
VALIDATION REPORT

Didul Private Limited

**Way Ganga Hydro Power project,
Sri Lanka**

SGS Climate Change Programme

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Summary

SGS India Pvt. Ltd., an affiliate of SGS United Kingdom Ltd. has made a validation of the CDM project activity "Way Ganga Hydro Power project, Sri Lanka", on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria. The project falls under small scale category and scope 1. Energy Industries (Renewable/ Non-renewable sources).

The scope of validation is the independent and objective review of the project design document, baseline study and monitoring plan and other relevant document of the project. The information in this document is reviewed against the criteria defined in the Marrakech Accords (Decision 17) and the Kyoto Protocol (Article 12) and subsequent guidance from the CDM Executive Board.

The overall validation process, from Contract Review to Validation Report & Opinion, was conducted using internal procedures (UK.PP.12 issue 3 dated 19/01/2007).

The first output of the validation process is a list of Corrective Actions Requests and New Information Requests (CAR and NIR), presented in Annex 3 of this document. Taking into account this output, the project proponent revised its project design document.

In summary, it is SGS's opinion that the proposed CDM project activity correctly applies the baseline and monitoring methodology as mentioned in approved methodology adopted for the proposed project activity and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Subject:		
CDM validation		Indexing terms
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Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Environment Authority
CEB	Ceylon Electricity Board
CER	Certified Emission Reductions
CO ₂	Carbon Dioxide
COP/MOP	Conference of parties serving as the meeting of parties to Kyoto Protocol
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EIA	Environment Impact Assessment
GHG	Green House Gas(es)
GWh	Giga watt hour
I	Interview
IPCC	Intergovernmental Panel on Climate Change
ISHC	International Stakeholder Consultation
kWh	Kilo watt hour
MoV	Means of Verification
MP	Monitoring Plan
MW	Mega watt
MT	Metric Tonne
NIR	New Information Request
NGO	Non Government Organisation
NOC	No Objection Certificate
ODA	Official Development Assistance
PDD	Project Design Document
SLRs	Sri Lankan Rupees – the official currency of Sri Lanka
SPPA	Standard Power Purchase Agreement
UNFCCC	United Nations Framework Convention for Climate Change

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1 Introduction

1.1 Objective

“Didul Private Limited” has commissioned SGS to perform the validation of the project: “Way Ganga Hydro Power project, Sri Lanka” 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.

1.2 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.

1.3 GHG Project Description

Project Description:

The proposed CDM project activity is an electricity generation project through the potential energy in the water of river Way Ganga and supplying the same to the Ceylon Electricity Board (CEB). The project will result in replacing the same amount of electricity from CEB which is dominated by fossil fuel based power plants. The project activity is located at a place called Poronuwa near Kahawatte village in Sri Lanka. The project activity employs horizontal Francis type turbines and brushless, synchronous generators. Three turbines each coupled to a generator of 2.8 MW are installed in the project activity. The project activity is already commissioned and working in satisfactory condition

Baseline Scenario:

Under the baseline scenario, there would have been more direct off-site emissions through burning of fossil fuel in the coal based power plants connected to Ceylon Electricity Board's (CEB) grid for meeting electrical energy requirements of the area.

With Project Scenario:

The project activity will generate and feed the electricity to the CEB grid. This will fulfil the electricity requirement which otherwise would have been fulfilled by the electricity from CEB grid which is fossil fuel dominated. Thus project activity replaces electrical energy from fossil fuel and contributes to conservation of fossil fuel, a non-renewable natural resource and consequently reduces GHG emissions.

Leakage:

As per the methodology AMS I-D version 10 dated 23rd December 2006; applicable for the project activity, leakage is to be considered if the energy generating equipment is transferred from another

activity or if the existing equipment is transferred to another activity. However this is not the case for present project activity and hence no leakage is considered for the present CDM project activity.

Environmental & Social Impacts:

There are no negative environmental and social impacts expected with the project activity, the same has been cross-checked during review of local stakeholder consultation process conducted by the assessor during the validation site visit.

1.4 The names and roles of the validation team members

Name	Role
Mr. Sanjeev Kumar	Team Leader / Lead Auditor
Mr. Vikrant Badve	Assessor
Mr. Jimmy Sah	Local Assessor
Mr. Sumanasiri Batuvita	Local Assessor
Ms. Irma Lubrecht	Technical reviewer

Statement of Competence of team members are attached at Annex IV.

2 Methodology

2.1 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. Additional information can be required to complete the validation, which may be obtained from public sources or through telephone and face-to-face interviews with key stakeholders (including the project developers and Government and NGO representatives in the host country). These may be undertaken by the local SGS affiliate. The results of this local assessment are summarized in Annex 1 to this report.

2.2 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	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
<i>The various requirements are linked to checklist questions the project should meet.</i>	<i>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.</i>	<i>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.</i>	<i>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.</i>

The completed validation protocol for this project is attached as Annex 2 to this report

2.3 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 3). In this form, the Project Developer is given the opportunity to "close" outstanding CARs and respond to NIRs and Observations.

2.4 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.

3 Determination Findings

3.1 Participation requirements

The host Party for this project is Sri Lanka. Sri Lanka has ratified the protocol on 3rd September 2002. A Letter of Approval from Sri Lankan DNA was not submitted by the project proponent. CAR (1) was raised asking project proponent to submit the Letter of approval from Sri Lankan DNA. Project proponent has received the Host country approval for the present project activity on 26th March 2007 issued by the Sri Lankan DNA (reference number 04/03/06/386). This letter was checked and the name of project proponent mentioned and the amount of emission reductions indicated on the HCA and in the PDD was found same. CAR (1) was closed.

No Annex I Party has been identified in the PDD and therefore no further Letter of Approval was available. It is observed that the CDM EB has agreed that the registration of a CDM project activity can take place without an Annex I Party being involved at the stage of registration although it should be noted that before CER can be transferred to an Annex I Party, a Letter of Approval will need to be submitted.

3.2 Baseline selection and additionality

The project has applied baseline as mentioned in the small scale methodology AMS I-D version 10 dated 23rd December 2006 for “Grid connected Renewable electricity generation” as per Appendix B of the simplified modalities and procedures for small-scale CDM project activities. The project activity generates electricity from potential energy in the water of river Way Ganga and thus replaces electricity from fossil fuel and contributes to conservation of fossil fuel, and fall under the category AMS I-D of the appendix B.

The present CDM project activity will generate and feed the electricity to the CEB grid. This will fulfil the electricity requirement which otherwise would have been fulfilled by the electricity generation from fossil fuel dominated CEB grid. The emission reductions achieved because of the project activity will be direct function of the net electricity feed to the grid and grid emission factor for the CEB grid.

