date: 22/06/2008
The PDD has been revised to clarify the QA/QC procedures in section B.7.2 and also in Annex 4.					
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008
Information Provided: QA/QC Procedures has been elaborated according to the raised NIR				Verified Document Reference: Revised PDD	
Information Verified: QA/QC procedures have not been satisfactory elaborated.					
Reasoning for not acceptance and close out: There is no information on adjustment of data like data loss, or errors, please justify.					
Project Participant Response:					Date: 17/08/2008

QA/QC Procedures has been elaborated according to address the missing data issues etc. in the revised PDD	
Acceptance and Close out by Lead Assessor:	Date: 15/09/2008
Information Provided: Revised PDD Information Verified: Found satisfactory	Verified Document Reference: Revised PDD
Reasoning for acceptance and close out: PP has elaborated the details on the same and hence this NIR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	31.	Type:	NIR	Issue	Performance Review	Ref.:	B.13.9
Lead Assessor Comment		Date: 15/05/2008					
The PDD doesn't discuss about the procedures identified for project performance reviews before data is submitted for verification, internally or externally							
Project Participant Response:		Date: 22/06/2008					
The PDD has been revised to clarify the QA/QC procedures in section B.7.2 and also in Annex 4.							
Acceptance and Close out by Lead Assessor:		Date: 15/07/2008					
Information Provided: QA/QC procedures have been described elaborately. Information Verified: Information about internal audit is missing in the PDD.		Verified Document Reference: Revised PDD					
Reasoning for not acceptance and close out: The monitoring plan only mentions the responsibilities of data recording, and all the persons have different task. There is no any procedures identified for counter checks or review or internal audit, please clarify.							
Project Participant Response:		Date: 17/08/2008					
In QA/QC procedures detailed structure to ensure the data quality has been incorporated with the responsibilities of each person & internal audit plan as well.							
Acceptance and Close out by Lead Assessor:		Date: 15/09/2008					
Information Provided: Revised PDD Information Verified: PP has incorporated the internal audit procedures in the revised PDD.		Verified Document Reference: Revised PDD					
Reasoning for acceptance and close out: PP has incorporated the review and internal audit procedures in the revised PDD; hence this NIR was closed out.							

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	32.	Type:	CAR	Issue	Baseline	Ref.:	B.14.3
Lead Assessor Comment		Date: 15/05/2008					
Please Provide documentary proof for the baseline values used in Annex 3 of PDD.							
Project Participant Response:		Date: 22/06/2008					

Documented evidence of the baseline values have been submitted to the validator.	
Acceptance and Close out by Lead Assessor:	Date: 15/07/2008
Information Provided: Baseline data has been provided. Information Verified: Baseline data has been checked from the copy of the log book.	Verified Document Reference: Copy of the log book
Reasoning for acceptance and close out: PP has submitted the baseline data, which was cross verified during the site visit, hence this CAR was closed out.	

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	33.	Type:	NIR	Issue :	EIA	Ref.:	D.1.2
Lead Assessor Comment					Date: 15/05/2008		
As per the PDD, there is no requirement for conducting EIA study under Host Country requirements. Please provide the documentary evidence for the same.							
Project Participant Response:					Date: 22/06/2008		
Letter of Approval from National EPA obtained for the project activity and also attached.							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		
Information Provided: No EIA is required for the project activity. Information Verified: EIA can be exempted based on the EPA.					Verified Document Reference: EPA letter		
Reasoning for acceptance and close out: PP has submit the letter of approval from national EPA for the project activity, which was checked and concluded that EIA is not required for the project activity and found satisfactory, hence this NIR was closed out.							

Date:	15/05/2008	Raised by:	Nikunj Agarwal				
No.:	34.	Type:	NIR	Issue :	Stake holder Consultation	Ref.:	
Lead Assessor Comment					Date: 15/05/2008		
As per PDD, stake holders have been consulted for which a meeting has been organized on 19/10/2007 at the conference hall of AES LAL PIR. This will be verified during site visit. Please provide the MoM of the same.							
Project Participant Response:					Date: 22/06/2008		
The minutes of the stakeholders' meeting have been provided to the validator.							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		
Information Provided: MoM of the stake holder consultation has been provided. Information Verified: MoM for the stake holder consultation					Verified Document Reference: MoM of the stake holder consultation		
Reasoning for acceptance and close out: MoM for the stake holder consultation has been submitted by the PP and the same has been cross verified during the local stake holder consultation during the site visit and found satisfactory, hence this NIR was closed out.							

Date:	15/05/2008			Raised by:	Nikunj Agarwal		
No.:	35.	Type:	NIR	Issue :	Media for stake holder consultation	Ref.:	
Lead Assessor Comment					Date: 15/05/2008		
As per PDD a notice was issued on Oct 02, 2007 and also invitation was sent to all stake holders. Please provide the copy o the same.							
Project Participant Response:					Date: 22/06/2008		
A copy of the announcement has been provided to the validator.							
Acceptance and Close out by Lead Assessor:					Date: 15/07/2008		
Information Provided: Invitation letter was send to the stake holders. Information Verified: Invitation letter for the stake holder consultation was sent to the local stake holders.					Verified Document Reference: Copy of Invitation letter		
Reasoning for acceptance and close out: PP has submitted the copy of invitation letter as an media for the stake holder consultation which was checked and verified during local stake holder consultation during site visit and found satisfactory, hence this NIR was closed out.							

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A.4 Annex 4: Team Members Statements of Competency

Name: Nikunj Agarwal

SGS Affiliate: SGS India Pvt. Ltd.

Status

- Product Co-ordinator
- Operations Co-ordinator
- Technical Reviewer
- Expert

Validation Verification

- Local Assessor
- Lead Assessor
- Assessor
- / Trainee Lead Assessor

Scopes of Expertise

- 1. Energy Industries (renewable / non-renewable)
- 2. Energy Distribution
- 3. Energy Demand
- 4. Manufacturing
- 5. Chemical Industry
- 6. Construction
- 7. Transport
- 8. Mining/Mineral Production

- 9. Metal Production
- 10. Fugitive Emissions from Fuels (solid,oil and gas)
- 11. Fugitive Emissions from Production and
Consumption of Halocarbons and Sulphur Hexafluoride
- 12. Solvent Use
- 13. Waste Handling and Disposal
- 14. Afforestation and Reforestation
- 15. Agriculture

Approved Member of Staff by Siddharth Yadav Date: 21/12/2007