The project has adopted the Investment barrier to justify the additionality of the present project activity which also includes Internal Rate of Returns for the project activity. In addition to this, project proponent has also mentioned Other Barriers due to extended approval procedures. In order to get all the related documents on the basis of which the project was shown additional and the justification for the delay to approach CDM funds, CAR (13) was raised.

The Internal Rate of Returns for the project activity is 8.83 % without CER benefits and 9.75% after considering the benefits from CDM. The benchmark value for IRR is 14% which is not crossed even after receiving the CDM funds, but still the project proponent went ahead with the project to attempt to establish a hydropower plant and expecting to realize the revenue from the sale of CERs. The additional source of income from the sale of carbon credits reduces the risk for the project activity and increase the IRR for the project activity considerably.

It was checked from the documents submitted by the project proponent that the project activity faces Investment barrier as mentioned in the PDD. Project proponent claimed that determination of the Power purchase tariff was the barrier to the project activity as CEB does not revise the tariff in a transparent manner. Project proponent has given a copy of news paper cutting in support of this claim and same was found acceptable. CEB in the SPPA mentioned that the small hydro power plant developer who has executed SPPA in 2002 will receive the additional 15% over the calculated tariff but project proponent has not received any such discount even the SPPA has been executed in the

December 2002. Project proponent after knowing this fact went ahead with the project activity as to utilize the green power and considering the project activity would be eligible for the CDM funds. This was cross-checked during discussion with the MD of the company.

It was checked during the validation site visit and desk review of the documents submitted by the Project proponent that project faced financial closure problems as the most of the financial institutions in Sri Lanka were not familiar to the small hydro power project financing as they were mostly interested to provide the finance to the coal based thermal power plants because of the assured returns from these kind of projects. The lending institutions were approached in January 2001 for financial assistance, it took 12 months to execute the loan agreements and the loan was sanctioned in January 2002. Further more it took 9 months time for the Financial Institutions to start the disbursements for the project activity. This was checked from the bank loan document submitted by the project proponent to the DOE.

The project proponent has executed an erection, design, supply and commissioning contract with Voith Siemens Hydro of Germany; as per the contract project proponent need to pay the contract value in phases over a period of 21 months in Euro currency. This clause made project proponent to pay 35 Millions SLRs more as a result of the increasing the exchange rate between Euro and SLR which was 1 Euro = 105.9 SLRs when letter of credit was made and same was raised to 1 Euro = 124.6 SLRs when final payment was made to the supplier. This was found accepted after a discussion with project proponent. Because of the adverse exchange fluctuation between the time of opening the Letter of Credit and final payment resulted in a cost overrun for electro mechanical equipment alone SRs 35 Million (US\$0.343 Million).

The project proponent was asked to provide a justification for the delay to approach for CDM funds. In response the project proponent explained that they were aware about the CDM mechanisms and benefits but, the expertise was not available locally to develop a CDM project and moreover there were uncertainties associated with development of a CDM project. Even now, a foreign organisation has been engaged to assist in CDM documentation. This was acceptable based on the fact that only 4 projects have been registered as CDM projects in Sri Lanka and they face lack of expertise locally.

Project proponent provided a copy of letter written to financial institution dated 21st February 2001 and a copy of board resolution dated 21st June 2000 against evidence for the CDM funds consideration for the project activity. These evidences were checked and accepted as a proof against CDM consideration for project activity.

Thus it is demonstrated that the project activity faced investment barrier and the delay in the getting the approval and delay in getting the financial closure for the project activity resulted in an investment risk for the project proponent. Hence CAR (13) was closed.

The proposed CDM project activity is an electricity generation project through the potential energy in the water of river Way Ganga and supplying the same to the Ceylon Electricity Board (CEB). CAR (07) was raised asking the project proponent to submit the Purchase orders to cross check the technical specifications as mentioned in the PDD for the project activity. In response the project proponent provided the contract document with Voith Siemens Hydro and the actual nameplate photographs which mentioned the technical specifications for the project activity. The specifications as mentioned in the PDD were checked with that mentioned on the nameplate and they were found acceptable, hence CAR (07) was closed.

3.3 Application of Baseline methodology and calculation of emission factors

The present project activity is generating power through the potential energy in the water of river Way Ganga and supplying the same to the Ceylon Electricity Board (CEB). The project has applied baseline methodology as mentioned in the small scale methodology AMS I-D version 10 dated 23rd December 2006 for “Grid connected Renewable electricity generation” as per Appendix B of the simplified modalities and procedures for small-scale CDM project activities.

It was mentioned in the PDD version 01 that the present project activity will generate 17,979 tonnes of CO₂ emission reductions per year. Project proponent has not provided excel spreadsheet for calculation of baseline, project emissions as well as the grid emission factor for the project activity. CAR (11) was raised and project proponent was asked to provide the excel spreadsheet for the same. During validation site visit project proponent submitted excel spreadsheet giving Emission reduction calculations which mention 17,979 tonnes of CO₂ per annum will be generated due to project activity and the calculations for the Grid emission factor. The Grid emission factor for the project activity is 0.697 tCO₂ / MWh. The excel sheets were checked for the calculations and assumptions and was found acceptable. The Grid emission factor calculation was checked and the OM and BM calculations were found according to ACM0002 and were acceptable, hence CAR (11) was closed.

The baseline emission calculations and emission reductions were found to be in order during the desk review and during the local assessments at the site. The emission reduction figures would further be checked during verification. As per methodology AMS I-D version 10 dated 23rd December 2006; leakage due to project activity will be consider only when there is an equipment transfer from one place to another but this is not the case with present project activity hence no leakage is considered.

The project proponent’s claim of project activity being a small scale project activity was also checked by the Assessor during the site visit. Actual photographs of the nameplate capacities of the turbine and the generator were taken during the site visit. This copy was used to cross-checked the technical description of the project activity and capacity of the present project activity. It was found that the capacity of the present project activity is 8.4 MW output capacities which is less than 15 MW and hence project was eligible under small scale category. The documents were used to verify the information given in section A.4.2 under sub-heading Technology to be employed by the project activity in the PDD.

3.4 Application of Monitoring methodology and Monitoring Plan

The present CDM project activity uses monitoring methodology AMS I-D version 10 dated 23rd December 2006 for “Grid connected Renewable Electricity generation”. The PDD clearly mentions that leakage is not consider in present project activity as methodology AMS I-D version 10 mentions leakage due to project activity will be consider only when there is an equipment transfer from one place to another but this is not the case with present project activity hence no leakage is considered. This was acceptable.

During the review of version 1 of the PDD it was found that project proponent has not mentioned about monitoring of the Grid emission factor also the monitoring plan mentioned in the PDD does not discuss the form and the archiving period for diesel consumed. CAR (15) was raised asking the project proponent to discuss about the monitoring of grid emission factor, form and archiving period for diesel consumed in the monitoring plan. In response the project proponent included the monitoring of grid emission factor, form and the time period for archiving of data for diesel consumed in the rephrased version of the PDD, which was checked and found acceptable hence CAR (15) was closed.

The project activity has been working in satisfactory conditions since July 2004 hence CAR (16) was raised and the project proponent was asked to submit the valid calibration certificates for the equipment used in the project activity and the quality Control and quality assurance procedures followed for the project activity. In response the project proponent submitted the calibration certificates for the project activity. The data monitoring and recording system for the project activity were checked during the site visit and was found acceptable. The PDD mentions the roles and responsibility of the personnel involved in the project activity the same was cross-checked during the site visit by the Assessor and was found acceptable. During discussion with the project proponent they mentioned that they had applied for ISO certification, and ISO certificate will be available during the verification for the project activity. This was acceptable and hence CAR (16) can be closed.

NIR (09) was raised and the project proponent was asked to submit evidence regarding training programme given to the personnel's for the present project activity. In response the project proponent submitted the Contract Agreement with Voith Siemens Hydro Kraftwerkstechnik GMBH & CO. KG.; the supplier for the equipment for the project activity. Training is to be provided by the supplier. This was cross-checked during the validation site visit by the Assessor and it was found that the plant operators were aware of the operating procedures for the project activity and thus NIR (09) was closed.

3.5 Project design

The PDD of the present project activity have been prepared in accordance with the guidelines for completing CDM-SSC-PDD version 04 and CDM-SSC-PDD template version 03. CAR (06) was raised when PDD was cross checked against these guidelines and template and it was found that requirements under the section C.2 and C.2.1 are not according to the guidelines for completing CDM-SSC-PDD. In response the Project proponent accepted that the section is not as per the guidelines and corrected same in rephrased PDD. This was cross-checked with rephrased PDD and the date of registration mentioned in section C.2.1 is as per the guidelines to complete CDM-SSC-PDD version 04 this was acceptable and hence CAR (06) was closed.

The section A.4.3 was not according to the template version 03 for completing the PDD, hence CAR (05) was raised. In response the project proponent corrected the section A.4.3 in the rephrased version of PDD. The rephrased version of the PDD was checked and section A.4.3 was found as per the template and was acceptable, hence CAR (05) was closed.

It was found that section C.1.1 of version 01 of the PDD indicated 25th September 2000 as project activity starting date; but evidence for the same was not provided. NIR (10) was raised asking project proponent to provide an evidence for the starting date of the project activity. In response project proponent provided a copy of the Standardised Agreement for Purchase of Energy between Project Proponent and Ceylon Electricity Board as evidence for the start date of the project activity. The date mentioned on the document is 16th April 2002, the PDD version 2 under the section C.1.1 mentions the same date and it is acceptable and also attached in the audit trail folder and mentioned in section 7 of this report. NIR (10) was closed and 16th April 2002 was accepted as starting date for the project activity.

The project boundary given in version 01 of the PDD was not clear on the components included in the project boundary and thus CAR (14) was raised asking the project proponent to clarify the same. In response the project proponent included a schematic diagram in PDD version 2 to make the project boundary more clear which shows that project boundary covers the weir, intake, head race channel, forebay, penstock, powerhouse and the tail race channel. This was cross-checked during site visit and found acceptable. Thus CAR (14) was closed.

Operational lifetime of the project activity was mentioned as 30 years which was found acceptable after reviewing the project technology details. NIR (08) was raised asking project proponent to provide any

documentary evidence that the present project technology will not be substituted or replaced by the more efficient technologies during the crediting period. In response the Project proponent has mentioned in PDD version 2 under Section A.4.2 that the technology would not be substituted by more efficient technology during the crediting period. This was accepted and NIR (08) was closed.

Project proponent in the PDD mentioned that project activity has not received any public funding from parties listed in Annex 1. CAR (02) was raised asking the project proponent to provide any documentary evidence that ODA was not used for the project activity. The project proponent has submitted a letter of undertaking stating that no ODA was used for the project activity. This is acceptable and hence CAR (02) was closed.

3.6 Environmental Impacts

PDD version 01 does not mention whether EIA has been carried for the project activity or not, CAR (13) was raised asking the project proponent to clarify the same and to provide a copy of environmental clearance by the CEA. In response the project proponent mentioned that EIA is not required to be carried out instead an Initial Environmental Examination (IEE) has to be carried out. IEE for the project activity was carried out and submitted to the CEA and Environmental clearance was provided by the CEA, this was found acceptable and thus CAR (13) was closed.

3.7 Local stakeholder comments

The present project activity is generating power through the potential energy in the water of river Way Ganga and supplying the same to the Ceylon Electricity Board (CEB).

The project proponent identified residents of the Poranuwa village and representatives of the village development societies as the local stakeholders of the project activity. The PDD version 01 did not describe the media used to communicate with the local stakeholders. NIR (03) was raised and the project proponent was asked to provide the same. In response the project proponent has submitted the letters which were sent to the local stakeholders to inform them about the local stakeholders meeting for the project activity. The letters submitted were in local Sinhalese language so a translation of the letters in English was provided by the project proponent. The letters were checked and they mentioned about the project date, place of the meeting and the timings for the local stakeholder meeting. The project proponent has also mentioned the use of letters to communicate the stakeholders in PDD version 02. This was acceptable and NIR (03) was closed.

CAR (04) was raised and the project proponent was asked to submit the minutes of meeting for the local stakeholder consultation process for the project activity. In response the project proponent provided the minutes of meeting for the project activity. The minutes of meeting were in local Sinhalese language so a translation of the letters in English was provided by the project proponent. The information mentioned in the PDD was the same as mentioned in the Minutes of meeting and this was acceptable; hence CAR (04) was closed.

4 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.

4.1 Description of how and when the PDD was made publicly available

The PDD and the monitoring plan for this project were made available from 14th March 2007 to 12th April 2007 on the SGS website

<http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=233> Comments were invited through the UNFCCC CDM homepage.

4.2 Compilation of all comments received

The project was up loaded for International stakeholder consultation (ISHC) for a period of 30 days from 14th March 2007 to 12th April 2007 and received no comment. Also no adverse comment received during local stakeholder consultation.

4.3 Explanation of how comments have been taken into account

No adverse comment was received for the project activity.

5 Validation opinion

SGS has performed a validation of the project: “Way Ganga Hydro Power project, Sri Lanka”. The Validation was performed on the basis of the UNFCCC criteria and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

Using a risk based approach, the review of the project design documentation and the subsequent follow-up interviews have provided SGS with sufficient evidence to determine the fulfilment of the stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project will hence be recommended by SGS for registration with the UNFCCC.

SGS has received confirmation by the host Party that the project activity assists it in achieving sustainable development.

By installing grid-connected 8.4 MW small hydro power plant the project will lead to displacement of carbon-intensive electricity by the electricity from a renewable source and thus the project results in reductions of greenhouse gas emissions that are real, measurable and give long-term benefits to the mitigation of climate change. A review of the barrier analysis involving Investment barrier which comprises of Internal Rate of Return (IRR) for the project activity demonstrates that the proposed project activity was 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 project has already been supplying electricity to the grid since July 2004. The project will likely achieve the estimated amount of emission reductions.

The validation is based on the information made available to SGS and the engagement conditions detailed in the report. The validation has been performed using a risk based approach as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence SGS can not be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

6 List of persons interviewed

Date	Name	Position	Short description of subject discussed
23/04/2007	Mr. Leel Wickremarachchi	Managing Director	Project Activity Description, Finance arrangement for project activity, Baseline and additionality issues
23/04/2007	Mr. Aruna Dheerasinghe	Dy. GM (Project)	Project Activity Description
23/04/2007	Mr. Russell De Silva	Dy. GM (Operation)	Data Monitoring System
23/04/2007	Mr. Ilango Bharathi	Project Consultant	Baseline emission calculations and emission reduction from project activity, Project additionality and baseline issues
23/04/2007	Mr. P. Karamanis	Local Stakeholder	Local Stakeholder consultation

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/ Letter of Approval from Host Country
- /2/ Modalities of communication
- /3/ PDD version 1 dated
- /4/ PDD version 2 dated 04/05/2007
- /5/ PDD version 3 dated 05/06/2007
- /5/ Emission reduction calculation sheet
- /6/ IRR calculation sheet for the project activity

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):

- /1/ Letter of undertaking stating no use of ODA for the project activity.
- /2/ Letter to CDM consideration
- /3/ Contract Agreement with Voith Siemens
- /4/ Invitation letters for Local Stakeholders
- /5/ Minutes of meeting for local stakeholder consultation process
- /6/ A copy of SPPA between Project Proponent and Ceylon Electricity Board
- /7/ Bank Loan Agreement
- /8/ Bank Loan disbursement letter
- /9/ Name plate photograph for Turbine
- /10/ Name plate photograph for generator
- /11/ CEA clearance for the project activity
- /12/ Calibration certificates for the project activity
- /13/ Monthly invoices for Power exported to the Grid
- /14/ Newspaper Cutting

Annex 1: Local Assessment

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
12.1 Host Country Approval (HCA) letter from Project Proponent	PDD		The Host country approval from Sri-Lankan DNA has been provided. The name of the project proponent and amount of CERs mentioned on the HCA is the same as mentioned in the PDD.	Y	Y
12.2 Power Purchase Agreement between Electricity Authority and Project Proponent	PDD		A copy of Standardised Power Purchase Agreement between Project Proponent and Ceylon Electricity Board has been provided, the date mentioned on the agreement is 16 th April 2002 which is also the date for start date of the project activity.	Y	Y
12.3 Evidence towards CDM was considered for the project activity during the initial planning stage	PDD B.5		A letter to General Manager PSIDCL dated 21 st February 2001 has been submitted which mentions the IRR of the project activity as less than 14% and consideration of CDM funds for the project activity.		
12.4 Documentary evidence regarding <ul style="list-style-type: none"> Project Additionality (Project financial information) 	PDD B.5		The project proponent has submitted the loan documents, IRR sheet which were checked and found acceptable.	Y	Y
12.5 Evidence for training and skill development of employees.	PDD B.7		Training requirements have been mentioned in the Contract agreement with Voith Siemens Hydro Kraftwerkstechnik GMBH & CO. KG.; the supplier for the equipment for the project activity, this was cross-checked during the site visit and found acceptable.	Y	Y
12.6 A copy of Purchase Order with technical specification and scope of supply for the project activity	PDD A.4		A copy of Contract agreement with Voith Siemens hydro has been	Y	Y

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
components like turbine and generators.			submitted along with actual name plate photographs of turbine and generator, and is acceptable.		
12.7 Calculation spreadsheet for Emission Reductions calculations along with Traceability of data used for calculation. Details regarding Grid emission factor calculation.	PDD B.5		Project proponent has asked to incorporate the changes in monitoring plan discussed during site visit.	Y	Y
12.8 Initial calibration certificate and periodic Test Certificates for TOD meters.	PDD D.3		Calibration certificates for the project activity have been submitted; it has been checked for the accuracy and found acceptable.	Y	Y
12.9 Media of communication (Public notice or individual invitation letter) for local Stakeholder Consultation Meeting.	PDD E.1		Project proponent has submitted the letters sent to local stakeholders for inviting them for the meeting held on 17 th August 2002 for the project activity.	Y	Y
12.10 Minutes of Meeting of Stakeholder Consultation with Comments of the Local Stakeholders, towards the project activity.	PDD E.2		Minutes of meeting for the local stakeholder consultation process has been submitted and the information mentioned in the PDD matches with the information mentioned in the minutes of meeting. This was acceptable.	Y	Y
12.11 A copy of Electricity export bills or statements.	PDD		Electricity export bills were submitted and it mentions the previous and the present reading for the meters. This was acceptable.	Y	Y
12.12 Data on Diesel consumption.	PDD B.7		Log sheets record for diesel consumption has been checked from the plant log book records and same were found acceptable.	Y	Y
12.13 A copy of EIA conducted for project activity or if EIA is not required as per host country legislation a detail reference of the same, under which EIA is not required for the project activity.	PDD C.1		A copy of Environmental clearance by the CEA has been submitted and this is acceptable.	Y	Y

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
12.14 Modalities of communication signed by person whose name is indicated in Annex 1 of PDD.	PDD		Letter for modalities of communication is provided and it is signed by Mr. Leel Wickremarachchi and his name is indicated in Annex 1 of PDD.	Y	Y
12.15 Evidence for no use of ODA			The project proponent has submitted a letter of undertaking stating that no ODA was used for the project activity. This is acceptable.	Y	Y

Annex 2: Validation Protocol

Table 1 Participation Requirements for Clean Development Mechanism (CDM) Project Activities (Ref PDD, LETTERS OF APPROVAL AND UNFCCC WEBSITE) ALL CDM PROJECT ACTIVITIES

REQUIREMENT	Ref	MoV	Comment	Draft finding	Final Concl
1.1 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.	PDD	DR	Project will assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3. However, no Annex-1 participant has been identified so far.	Y	Y
1.2 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.	PDD	DR	<p>The project activity will contribute to sustainable development.</p> <p>Host Country Approval from Designated National Authority is to be provided by the project proponent.</p>	CAR 1	Y CAR 1 closed
1.3 All Parties (listed in Section A3 of the PDD) have ratified the Kyoto protocol and are allowed to participate in CDM projects.	PDD/ UNF CCC Web-site	DR/ UNF CCC Web-site	<p>Sri Lanka has ratified the protocol on 3rd September 2002 and is allowed to participate.</p> <p>http://maindb.unfccc.int/public/country.pl?country=LK</p>	Y	Y

REQUIREMENT	Ref	MoV	Comment	Draft finding	Final Concl
1.4 The project results in reductions of GHG emissions or increases in sequestration when compared to the baseline; and the project can be reasonably shown to be different from the baseline scenario.	PDD	DR	The project activity results in reduction of CO ₂ emissions by replacing conventional fossil fuel by use of renewable energy (Hydro power) in this case.	Y	Y
1.5 Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days (45 days for AR projects), and the project design document and comments have been made publicly available.	PDD	DR/ UNF CCC Web -site	<p>Yes, the project was listed on UNFCCC website from 14th March 07 to 12th April 07</p> <p>http://cdm.unfccc.int/Projects/Validation/DB/YALJA7L6C16QMYZ27P5AECKLWKA3O/view.html</p> <p>The project is also listed on SGS climate change website from 14th March 2007 to 12th April 2007.</p> <p>http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=234</p> <p>Number of comments received during web-hosting period - 0</p>	Y	Y
1.6 The project has correctly completed a Project Design Document, using the current version and exactly following the guidance.	PDD	DR	The guidelines for completing the PDD as per version 4 has been followed , except some pending closure of CARs and NIRs	Pending	Y All CARs/ NIRs are closed
1.7 The project shall not make use of Official Development Assistance (ODA), nor result in the diversion of such ODA.	PDD	DR	<p>The project has not received any public funding from Annex I country as mentioned in the PDD.</p> <p>Evidence for the same is required to be submitted by the project proponent.</p>	CAR 2	Y CAR 2 closed

REQUIREMENT	Ref	MoV	Comment	Draft finding	Final Concl
1.8 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?	PDD	DR	Not relevant as the project is not an AR project	Not applicable	Not applicable
1.9 Does the project meet the additional requirements detailed in: Table 9 for SSC projects Table 10 for AR projects Table 11 for AR SSC projects	PDD	DR	This is an SSC project which comes under category AMS I - D and hence table 9 is applicable.	Y	Y
1.10 Is the current version of the PDD complete and does it clearly reflect all the information presented during the validation assessment?	PDD	DR	The PDD for the present project activity is complete and it does reflect all the required information clearly except closure of pending CARs / NIRs	Pending	Y All CARs/ NIRs are closed
1.11 Does the PDD use accurate and reliable information that can be verified in an objective manner?	PDD	DR	Pending CARs / NIRs	Pending	Y All CARs/ NIRs are closed

Table 2 Baseline methodology/ies (Ref: PDD Section B and E and Annex 3 and AM) Normal CDM projects only

Table 3 Additionality (Ref: PDD Section B3 and AM) Normal CDM projects only

Table 4 Monitoring methodology (PDD Section D and AM) Normal CDM Projects only

Table 5 Monitoring plan (PDD Annex 4) Normal CDM Project activities only

Table 6 Environmental Impacts (Ref PDD Section F and relevant local legislation) Normal CDM Project Activities only

Table 7 Comments by local stakeholders (Ref PDD Section G) All CDM Project Activities

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
7.1 Have relevant stakeholders been consulted?	PDD	DR	The project proponent has consulted the relevant stakeholders for the project activity as mentioned in the PDD. Evidence to be checked during site visit.	Site visit	Y
7.2 Have appropriate media been used to invite comments by local stakeholders?	PDD	DR	Media used to communicate with the relevant stakeholders for the present project activity is not mentioned in the PDD.	NIR 3	Y NIR 3 closed
7.3 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?	PDD	DR	The project participant has consulted the stakeholders as a requirement for CDM project. Minutes of meeting for local stakeholder consultation process are to be provided by the project proponent. Evidence needs to be checked during site visit	CAR 4	Y CAR 4 closed
7.4 Is a summary of the stakeholder comments received provided?	PDD	DR	The summary of stakeholder comments is provided in PDD. Evidence needs to be provided.	Site visit	Y Evidence provided
7.5 Has due account been taken of any stakeholder comments received?	PDD	DR	The project participant has addressed the concerns of the local stakeholders, as mentioned in the PDD. Evidence needs to be checked during site visit.	Site visit	Y Evidence provided

Table 8 Other requirements All CDM project activities

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8.1 Project Design Document					
8.1.1 Editorial issues: does the project correctly apply the PDD template and has the document been completed without modifying/adding headings or logo, format or font.	PDD	DR	Section A.4.3 of the PDD is not as per template for CDM-SSC-PDD.	CAR 5	Y CAR 5 closed
8.1.2 Substantive issues: does the PDD address all the specific requirements under each header. If requirements are not applicable / not relevant, this must be stated and justified.	PDD	DR	The PDD does not address the requirement under Section C.2, the project proponent has not mentioned how many times the crediting period will be renewed for the present project activity. The PDD under section C.2.1.1 mentions the start date of crediting period as "01/06/2007 or the date of registration of the project activity whichever is earlier". This is not as per guidelines.	CAR 6	Y CAR 6 closed
8.2 Technology to be Employed					
1. 8.2.1 Does the project design engineering reflect current good practices?	PDD	DR	The project design reflects current good practices. Same is required to be checked from the purchase order copy for the present project activity.	CAR 7	Y CAR 7 closed
2. 8.2.2 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?	PDD	DR	The project activity is a hydropower plant of output capacity 8.4 MW, and it is a proven technology for producing power. Evidence needs to be checked during the site visit.	Site visit	Y Evidence provided

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8.2.3 Is the project technology likely to be substituted by other or more efficient technologies within the project period?	PDD	DR	Project technology will not be substituted by other or more efficient technologies during the crediting period. Evidence needs to be provided by the project proponent.	NIR 8	Y NIR 8 closed
8.2.4 Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	PDD	DR	The PDD mentions about training being provided to the project participants. Evidence for the same is to be provided by the project proponent.	NIR 9	Y NIR 9 closed
8.3 Duration of the Project/ Crediting Period					
8.3.1 Are the project's starting date and operational lifetime clearly defined and reasonable?	PDD	DR	The starting date of the project is clearly mentioned but the proof of the same is to be obtained by the project proponent. The operational lifetime is clearly defined as 30 years.	NIR 10	Y NIR 10 closed
8.3.2 Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max. two x 7 years or fixed crediting period of max. 10 years)?	PDD	DR	The assumed crediting time is clearly defined as renewable crediting period, but it is not mentioned how many times the project participant will renew the crediting period.	Pending CAR 6	Y CAR 6 closed
8.3.3 Does the project's operational lifetime exceed the crediting period.	PDD	DR	The projects operational lifetime if of 30 years this exceeds the crediting period of 7 years	Y	Y

Table 9 Additional requirements for SSC project activities only

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
9.1 Does the project qualify as a small scale CDM project activity as defined in paragraph 6 (c) of decision 17/CP.7 on the modalities and procedures for the CDM?	PDD	DR	The present CDM project activity is Way Ganga hydro power project in Sri Lanka. The net electricity generated from the project activity is 8.4 MW which is less than 15 MW, and hence it qualifies as a small scale CDM project activity as defined in paragraph 6 (c) of decision 17/CP.7	Y	Y
9.2 The project conforms to one of the categories listed in Appendix B to Annex II to Decision 21/CP.8.	PDD	DR	Yes, AMS I-D version 10, 23 rd December 2006	Y	Y
9.3 The small scale project activity is not a debundled component of a larger project activity?	PDD	DR	The Small scale project activity is not a debundled component of a larger project as mentioned in the PDD. To be checked during the site visit.	Site visit	Y
9.4 PDD has been prepared in accordance with appendix A of Annex II to Decision 21/CP.8	PDD	DR	The PDD has been prepared in accordance with the PDD form version 03, except for some pending CARs/NIRs	Pending	Y All CARs/NIR s closed
9.5 The project uses a simplified baseline and monitoring methodology specified in Appendix B. If not, they may propose changes to the methods or a new SSC project category	PDD	DR	The project uses simplified baseline and monitoring methodology AMS I-D. This is as per Appendix B.	Y	Y

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
9.6 Are the emission reductions determined in accordance with the methodology described?	PDD	DR	The Excel spreadsheet of the calculations of emission reductions needs to be provided by the project proponent. Detail data regarding Grid emission factor calculation needs to be provided by the project proponent.	CAR 11	Y CAR 11 closed
9.7 Is there any bundling of SSC activities into one PDD? If so, does the monitoring plan consider sampling of activities? Refer to para 19 of Annex II. Also, note bundling provisions in SSC Briefing Note and SSC meths I C / I D and III D and Para 22e of Appendix B.	PDD	DR	No bundling of SSC activities into one PDD.	Site visit	Y Evidence provided
9.8 Is EIA required by host party? If not, none is required irrespective of SHC. If yes, has one been performed consistent with local requirements?	PDD	DR	The PDD does not describe whether EIA was carried out or not for the present project activity. The project participants have reviewed the environmental aspects, which will be checked during site visit. Provide a copy of Environmental clearance by CEA.	CAR 12	Y CAR 12 closed

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
<p>9.9 The project results in emission reductions that are additional in accordance with the following requirements:</p> <ul style="list-style-type: none"> (Para 26) The project is additional if emissions are reduced below those in the absence of the project. (Para 27) Simplified baseline can be used; if not, baseline proposed shall cover all gases, sectors and sources listed in Annex A to the KP (Para 28) One or more barriers as detailed in attachment A to Appendix B to Annex II will be used to demonstrate that the project would not proceed without the CDM 	PDD	DR	<p>The project activity comprises of hydropower plant supplying electricity to the Ceylon Electricity Board (CEB) grid, which is being supplied by several fossil fuel generating units, so emissions will reduce below those would be in the absence of the project activity.</p> <p>The simplified baseline as per AMS.I.D. has been used for the project activity.</p> <p>The investment barrier does not mention the IRR rate with CDM consideration, provide IRR calculation sheets.</p> <p>The investment barrier and other barriers mentioned in the PDD is not clear.</p> <p>Please mention that how benefits from CDM will overcome the risk associated with the project activity.</p> <p>Evidence is required that CDM fund was considered during the planning stage of the project activity.</p> <p>Justify why there is a delay to approach for CDM funds.</p>	<p>Y</p> <p>Y</p> <p>CAR 13</p>	<p>Y</p> <p>Y</p> <p>Y CAR 13 closed</p>

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
9.10 Leakage is calculated according to the provisions of the SSC methodologies in Appendix B.	PDD	DR	There is no equipment transfer from other location in case of present project activity and hence as per SSC methodology AMS I-D version 10, no leakage is being considered. Evidence for leakage emissions need to check during site visit.	Site visit	Y Evidence provided
9.11 The project boundary shall be constructed in accordance with the requirements of the SSC meths in Appendix B.	PDD	DR	The project boundary as mentioned in the PDD is not clear. Provide a diagram for the project boundary	CAR 14	Y CAR 14 closed
9.12 The Monitoring plan shall be consistent with the requirements of the SSC methodology in Appendix B and shall provide for the collection and archiving of data needed to determine project emissions, baseline emissions and leakage.	PDD	DR	The monitoring Plan does not include monitoring of Grid emission factor. The monitoring plan for the parameter Diesel consumed does not discuss about the form in which the data will stored and the archiving period.	CAR 15	Y CAR 15 closed
9.13 The monitoring plan shall present good monitoring practice appropriate to the circumstances of the project activity.	PDD	DR	Provide a copy of calibration certificates for the equipments used for measurement purpose. Copy of QA and QC procedure regarding project activity. Records of Training programme carried out for the project activity.	NIR 16	Y NIR 16 closed

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
9.14 If project activities are bundled, separate monitoring plan shall be prepared for each of the activities or an overall plan reflecting good monitoring practice will be prepared, consistent with the above requirements.	PDD	DR	No, the project is not a bundled project activity.	Y	Y

Table 10 Additional requirements for AR projects – Not applicable

Table 11 Additional requirements for SSC AR projects – Not applicable

Table 12 Additional information to be verified by local assessors / Site visit – Separate File attached

Annex 3: Overview of Findings

Date: 11th April 2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
01	CAR	Host country Approval from the Designated National Authority (Sri Lanka) is to be submitted by the project proponent.	1.2
Date: [Response from project developer]: 25 April 2007.			
Host country Approval from the Designated National Authority (Sri Lanka) was handed over to DOE during the site visit.			
Date: [10 th May 2007] [Comments from Assessor] The Host country approval from Sri-Lankan DNA has been provided. The name of the project proponent and amount of CERs mentioned on the HCA is the same as mentioned in the PDD. CAR can be closed.			
[Acceptance and close out] OK Sanjeev Kumar [10 th May 2007]			

Date: 11th April 2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
02	CAR	Evidence is required to be submitted by the project proponent regarding no use of ODA for the specific project activity.	1.7
Date: [Response from project developer]: 25April 2007. Evidence that ODA assistance was not used for the project activity was provided to DOE during site visit.			
Date: [10 th May 2007] [Comments from Assessor] The Project proponent has submitted a letter of undertaking stating that no ODA was used for the project activity. This is acceptable and CAR can be closed.			
[Acceptance and close out] OK Sanjeev Kumar [10 th May 2007]			

Date: 11th April 2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
03	NIR	The PDD does not describe about the Media used to communicate with the relevant stakeholders for the present project activity.	7.2
Date: [Response from project developer]: 25April 2007 Letters were sent inviting local stakeholders for the meeting. The copy of the letters in local Sinhalese language and English translation of the same were handed over to DOE during site visit.			
Date: [10 th May 2007] [Comments from Assessor] The local stakeholders were communicated by letters for the present project activity. The letters			

have been submitted and it mentions about the project date, place of the meeting and the timings for the local stakeholder meeting. This is acceptable and NIR can be closed.

[Acceptance and close out] OK Sanjeev Kumar [10th May 2007]

Date: 11th April 2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
04	CAR	The minutes of meeting of the stakeholders consultation process for the project activity is required to be submitted by the project proponent.	7.3

Date: [\[Response from project developer\]: 25 April 2007.](#)

[The minutes of meeting of the local stakeholders meeting was provided to DOE during site visit.](#)

Date: [10th May 2007] [Comments from Assessor]
The minutes of meeting have been provided and the information mentioned is the same mentioned in the PDD and is acceptable. CAR can be closed.

[Acceptance and close out] OK Sanjeev Kumar [10th May 2007]

Date: 11th April 2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
05	CAR	Section A.4.3 of the PDD is not as per template for CDM-SSC-PDD.	8.1.1

Date: [\[Response from project developer\] 25 April 2007](#)

[Section A.4.3. of the PDD is modified as per template of CDM-SSC-PDD in the revised PDD version 02.](#)

Date: [10th May 2007] [Comments from Assessor]
The Section A.4.3 has been checked and is found according to the template for CDM-SSC-PDD version 03, and is acceptable. CAR can be closed.

[Acceptance and close out] OK Sanjeev Kumar [10th May 2007]

Date: 11th April 2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
06	CAR	The PDD does not address the requirement under Section C.2, it is not mentioned how many times the crediting period will be renewed for the present project activity. Kindly clarify the same. The PDD under section C.2.1.1 mentions the start date of crediting period as "01/06/2007 or the date of registration of the project activity whichever is earlier". This is not as per guidelines.	8.1.2

Date: [\[Response from project developer\]: 25 April 2007](#)

[It has been mentioned in Section C.2 that, the project activity proposes to adopt the renewable crediting period. The first crediting period would be renewed twice. That is, the total crediting](#)

period would be 21 years (7 years x 3 times).
Section C.2.1.1 is revised as "01/06/2007 or the date of registration of the project activity whichever is later" in the revised PDD version 02.

Date: [Response from project developer]: 7th June 2007
Section C.2.1.1 is revised as 01/09/2007 in the revised PDD version 03

Date: [8th June 2007] [Comments from Assessor]
Section C.2.1.1 has been checked and the date of registration mentioned it is as per the guidelines to complete CDM-SSC-PDD version 04, and hence it is acceptable. CAR can be closed.

[Acceptance and close out] OK Sanjeev Kumar [8th June 2007]

Date: 11th April 2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
07	CAR	Evidence for the technical description of the project activity needs to be provided. The project proponent need to submit all the purchase orders related to the project activity.	8.2.1

Date: [Response from project developer]: 25 April 2007
Evidence for the technical description of the project activity has been provided to DOE during site visit. The Purchase Order copies of the same have been given to DOE during site visit.

Date: [10th May 2007] [Comments from Assessor]
Purchase orders for the project activity have been submitted and the technical description has been cross-checked by actual nameplate photographs and was found the same as mentioned in the PDD, CAR can be closed.

[Acceptance and close out] OK Sanjeev Kumar [10th May 2007]

Date: 11th April 2007 Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
08	NIR	Evidence is required to submit regarding the issue that project technology will not be substituted or replaced by the more efficient technologies during the crediting period.	8.2.3

Date: [Response from project developer]: 25 April 2007.

The evidence that the technology would not be substituted with more efficient technology during the crediting period has been mentioned in the revised PDD in section A.4.2

Date: [10th May 2007] [Comments from Assessor]
The PDD under Section A.4.2 mentions that the technology would not be substituted by more efficient technology during the crediting period. NIR can be closed.

[Acceptance and close out] OK Sanjeev Kumar [10th May 2007]

Date: 11th April 2007

Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
09	NIR	The project proponent needs to provide evidence regarding training programme given to the personnel's for the present project activity.	8.2.4
Date: [Response from project developer]: 25 April 2007. Evidence regarding training to personnel of the project activity was provided to DOE during site visit.			
Date: [10 th May 2007] [Comments from Assessor] The requirement for training was provided by Voith Siemens Hydro Kraftwerkstechnik GMBH & CO. KG.; the supplier for the equipment for the project activity. This was mentioned in the Contract Agreement for the project activity. This was checked during the site visit the plant operators were interviewed and they were found to be aware of the operating procedures for the project activity. NIR can be closed.			
[Acceptance and close out] OK Sanjeev Kumar [10 th May 2007]			

Date: 11th April 2007

Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
10	NIR	Evidence is required to submit for the starting date of the project activity.	8.3.1
Date: [Response from project developer]: 25 April 2007. Evidence regarding the starting date of the project activity was provided to DOE during the site visit.			
Date: [10 th May 2007] [Comments from Assessor] The Standardised Agreement for Purchase of Energy mentions the date as 16 th April 2002, which is the same as mentioned in section C.1.1 of the PDD, NIR can be closed.			
[Acceptance and close out] OK Sanjeev Kumar [10 th May 2007]			

Date: 11th April 2007

Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
11	CAR	The Excel spreadsheet for the calculation of emission reductions need to be provided by the project proponent. Detail data regarding Grid emission factor calculation needs to be provided by the project proponent.	9.6
Date: [Response from project developer]: 25 April 2007. The excel spreadsheet for the calculation of grid emission factor and emission reductions were already provided to DOE. They were again given to DOE during to site visit.			
Date: [10 th May 2007] [Comments from Assessor] The Excel sheets provided by the project proponent were checked for the assumptions used and were found ok. The Grid emission factor calculation was checked and the OM and BM calculations were found according to ACM0002. CAR can be closed.			

[Acceptance and close out] OK Sanjeev Kumar [10th May 2007]

Date: 11th April 2007

Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
12	CAR	It is not described in the PDD whether EIA has been carried for the project activity or not. Provide a copy of environment clearance by CEA	9.8

Date: [\[Response from project developer\]: 25 April 2007.](#)

EIA is not required as per Sri Lankan Environmental laws. Instead, an Initial Environmental Examination (IEE) report has to be carried out and submitted to CEA. IEE was submitted and environmental clearance was obtained. The copy of the same has been handed over to DOE during site visit.

[A copy of the environmental clearance has been handed over to DOE during site visit.](#)

Date: [10th May 2007] [Comments from Assessor]

The environmental clearance by the CEA for the current project activity has been provided and is acceptable. CAR can be closed.

[Acceptance and close out] OK Sanjeev Kumar [10th May 2007]

Date: 11th April 2007

Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
13	CAR	The investment barrier does not mention the IRR rate with CDM consideration, provide IRR calculation sheets. The investment barrier and other barriers mentioned in the PDD is not clear. Please mention that how benefits from CDM will overcome the risk associated with the project activity. Evidence is required that CDM fund was considered during the planning stage of the project activity. Justify why there is a delay to approach for CDM funds.	9.9

Date: [Response from project developer]: 25 April 2007.

IRR calculations were provided as Appendix 4. IRR calculations with and without CDM benefits are attached. As the CDM benefits would improve the returns of the project activity, the IRR would improve to 9.75 % from 8.83 % .

Evidences regarding the consideration of CDM incentives were provided to DOE during site visit.

Delay in approach of CDM registration

Although, the project proponents were aware about the CDM mechanism and the benefits, the expertise was not available locally to develop a CDM project and moreover there were uncertainties associated with development of a CDM project. Even now, a foreign organisation has been engaged to assist in CDM documentation. Hence, there was delay in approach for registration of project as CDM project.

Date: [10th May 2007] [Comments from Assessor]

The IRR calculations mentioned for the project activity is 8.83% without CDM benefits and 9.75% with CDM benefits. The benchmark value of IRR for a project activity is 14 %. Though the value of IRR does not cross the benchmark but still the IRR values due CDM funds increase to a level where the project proponent is ready to take a risk for the project activity. The CDM funds cover the risks associated with the project activity. The project proponent are proceeding with the project on the basis of long term benefits to the project, namely the benefits of Carbon credits and the availability of sufficient cash once the loans have been settled.

The board note and letter written to the Financial Institution in which incentives from the CDM were considered is submitted and same was found acceptable. The board note mentions that 14% is the minimum IRR for any investment made by the project proponent.

The delay occurred due to lack of availability of expertise in Sri Lanka is acceptable based on the fact that only 4 projects have been registered as CDM projects in Sri Lanka, and the project proponent had to engage a foreign organisation for CDM documentation. CAR can be closed.

[Acceptance and close out] OK, Sanjeev Kumar (10th May 2007)

Date: 11th April 2007

Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
14	CAR	The project boundary as mentioned in the PDD is not clear.	9.11

Date: [Response from project developer]: 25 April 2007.

A schematic diagram of project boundary is included in the revised PDD version 02 to make it clearer.

Date: [10th May 2007] [Comments from Assessor]

The diagram mentioned under the section B.3 of the PDD is acceptable. CAR can be closed.

[Acceptance and close out] OK Sanjeev Kumar [10th May 2007]

Date: 11th April 2007

Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
15	CAR	The monitoring Plan does not include monitoring of Grid emission factor. The monitoring plan for the parameter Diesel consumed does not discuss about the form in which the data will stored and the archiving period.	9.12
Date: [Response from project developer] : 24 April 2007. Grid emission factor is included in the monitoring plan in the revised PDD version. The diesel consumed data would be stored in both electronic and paper form.			
Date: [10 th May 2007] [Comments from Assessor] The corrections mentioned above were accepted when cross-checked with the rephrased PDD. CAR can be closed.			
[Acceptance and close out] OK, Sanjeev Kumar (10 th May 2007)			

Date: 11th April 2007

Raised by: Sanjeev Kumar

No.	Type	Issue	Ref
16	NIR	The project proponent needs to provide a copy of calibration certificates issued for the equipment used in the project activity. Also provide a copy of QA/QC procedures followed.	9.13
Date: [Response from project developer]: 25 April 2007 Copy of calibration certificates were provided to DOE during site visit.			
Date: [10 th May 2007] [Comments from Assessor] The calibration certificates are provided for the project activity. The data monitoring and recording system for the project activity were checked during the site visit and was found acceptable. The PDD mentions the roles and responsibility of the personnel involved in the project activity the same was cross-checked during the site visit and was found acceptable. During discussion with the project proponent they mentioned that they had applied for ISO certification, and ISO certificate will be available during the verification for the project activity. NIR can be closed.			
[Acceptance and close out] OK Sanjeev Kumar [10 th May 2007]			

Annex 4: Statement of Competence of Validation Team

Statement of Competence

Name: Sanjeev Kumar

SGS Affiliate: SGS India Pvt. Ltd.

Status

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

Validation

Verification

- | | | |
|------------------------|-------------------------------------|-------------------------------------|
| - Local Assessor | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| - Lead Assessor | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| - Assessor | <input type="checkbox"/> | <input type="checkbox"/> |
| /Trainee Lead Assessor | | |

Scopes of Expertise

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

Approved Member of Staff by Siddharth Yadav Date: 16th May 2007

Statement of Competence

Name: Vikrant Badve

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

Approved Member of Staff by Marco van der Linden

Date: 29-12-06

Statement of Competence

Name: Jimmy Sah

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: 23-05-07

Statement of Competence

Name: Irma Lubrecht

SGS Affiliate: Netherlands

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 ☐
16. Chemical Industry ☐
17. Construction ☐
18. Transport ☐
19. Mining/Mineral Production ☐
20. Metal Production ☐
21. Fugitive Emissions from Fuels (solid, oil and gas) ☐
22. Fugitive Emissions from Production and ☐

Consumption of Halocarbons and Sulphur Hexafluoride

23. Solvent Use ☐
24. Waste Handling and Disposal ☒
25. Afforestation and Reforestation ☒
26. Agriculture ☐

Approved Member of Staff by Marc van der Linden

Date: 16-03-2007